

**EXPANDING U.S. DIGITAL TRADE AND
ELIMINATING BARRIERS TO U.S. DIGITAL EXPORTS**

HEARING
BEFORE THE
SUBCOMMITTEE ON TRADE
OF THE
COMMITTEE ON WAYS AND MEANS
U.S. HOUSE OF REPRESENTATIVES
ONE HUNDRED FOURTEENTH CONGRESS

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**EXPANDING U.S. DIGITAL TRADE AND ELIMI-
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PORTS**

WEDNESDAY, JULY 13, 2016

U.S. HOUSE OF REPRESENTATIVES,
COMMITTEE ON WAYS AND MEANS,
SUBCOMMITTEE ON TRADE,
Washington, DC.

The Subcommittee met, pursuant to call, at 10:04 a.m., in Room 1100, Longworth House Office Building, the Honorable Dave Reichert [Chairman of the Subcommittee] presiding.

[The advisory of the hearing follows:]



WAYS AND MEANS

CHAIRMAN KEVIN BRADY

Chairman Reichert Announces Hearing on Expanding U.S. Digital Trade and Eliminating Barriers to U.S. Digital Exports

House Ways and Means Trade Subcommittee Chairman Dave Reichert (R-WA) announced today that the Subcommittee will hold a hearing on “Expanding U.S. Digital Trade and Eliminating Barriers to U.S. Digital Exports.” The hearing will focus on how high-standard and ambitious digital trade provisions in U.S. trade agreements can, if thoroughly implemented and fully enforced, open markets to U.S. exports and benefit U.S. businesses of all sizes that rely on digital trade to enable sales of goods and services. **The hearing will take place on Wednesday, July 13, 2016, in room 1100 of the Longworth House Office Building, beginning at 10:00 A.M.**

In view of the limited time to hear witnesses, oral testimony at this hearing will be from invited witnesses only. However, any individual or organization may submit a written statement for consideration by the Committee and for inclusion in the printed record of the hearing.

DETAILS FOR SUBMISSION OF WRITTEN COMMENTS:

Please Note: Any person(s) and/or organization(s) wishing to submit written comments for the hearing record must follow the appropriate link on the hearing page of the Committee website and complete the informational forms. From the Committee homepage, <http://waysandmeans.house.gov>, select “Hearings.” Select the hearing for which you would like to make a submission, and click on the link entitled, “Click here to provide a submission for the record.” Once you have followed the online instructions, submit all requested information. ATTACH your submission as a Word document, in compliance with the formatting requirements listed below, **by the close of business on Wednesday, July 27, 2016**. For questions, or if you encounter technical problems, please call (202) 225-3625.

FORMATTING REQUIREMENTS:

The Committee relies on electronic submissions for printing the official hearing record. As always, submissions will be included in the record according to the discretion of the Committee. The Committee will not alter the content of your submission, but we reserve the right to format it according to our guidelines. Any submission provided to the Committee by a witness, any materials submitted for the printed record, and any written comments in response to a request for written comments must conform to the guidelines listed below. Any submission not in compliance with these guidelines will not be printed, but will be maintained in the Committee files for review and use by the Committee.

All submissions and supplementary materials must be submitted in a single document via email, provided in Word format and must not exceed a total of 10 pages. Witnesses and submitters are advised that the Committee relies on electronic submissions for printing the official hearing record.

All submissions must include a list of all clients, persons and/or organizations on whose behalf the witness appears. The name, company, address, telephone, and fax numbers of each witness must be included in the body of the email. Please exclude any personal identifiable information in the attached submission.

Failure to follow the formatting requirements may result in the exclusion of a submission. All submissions for the record are final.

The Committee seeks to make its facilities accessible to persons with disabilities. If you are in need of special accommodations, please call 202-225-1721 or 202-226-3411 TTD/TTY in advance of the event (four business days notice is requested). Questions with regard to special accommodation needs in general (including availability of Committee materials in alternative formats) may be directed to the Committee as noted above.

Note: All Committee advisories and news releases are available at <http://www.waysandmeans.house.gov/>.

Chairman REICHERT. The Committee will come to order. Good morning. The Subcommittee will come to order, and welcome to the Ways and Means Trade Subcommittee hearing on Expanding U.S. Digital Trade and Eliminating Barriers to U.S. Digital Exports. Before hearing from our witnesses, I would like to make a few points. Shocking. Huh? Politicians wanting to make a few points. We will all get an opportunity to do that.

The United States is far and away the world's leading exporter of digital goods and services. This is a great position for the U.S. to be in because digital trade is growing at a rapid pace. And this means more jobs and more opportunities for Americans across the country.

Our country is succeeding in digital trade because of the innovative spirit of the American people and American companies of all sizes. Our companies lead the world in creating digital products and content as well as in data storage and analysis. In fact, United States based Web sites represent more than half of the top 100 Web sites in every region of the world, except Europe.

In order to remain the global leader of digital trade, we must maintain access to the world's expanding digital markets. Digital trade, including the use of online platforms data flows, benefits both high tech companies and traditional companies in a wide range of industries like manufacturers, retailers, and service providers. These businesses depend on digital platforms to export goods and services. Small businesses, in particular, benefit from the opportunities that digital trade provides through global digital platforms, including e-commerce Web sites such as Amazon, search engines such as Microsoft Bing, and payment systems such as PayPal. And when our companies are successful because of digital trade, they grow and create more jobs here at home.

We must build on the great success of the United States companies. We need to do more to tear down barriers to U.S. digital exports so we can allow our job creators to grow. For example, too many of our trading partners have imposed or threatened requiring the storage of data in country, which can make it impractical for

U.S. companies in various industries to serve or even obtain customers in those markets.

Arbitrary blocking of cross-border Internet traffic, which effectively prohibits digital trade by U.S. companies, is another long-term problem in many countries throughout the world. China is a particularly extreme example. In addition, inadequate protection of intellectual property rights, such as digital piracy of media or software, hurts our innovative companies.

Trade agreements can be an effective tool to lower these and other barriers in open markets for America's digital products. Many of the problems our digital exporters now face arose after our existing trade agreements were negotiated years ago. And that is why Congress set forth important new and expanded principal negotiating objectives relevant to digital trade in goods and services and cross-border data flows in the bipartisan Congressional Trade Priorities and Accountability Act that became law last year. That was a mouthful.

Our future trade initiatives must reflect these priorities. In that regard, I believe TPP holds great promise to tear down barriers hurting digital trade. It would prohibit tariffs on digital goods, including software, video, and music. It would facilitate trade of both digital and physical goods by encouraging paperless trading and requiring the recognition of electronic signatures.

TPP also includes commitments to ensure the free flow of global information and data at the heart of digital economy. It would prohibit data localization measures, but I share the disappointment of many Members of Congress and the Financial Services Committee that financial services were excluded from this localization commitment.

I believe that the administration has heard our concerns, and I appreciate the administration is working constructively to address this issue. I welcome our continued work to create a clear and enforceable ban on localization requirements in this sector for all TPP countries. Resolving this issue and other outstanding issues, as well as developing implementation plans to assure that TPP will be fully implemented and enforced, is essential to getting congressional support for TPP.

Finally, the negotiation of a trade agreement with the EU and the trade and services agreement with 22 parties both hold great promise for digital exports as long as they are comprehensive, high-standard agreements that address the barriers faced by digital exporters and do not exclude import sectors such as financial services.

I will now yield to Mr. Rangel for his opening statement.

Mr. RANGEL. Thank you, Mr. Chairman, for calling this hearing.

And I welcome all of our witnesses and look forward to hearing your testimony.

Gone are the days where trade simply meant reducing tariffs and limiting quotas for imported products. Trade policy now addresses much more difficult issues, as one can see from the length of modern trade agreements. One of our biggest areas of expansion have been on issues related to digital trade. U.S. trade policy now addresses issues such as cross-border data flows, enforced localization

policies that some countries have implemented to force companies to store data within their own borders. These digital trade policies have been endorsed by a wide range of stakeholders.

Not only have these provisions been applauded because of their commercial significance, but many NGOs, think tanks, and academies have also praised the revision because of the impact of maintaining a free and open Internet. This is one of the few areas in international trade policy where one can find very, very broad agreement. But we can't lose sight of the bigger picture. The public debate on trade today touches on a much broader range of issues and are much bigger and more controversial issues than the digital trade issues we will be discussing today.

These issues range from who actually benefits from trade in our trade agreements, and to whether we have the infrastructure and training programs in place to take advantage of the opportunities that may arise as the result of our trade agreements. We need to be much more focused than we have been on addressing these bigger picture issues if we want to begin and establish a consensus in bipartisanship on trade.

Mr. Chairman, there are some political questions as to whether or not the Congress is going to be dealing with the question of TPP. There is some political questions as to how many votes we will have. There are serious questions as to people being afraid that they are going to lose jobs. One way, in my opinion, that we can eliminate these fears would be to tie in the questions that we are raising today, and that is technology. Nobody can challenge the fact that, with TPP, we are going to have to have a workforce that is extremely talented in math, science, and technology.

And in addition to that, the greatest trade agreement in the world cannot be effective without a strong infrastructure. The Congress refuses even to discuss these issues. It would seem to me that if the President and the Congress could find some way to bring these issues together where the person on the street may not see an opportunity for him or herself, but certainly for their children to know that there will be jobs in infrastructure, the kids will be educated to meet the needs of the future, I think that in this administration we can get something done. Nevertheless, this is such an important part of a trade agreement that we don't discuss. And I welcome the opportunity to listen to the witnesses.

And I yield back the balance of my time.

Chairman REICHERT. Thank you, Mr. Rangel. And we would agree, I think, on both sides of the aisle that trade agreements are normally a difficult process for us to work through. We want to get it right because it is about creating jobs across this country and having the ability to sell our products across the globe. And I do think you are correct in recognizing the importance of a highly educated force in our country and preparing them for especially the new jobs that will be supplied in the area of high tech, and especially as it relates to technology and trade.

And that is really the purpose of today's hearing, is to really expose and educate those who may not know how the world works today regarding technology and trade, and the benefits that it provides to Americans and jobs and how we must begin to prepare to enter in that sort of a market. So today, we are joined by five wit-

nesses who will help us understand this issue a lot more. We will have lots of questions for you after your testimony.

The first witness is Mr. Robert Atkinson, president of Information Technology and Innovation Foundation. Our second witness is Mr. Christopher Padilla, vice president of Government and Regulatory Affairs of IBM Corporation. Our third witness is Mr. Michael Beckerman, president and CEO of Internet Association. Our fourth witness is Ms. Kavita Shukla, cofounder and CEO of Fenugreen. Finally, our fifth witness is Mr. Usman Ahmed, head of global public policy at PayPal.

Before recognizing our first witness, let me note that our time is limited. So please limit your testimony to 5 minutes, and a reminder to members to keep their questioning to 5 minutes.

Mr. Atkinson, you are recognized for your 5-minute statement.

**STATEMENT OF ROBERT ATKINSON, PRESIDENT,
INFORMATION TECHNOLOGY AND INNOVATION FOUNDATION**

Mr. ATKINSON. Thank you, Chairman Reichert, Ranking Member Rangel, and Members of the Committee. It is a pleasure to be here today to talk to you about this important issue.

I would like to make three main points. The first point is that as information technology has improved over the last decade, it has become increasingly easy for companies to share data across borders. And not just easy, but necessary. As we have global supply chains, and as U.S. firms, even big and small become more global, they need to be able to move this data across borders.

Companies that are doing this, though, as the chairman mentioned, are not just the high tech companies, some of who are on this panel, but firms in a wide array of industries: Agriculture, mining, retailing, banking. For example, consumer products companies like Procter and Gamble, machinery companies like Caterpillar, retailers like Walmart, aerospace firms like Boeing, automobile manufacturers like Ford, and other manufacturers like GE for their aircraft engines, wind turbines, and industrial equipment, all of these companies rely on the ability to move data across borders for their competitive success.

Unfortunately, though, dozens of countries now have put in place barriers and prohibitions that limit the ability to move data across borders, china being perhaps one of the worst examples. They, for example, prohibit firms from processing or storing offshore financial and credit data on Chinese citizens. Malaysia's Personal Data Protection Act requires that all data on Malaysians has to be stored on local servers. And South Korea has the same kind of policy. And these are just a few of the restrictions. Increasingly, we are seeing more and more countries adopt these policies, either because they think they are going to get jobs and protect and defend their domestic companies, or misguided orientation beliefs on privacy.

This hurts the U.S. economy in three main ways. One is that data localization by definition means that economic activity that could be in the U.S. is now going to be overseas. You are not going to have a data center here if you have to put one in Brazil or Vietnam.

Secondly, these cross-border data restrictions increase costs and limit innovation for U.S. firms. U.S. firms use this data to figure out new ways to improve their products and services. They use this data to cut costs. And if they can't do that, there will be a problem.

And third, if they restrict U.S. firms from participating in these foreign markets, they are going to lose market share to these companies who are favored by the domestic countries.

And I think most importantly is there is really no policy justification for data nationalism. Some countries are just, frankly, naked mercantilists. They just do this because they think they can and they want the jobs. Other countries, either they say or they believe that this is necessary for privacy. But it really, fundamentally, as we have shown in work, there is really no advantage from a privacy or commercial security perspective of keeping data in the country.

To use an example, if a foreign company is in the U.S. providing healthcare services, they can't escape the requirements of HIPAA by storing the data somewhere else. They are subject to U.S. law. And anytime a U.S. company is in a foreign country doing business, they are subject to their privacy laws and their security laws. Where they put the data is irrelevant. It just has no effect.

In fact, you could argue that the ability to store data in the best data centers in the world, the most secure data centers in the world, is actually more privacy protective than having to put it in every little data center in every country in the world. That is why I think the decision by the administration to exempt the financial sector from NTTP—from the relatively strong data localization prohibitions in TPP was ill advised. This rule which was at the insistence of U.S. financial regulators essentially sent a message that said something special about financial data. It is so important that you have to keep it local. In other words, it sent a message that moving data across borders was risky. And as we have shown, there really was no reason for that provision.

There are already provisions in a number of different trade agreements and other provisions that would have let financial regulators get access to that data. To their credit, USTR is attempting to fix that and has indicated that they would not put it in future trade agreements. So I think they deserve credit for the fix.

Lastly, this comes—what do we do in the future? I think, first of all, any new trade agreement that U.S. is engaged in shouldn't have that provision in it. And in addition, we should make sure that any new agreements, TiSA or TTP, and ideally, frankly, a new multilateral data services agreement in the WTO should ensure that there are strong prohibitions against data nationalism.

And I will just close by saying with—Congressman Rangel's point about the loss of faith in trade in the U.S., and we see that in the current politics today. In our view, one of the reasons there is a loss of faith is because of other countries manipulating the trading system and, frankly, cheating and hurting U.S. companies and U.S. jobs. And I think that is why making sure we have these very strong prohibitions against data localization, data nationalization that are in the TPP and making sure that they extend to other agreements is going to be important, not just to help U.S. companies, but to restore faith in the trading system.

Thank you for having me.
Chairman REICHERT. Thank you.
[The prepared statement of Mr. Atkinson follows:]



Testimony of
Robert D. Atkinson, Ph.D.
Founder and President
Information Technology and Innovation Foundation

Before the
Committee on Ways and Means
Trade Subcommittee

Hearing on
“Expanding U.S. Digital Trade and Eliminating Barriers to Digital
Exports”

July 13, 2016
1100 Longworth House Office Building
Washington, DC

The Information Technology and Innovation Foundation (ITIF) appreciates the House Ways and Means Trade Subcommittee's invitation to testify regarding the importance of digital trade to the U.S. and global economy and the need to secure trade rules that ensure both fair competition in global digital trade and the seamless movement of data and information across international borders.

ITIF is a nonpartisan think tank whose mission is to formulate and promote public policies to advance technological innovation and productivity internationally, in Washington, and in the states. Recognizing the vital role of technology in ensuring prosperity, ITIF focuses on innovation, productivity, and digital economy issues. We have long been involved in the digital trade debate, advocating for policies which support the free flow of data across borders as essential to global trade and commerce.

Data and Digital Trade as the Key Drivers of the Modern Global Economy

Data and digitalization are increasingly the driving forces of innovation and growth in the modern global economy. For example, TEKES (Finland's Technology and Innovation Agency) recently estimated that, by 2025, fully half of all value generated in the global economy will be created digitally. Similarly, a report released in March 2016 by the McKinsey Global Institute finds that the global value of international data flows in 2015—\$2.8 trillion—exceeded the value of global merchandise trade for the first time.¹ The McKinsey report further estimates that almost one-quarter, or 22 percent, of global economic output can be attributed directly to the digital economy and notes that the application of digital technologies—such as cloud computing, data analytics, and the Internet of Things—will increase global GDP by \$2 trillion by 2020.² And, as ITIF has shown, a wide array of industries, from manufacturing to mining to retail and financial services, depend on cross-border data flows.³

The contribution of digital technologies to the modern global economy is an extension of the role of information technology (IT) on growth. For example, ITIF has estimated that, all by itself, the commercial activity that is concentrated under the Internet's ".com" top-level domain will contribute \$3.8 trillion annually to the global economy by 2020.⁴ And the McKinsey Global Institute has estimated that, for 13 of the world's largest economies between 2007 and 2011, the Internet alone accounted for 21 percent of aggregate GDP growth.⁵

The United States holds a distinct leadership role in the fast-growing data economy owing to its role as a pioneering innovator and early adopter of IT, coupled with an Internet regulatory regime, particularly a light touch for privacy, which enables innovation. As of 2010, U.S. firms held a 26 percent share of the global IT industry and were the world's largest producers of IT goods and services.⁶ Of the top 20 enterprise cloud computing service providers in the world, 17 are headquartered in the United States.⁷ Of the top 10 Internet firms, 7 are headquartered in the United States.⁸ The digitally enabled services that these firms provide have become a key growth engine for the U.S. economy, with exports reaching \$356 billion in 2011, up from

\$282 billion just four years earlier.⁹ The United States exports over \$162 billion worth of digital services to Europe annually.

Moreover, it is increasingly the case that many of the benefits from information technology come from creating value and insights from data, often in real-time. Virtually every sector of the U.S. economy benefits from the data revolution; the applications for data processing and analytics are quite large. And this value will only increase as the public and private sectors alike become more data-driven.¹⁰ For example, the McKinsey Global Institute estimates that making open data available for public use, particularly government data, would unlock up to \$5 trillion in global economic value annually across just seven sectors, ranging from education to consumer finance.¹¹ In the United States, the use of big data in health care can save \$450 billion per year.¹² Industry forecasters estimate that, by 2025, the Internet of Things will have an economic impact of up to \$11.1 trillion per year.¹³ And for the global public sector, the Internet of Things is expected to create \$4.6 trillion in value by 2022.¹⁴ Even Europe could grow more quickly if it more fully embraced data and the digital revolution.¹⁵

Why Free Trade in Data is Vital

A key reality of the global digital economy is that a significant share of data needs to move across borders. It is not unusual, for example, for Internet traffic to go through multiple different intermediaries in multiple nations. To paraphrase cyberspace advocate John Perry Barlow, who once said “information wants to be free,” today, “information wants to be global.” As the Organization for Economic Cooperation and Development (OECD) noted in a recent report on the data economy:

The data ecosystem involves cross-border data flows due to the activities of key global actors and the global distribution of technologies and resources used for value creation. In particular, ICT infrastructures used to perform data analytics, including the data centers and software, will rarely be restricted to a single country, but will be distributed around the globe to take advantage of several factors; these can include local work load, the environment (e.g., temperature and sun light), and skills and labor supply (and costs). Moreover, many data-driven services developed by entrepreneurs “stand on the shoulders of giants” who have made their innovative services (including their data) available via application programming interfaces (APIs), many of which are located in foreign countries.¹⁶

Indeed, the growing extent and value of cross-border data flows is reflected in the fact that the data-carrying capacity of transatlantic submarine cables rose at an average annual rate of 19 percent between 2008 and 2012.¹⁷ This is why—absent policy-created “data protectionism”—digital trade and cross-border data flows are expected to continue to grow much faster than the overall rate of global trade.

As a result, the ability to move data across borders has become a critical component of value creation for organizations in the United States and other countries around the world. As the OECD states, “the free flow of information and data is not only a condition for information and knowledge exchange, but a vital condition for the globally distributed data ecosystem as it enables access to global value chains and markets.”¹⁸ In fact, fully half of all global trade in services now depends on access to cross-border data flows.¹⁹ And, as noted, digitally enabled services have become a key growth engine for the U.S. economy, with exports reaching \$356 billion in 2011, up from \$282 billion just four years earlier.²⁰

This is why the U.S. International Trade Commission (ITC) estimates that digital trade increased annual U.S. GDP by between \$517 and \$710 billion in 2011 (3.4 to 4.8 percent).²¹ The ITC further estimates that digital trade increased average wages and helped create 2.4 million American jobs in 2011. U.S. firms in digitally intensive industries sold \$935.2 billion in products and services online in 2012, including \$222.9 billion in exports. Similarly, based on 2014 estimates, the U.S. International Trade Commission estimates that decreasing barriers to cross-border data flows would increase U.S. GDP by 0.1 to 0.3 percent.²² And even though the ITC’s analysis shows important benefits from digital trade, those benefits are likely understated. This is because the report limited its analysis to “digitally intensive” sectors, which means that its numbers exclude contributions from firms in industries that only use digital trade as a smaller part of their business.

The ITC also found digital trade to be crucial for digitally intensive small- and medium-sized enterprises (SMEs), which sold \$227 billion in products and services online in 2012. Indeed, small firms in a wide array of sectors depend on digital trade. For example, in the \$120 billion U.S. app industry, small companies and startups account for 82 percent of the top-grossing applications. Consumers throughout the world use these apps and any interruption in cross-border data flows will negatively affect both firms’ revenues and customers’ experiences.

Free trade in data is important not just to technology firms, but also to traditional industries, such as automobile manufacturers, mining companies, banks, airlines, hospitals, and grocery store chains—all of which depend upon the ability to move data across borders or analyze it in real-time as a fundamental enabler of their supply chains, operations, value propositions, and business models. Indeed, among the thousands of U.S. firms that have operated under the erstwhile U.S.-EU Safe Harbor Agreement, 51 percent did so in order to process data on European employees—for example, transferring the personnel files of overseas workers to the United States for human resource purposes—and most of these firms are in traditional industries.²³ In fact, the McKinsey Global Institute estimates that about 75 percent of the value added by data flows on the Internet accrues to “traditional” industries, especially via increases in global growth.²⁴

There are numerous examples of U.S. firms, large and small alike, benefiting from cross-border data flows. For example, Ford Motor Company gathers data from over four million cars with in-car sensors and remote

applications management software.²⁵ All data is analyzed in real-time, giving engineers valuable information to identify and solve issues, know how the car responds in different road and weather conditions, and be aware of any other forces affecting the vehicle. This data is returned back to the factory for real-time analysis and then returned to the driver via a mobile app. Like other car companies, Ford believes the data belongs to the owner and that Ford serves as customers' "data steward." For internal purposes, performance data is de-identified and analyzed to track potential performance and warranty issues.²⁶ Ford uses a U.S. cloud service provider to host this data.²⁷

Likewise, Caterpillar, a leading manufacturer of machinery and engines used in industries, established its fleet management solution to increase its customers' performance and cut costs. Sensor-enabled machines transmit performance and terrain information to Caterpillar's Data Innovation Lab in Champaign, Illinois where data can be analyzed, enabling Caterpillar and its customers to remotely monitor assets across their fleets in real time. This also enables Caterpillar and its customers to diagnose the cause of performance issues when things go wrong. For example, truck data at one worksite showed Caterpillar that some operators were not using the correct brake procedures on a haul road with a very steep incline. Retraining the operators saved the customer about \$12,000 on the project, and company-wide driver incidents decreased by 75 percent. Cross-border data flow restrictions could limit Caterpillar's ability to offer these services in certain markets, such as those that prevent the movement of GPS data across borders.²⁸

When nations impose restrictions on data flows, the U.S. economy is harmed in at least three ways. First, policies such as requiring localization of data or computing infrastructure will move activity from the United States to these nations, reducing jobs and investment here and raising costs for U.S. firms. Second, cross-border data restrictions will increase costs and limit innovation for U.S. firms. Third, if the restrictions preclude U.S. firms from participating in foreign markets, then U.S. firms will lose global market share to competitors that are based in those protected markets.

Some advocates assert that the U.S. economy can thrive simply by having a healthy small business, domestic-serving sector and that policymakers can and should be indifferent to the competitive fate of U.S. multinational, corporations. But this is profoundly wrong. Losing global market share because of digital protectionism—regardless of whether it is in information industries or "traditional" industries—harms not just U.S. multinationals, but also the overall U.S. economy and U.S. workers. A large body of scholarly literature proves this point. Dartmouth's Matthew J. Slaughter finds that employment and capital investment in U.S. parents and foreign affiliates rise simultaneously.²⁹ In a study of U.S. manufacturing multinationals, Desai et al., find that a 10 percent greater foreign investment is associated with 2.6 percent greater domestic investment.³⁰ Another study of U.S. multinational corporation services firms found that affiliate sales abroad increase U.S. employment by promoting intra-firm exports from parent firms to foreign affiliates.³¹ In short, when U.S. multinationals firms, regardless of size, are able to expand market share overseas, it creates real

economic benefits and jobs here at home. These jobs run the gamut, including sales, marketing, management, and engineering, computer science, and technical jobs. And this matters because, as ITIF has shown, IT workers earned 74 percent more than the average American worker in 2011 (\$78,584 versus \$45,230). In 2011, the IT industry contributed about \$650 billion to the U.S. economy, or 4.3 percent of GDP, up from 3.4 percent in the early 1990s.³² Finally, digital trade does not just benefit large companies such as Amazon, Ford, GE, IBM, or P&G. Small- and medium-sized U.S. enterprises account for one-quarter of digital trade sales and fully one-third of digital trade purchases.³³

Free trade in data is important not just for businesses and their workers, but for all Americans. Imagine if data had a much harder time crossing borders. Americans traveling overseas would not be able to use their credit cards or cell phones, because both require cross-border data flows. In fact, without cross-border data flows, people would not be able to fly overseas at all, because airlines need to transmit data on passenger manifests and flight operations and governments need to transfer passport data on passengers. People would have a hard time shipping packages overseas. If individuals get sick while traveling, there would be no way to access their medical records, much less receive remote medical expertise or diagnostic tests, if medical data are not allowed to cross borders. Without data flows, officials can't pre-position travelers' personal information to speed customs and border crossings. And companies would not be able to provide international service or warranty protection over the productive life of a product. For example, it would disrupt the increasingly common practice in which automakers remotely upgrade the software in motorists' vehicles.

By contrast, the free flow of data can improve the quality of goods and services, including public goods. For example, cross-border data flows can be an essential component of pandemic disease management and control. The free flow of data is also a key to providing remote diagnostics with medical imaging systems, as there can be personally identifiable information in these systems. Likewise, farmers can remotely receive personalized weather feeds that are based on big data analytics (e.g., a mash up of data on weather forecast and history, soil moisture, soil content, river flows, etc.), but this requires data to be able to flow across national borders.

As a case study, consider how cross-border data flows can impact quality and safety in the airline industry. Aircraft manufacturer Boeing, headquartered in Chicago, Illinois, relies heavily on data transmitted from planes operating around the world to improve safety and reduce flight delays and cancellations. Boeing has created a system called Airplane Health Management that processes the large amounts of data that its airplanes generate and transmit in real time while they are in flight.³⁴ For example, a Boeing 737 engine produces 20 terabytes of data per hour.³⁵ Commercial airlines that operate Boeing aircraft, such as United Airlines, can monitor this data in real time and proactively dispatch maintenance crews to await an airplane's arrival and quickly address any problems that may have arisen during a flight.³⁶ Since the very purpose of airplanes is to traverse borders, the success of such a system hinges on Boeing's ability to quickly and easily

transmit data from its planes to its airline customers across the globe.³⁷ Likewise, when General Electric (GE) Aircraft Engines develops engine maintenance and service plans for its airline customers, it customizes the entire package based upon data showing the individual service history (e.g., hours flown, weather conditions flown in, etc.) of each of the jet engines in the airline customers' entire fleet.

Another reason the digital trade linkage between products and services is so important is that the increasing phenomenon of "servicization" means that products are increasingly being sold as services. For example, GE no longer sells individual radiological equipment (e.g., MRI or X-Ray machines) to hospitals; rather it sells radiological services, whereby GE takes over for example a hospital's entire suite of radiological assets, installing the devices with remote-monitoring capabilities that allow GE to know if they are operating and functioning properly or to diagnose various failure models. In other words, GE is selling its products as a package of bundled services, with the quality of GE's service offering being dependent on the digital data stream produced by its devices. (In a like manner, GE's Aircraft Engines division no longer sells airlines individual jet engines; it sells them "guaranteed thrust." And Johnson Controls no longer sells individual heating or air conditioning units; it sells to customers a service—"chilled air.") The point is that these "servicized" business models account for an increasingly large share of the economy—and digital trade—and they depend upon the free flow of unfettered data across borders; any trade restrictions that impede the free flow of such information imperil these digital-data-predicated business models.

The free flow of data will also enhance overall "data innovation," which is playing a key role in improving the lives of Americans. A case in point is medical research. Diseases do not stop at national borders, and the data that are needed to help find cures need to cross borders, too. Powerful data analytics applied to bigger global data sets can help speed the development of cures. (Organizations can "de-identify" data so that they do not release personally identifiable information.) The rarer the disease, the more important it is to collect data on a global basis, since data from individual countries may not create a large enough database to reveal patterns. Unnecessary restrictions on data flows will make it harder for health-care providers to save lives.

Finally, it is important to note that support for free trade in data does not have to mean support for the free flow of all data, regardless of its legal status. Just as it is not a violation of free trade principles to block trade in banned products, such as elephant ivory or rhinoceros products, it is also not a violation of free trade principles to oppose digital trade in illegal digital goods, such as child pornography, email spam, Internet malware, and pirated digital content. Numerous countries, including the United Kingdom, Denmark, Greece, Italy, Portugal, and Singapore, have blocked websites that trade in pirated digital content (either using their domain name or network address), thereby preventing that data from flowing into a country.³⁸ In fact, according to the International Federation of the Phonographic Industry, the global trade association for the music industry, "[Internet service providers] in 19 countries have been ordered to block access to more than 480 copyright infringing websites."³⁹ This is clearly not digital protectionism. Rather, it is indicative of

how the global trading system was intended to work, enabling trade in legal goods, services, and data, and prohibiting trade in illegal goods, services, and data. Moreover, just as taking a stand against trade in products like ivory or illegal drugs does not weaken America's intellectual leadership in promoting free trade, taking a stand against trade in illegal digital goods will not weaken our case in promoting free trade in data.

The Barriers to Global Digital Trade

Data for legal goods and service will naturally flow across borders when it needs to, unless nations erect digital barriers that impede it. Unfortunately, despite the vast benefits to companies, workers, consumers, and economies that arise from the ability to easily share data across borders, dozens of countries—both developed and developing alike—have erected a wide slate of barriers to digital trade.⁴⁰ The nations that have enacted such barriers proffer three main types of “justifications” for these policies: privacy and security concerns, national security and law enforcement concerns, and aspirations for domestic economic growth. In almost all cases, though, more than one motivation plays a role. But as the following discussion elaborates, none of these justifications validate the digital trade barriers all too many countries are increasingly erecting.

First, some nations have raised privacy concerns, contending that data, if transferred overseas, is somehow inherently less secure. But as ITIF has demonstrated in a detailed report, *The False Promise of Data Nationalism*, those who argue that free trade provisions for data abrogate national privacy rules, and therefore should not be included in trade agreements, overlook the reality that data does not need to be stored locally to be secure or to maintain commercial privacy protections.⁴¹ For example, Europe's concerns about data trade stem in large part from its desire to protect citizens' privacy. However, effectively addressing privacy concerns should be the easiest of the three motivations to address. As long as the company involved has legal nexus in a nation, it is subject to the privacy and cybersecurity laws and regulations of that nation—moving data overseas, or storing it elsewhere, does not give the company a free pass to ignore a nation's (or European Union's) laws. It is either in compliance with the privacy laws and regulations of that nation, or it is not. For example, foreign companies operating in America must comply with the privacy provisions of the Health Insurance Portability and Accountability Act (HIPAA), which regulates U.S. citizens' privacy rights for health data, or the Gramm-Leach-Bliley rules regulating the privacy of financial data, whether they store a customer's data on their own server in the United States (or elsewhere) or on a third-party cloud server in another nation.⁴²

The focus of discussions on cross-border data flows should be on the actual issue (e.g. privacy or cybersecurity), rather than the geographic location of the data. The new Privacy Shield agreement between the United States and the European Union attempts to address this. The Privacy Shield agreement shows that while the United States and Europe have different laws and values with regard to privacy, these can be addressed in a manner that that does not restrict or block data flows. One of the reasons why the Privacy Shield negotiations have become so heated is that there are misconceptions about how each respective side treats privacy. Too many Americans believe European Union (EU) privacy rules exclude even the most basic uses of data for commercial purposes and innovation, while too many Europeans believe that the United

States is a “wild west” in terms of data privacy. In fact, both sides share similar values with regard to privacy, the rule of law, and government access to data, and both benefit enormously from globalization and data innovation. Moreover, as ITIF has written, as long as U.S. firms have physical nexus in Europe, European privacy law continues to apply for European data U.S. firms collect, regardless of where they store that data.⁴³

Second, some governments require data to stay in-country due to concerns over the ability of governments to get access to data. This appears to be a motivation for many non-democratic governments, such as China and Russia, which require that data be stored inside their borders. There is no question that localization policies such as these give government security services easier access to data. However, those nations do not need to mandate localization for their governments to have legal access to data. They are still able to compel companies doing business in their markets to turn over data, even if it is stored outside their nation. In truth, even this is not enough for some governments; they want the power to collect data without the knowledge of the company involved, and that is easier if the data are stored locally. For democratic nations that abide by the rule of law, there is no need for mandating data be stored domestically as long as there is a well-functioning and robust system of mutual legal assistance treaties (MLATs) in place, as described subsequently.

Finally, a number of countries see “data mercantilism” as a path to economic growth, because they believe (incorrectly) that if they restrict data flows they will gain a net economic advantage from data-related jobs.⁴⁴ Many nations that invoke privacy and security concerns as a justification to impede cross-border data flows are often simply commandeering these issues as a smokescreen for naked data protectionism. And all too often countries do so spurred on by domestic IT companies seeking an unfair leg up over foreign competitors. For example, Australian businesses have trumped up privacy and security fears to promote protectionist policies that spare them from having to compete with U.S. (and other foreign) technology companies. When Rackspace, a Texas-based cloud computing firm, built its first data center in Australia, MacTel, a domestic competitor, tried to stoke fears of U.S. surveillance efforts under the Patriot Act to push Rackspace out of the Australian market.⁴⁵ In fact, this same Australian company funded a report calling on Australian policymakers to impose additional regulations designed to put foreign cloud computing competitors at a disadvantage.⁴⁶

Similarly, some calls in Europe for data localization requirements and procurement preferences for European providers, and even for a so-called “Schengen area for data”—a system that would keep as much data in Europe as possible—appear to be motivated by pure digital protectionism.⁴⁷ For example, Germany has started to create a dedicated national network, called “Schlandnet.”⁴⁸ And Deutsche Telecom has pushed the European Commission to adopt rules making it harder for U.S. cloud providers to operate in Europe in order for them to gain market share. Similarly, the French government has gone so far as to put €150 million into two start-ups, Numergy and Cloudwatt, to build up a domestic cloud infrastructure (“*le cloud souverain*”) that is independent of U.S. technology companies.⁴⁹ French Digital Economy Minister Fleur Pellerin has explained that France’s goal is to locate data servers and centers in French national territory and to “build a France of digital sovereignty.”⁵⁰

Examples of countries enacting barriers to cross-border data flows are rife:

- **Australia** requires that local data centers be used as part of e-health record systems.⁵¹ The purported rationale is to protect Australians' privacy and security. However, as noted, mandates on where data is stored do not improve privacy or security. Nevertheless, Australian IT companies have used this fear to promote protectionist policies that spare them from having to compete with U.S. technology companies.
- **China**, not surprisingly, given its history of rampant "innovation mercantilism," has implemented a wide array of protectionist measures on data. To start with, it has long limited data "imports." For example, China's Ministry of Public Security runs the Golden Shield program (commonly referred to as the "Great Firewall of China"), which restricts access to certain websites and services, particularly ones that are critical of the Chinese Communist Party. As the United States Trade Representative's Office recently noted, China's "outright blocking of websites appears to have worsened over the past year [2015]."⁵²

More importantly from a trade perspective, China has made a number of moves in the wake of the Snowden revelations to restrict the cross-border movement of data.⁵³ For example, Chinese law prohibits institutions from analyzing, processing, or storing off-shore personal financial, credit, or health information of Chinese citizens. A recent set of draft administrative regulations for the insurance industry included localization requirements, both for data centers and cross-border data flows. Furthermore, China's Counter-Terrorism Law requires Internet and telecommunications companies and other providers of "critical information infrastructure" to store data on Chinese servers and to provide encryption keys to government authorities.⁵⁴ Any movement of data offshore must undergo a "security assessment." And China's draft cybersecurity law would require IT hardware to be located in China. China's policy framework to develop a domestic cloud computing capability also refers to the importance of regulating cross-border data flows.

- **Two Canadian provinces**, British Columbia and Nova Scotia, have implemented laws mandating that personal data held by public bodies such as schools, hospitals, and public agencies must be stored and accessed only in Canada unless certain conditions are fulfilled.⁵⁵
- Many are concerned that **Europe** will introduce data protectionist policies as part of its Digital Single Market, General Data Protection Regulation (GDPR), and European Cloud initiatives.⁵⁶ The GDPR proclaims data privacy to be a fundamental human right; introduces a "right to be forgotten," which Europe is attempting to apply to the whole of the global Internet; and proposes significant fines—as high as €100 million or up to 5 percent of an enterprise's annual revenue—for firms found to be in violation of European data protection laws.

Certain EU Member States have instituted measures that require news aggregators, which provide snippets of text from other news sources, to remunerate those other sources for use of the snippets. These measures serve as an arbitrary tax on firms that help drive traffic to publishing sites. After Germany implemented such measures, some aggregators dropped links to sites seeking compensation

for use of the indexed extracts and related links, causing many publishers to opt out of requiring such payments. In late 2014, Spain passed a similar measure which made such payments mandatory.⁵⁷

In short, all too often European digital trade policies are animated by a desire to impede the competitiveness of American digital or information technology-based enterprises competing in European markets. As Juliette Garside divulged the sentiment in 2014 in *The Guardian*, writing that, “Brussels and Berlin are mobilizing to defend...the digital environment of Europe’s inhabitants; their enemies are the Silicon Valley corporations that seek to dominate it.”⁵⁸ Such thinking, too prevalent in Europe, hinders digital trade, to the harm of both Europe’s and America’s economy alike.

- **India** has considered a measure that would require companies to locate part of their information and communications technology infrastructure within the country to provide investigative agencies with ready access to encrypted data on their servers.⁵⁹ In February 2014 the Indian National Security Council proposed a policy that would institute data localization by requiring all email providers to setup local servers for their India operations and further mandate that all data related to communication between two users in India should remain within the country.⁶⁰
- In 2014, **Indonesia** began considering a “Draft Regulation with Technical Guidelines for Data Centres” that would require Internet-based companies, such as Google and Facebook, to set up local data storage centers.⁶¹ The Technology and Information Ministry is now implementing this regulation under the country’s Electronic Information and Transactions Law.⁶² The Indonesian government may pursue regulation or national legislation on personal data protection in 2016, either of which could further define requirements for data localization.⁶³
- In 2010, **Malaysia** passed the Personal Data Protection Act, which requires data about Malaysians to be stored on local servers.⁶⁴
- In 2010, **New Zealand**’s tax collection agency, the Commissioner of Inland Revenue, issued guidance that electronic business and tax records must only be stored in New Zealand.⁶⁵
- In 2014, **Nigeria** put into effect the “Guidelines for Nigerian Content Development in Information and Communications Technology.” Several of the provisions regard restrictions on cross-border data flows and mandate that all subscriber, government, and consumer data be stored locally.⁶⁶
- In **Russia**, amendments to the Personal Data Law mandate that data operators which collect personal data about Russian citizens must “record, systematize, accumulate, store, amend, update and retrieve” data using databases physically located in Russia.⁶⁷ This personal data may be transferred out, but only after it is first stored in Russia. Even the guidelines for this law, which went into effect in September 2015, acknowledge that there are significant ramifications for foreign companies due to this law.

- In **South Korea**, the Personal Information Protection Act requires companies to obtain consent from “data subjects” (i.e., the individuals associated with particular datasets) prior to exporting that data.⁶⁸ The Act also requires “data subjects” to be informed about whom receives their data, the recipient’s purpose for having that information, the period that information will be retained, and the specific personal information to be provided. This is clearly a substantial burden on companies trying to send their data across borders.
- **Turkey** passed a law in 2014 mandating that companies process all digital payments inside its borders. This regulation caused PayPal to suspend its Turkish operations on May 31, 2016 after the country’s financial regulators rejected its license applications—on the grounds that PayPal did not keep its IT systems in Turkey.⁶⁹
- **Venezuela** has passed regulations requiring that IT infrastructure for payment processing be located domestically.
- In **Vietnam**, a Decree on Information Technology Services requires digital service providers or websites to locate at least one server within Vietnam.⁷⁰ Vietnam had also put forth a draft IT Services Decree that would include additional data localization requirements as well as restrictions on cross-border data flows. Vietnam is also establishing a national payments gateway that discriminates against foreign electronic payment services—favoring a new local firm called “NAPAS”—in direct contravention of its Trans-Pacific Partnership (TPP) commitments.

The examples above show that digital trade barriers vary in terms of scope and scale, but while some are blanket policies that affect all data or e-commerce, there are a few specific sectors and processes that are the specific target, such as cloud computing and electronic payment processing.

Cloud computing services are often a specific target of data localization policies as countries think that this will lead to the development of local data centers. These countries think that data localization is a quick way to bring economic activity within their borders, but in reality, such policies cause more harm than good. The supposed benefits of data localization policies are misunderstood. As data centers become more automated, the number of jobs associated with each facility, especially for technical staff, decrease. While data centers contain expensive hardware and create some temporary construction jobs, they employ relatively few full-time staff to operate the equipment, especially as cloud-based technologies have increased automation in data centers.⁷¹ The short-term benefit of these jobs is outweighed by the substantial costs to build unnecessary data centers, a cost which is ultimately passed on to business and consumer customers.

Barriers to cross-border data transfers for cloud computing add significant costs for local companies. Studies show that local companies would need to pay 30 to 60 percent more for their cloud computing needs when they are compelled to use local vendors and as opposed to global best-of-breed providers. For example, it is estimated that businesses that move their cloud computing outside of the European Union, in the event of a “European Cloud,” could save more than 36 percent.⁷² India, Indonesia, and Russia have no cloud computing providers from key global data centers, thereby forcing local companies to build their own or use

cloud providers that are not the most efficient or secure. Cross-border data flow restrictions go against the very distributed design of the Internet and do not achieve the goals often cited for such misguided policies.

Electronic payment services are also often targeted by data localization and other regulations in a way that effectively acts as a barrier to digital trade, often enacted to favor a local firm. Such services, through credit card companies (such as Visa and MasterCard) or online providers (such as PayPal), are critical enablers of the global digital economy and are closely tied to trade flows. Such cross-border transactions are growing rapidly as technology, consumer preferences, and services continues to change and as more people in more countries, especially emerging economies, gain access to the Internet and online e-commerce platforms.

As global electronic payment services grow, more countries are trying to capture this activity for local firms by introducing protectionist policies. In 2010, the United States won a legal case against China at the World Trade Organization for measures it had introduced that discriminated against foreign payment providers—a critical win given the large and growing role of the Chinese market for these services. Recognizing the rise of these measures, the TPP’s financial services chapter explicitly prohibits member countries from introducing measures that act as a barrier to the cross-border delivery of electronic payment card services. Despite this provision, it is disappointing to learn that Vietnam—despite this being raised as an issue by the United States Trade Representative—is pursuing measures that directly contravene this provision by enacting a barrier that favors a new local firm over foreign service providers.

The Trans-Pacific Partnership (TPP)—Breaking Down and Protecting Against Digital Trade Barriers

The TPP’s e-commerce chapter takes a number of positive steps in pushing back against barriers to digital trade. The TPP is the first trade agreement to include provisions that prohibit barriers to cross-border data flows and forced data localization, thus outlawing the practice of requiring companies to store data or setup computing facilities within a country’s borders as a condition of competing in domestic markets. These updated rules are sorely needed as current World Trade Organization (WTO) rules were largely codified in the 1990s when the Internet as we know it barely existed, as did even the concept of digital protectionism. As demonstrated by the examples above, the failure of these rules to adapt to modern trade has allowed countries to introduce a range of barriers to cross-border data flows.

The TPP’s e-commerce chapter recognizes the vital importance of digital trade to the modern global economy. The e-commerce chapter addresses a range of issues that enable digital trade, including provisions that:

- Prohibit countries from imposing customs duties on electronic transmissions and digital goods;
- Prohibit countries from discriminating against digital products as compared to tangible goods and services;
- Prohibit requirements that force suppliers to share valuable software source code with foreign governments or commercial rivals as a condition of entry;

- Facilitate the recognition and use of electronic authentication and signatures;
- Ensure countries have measures against unsolicited emails (spam); and
- Ensure that countries have laws and regulations that protect consumers from fraudulent and deceptive activities and protect personal information online, and sets up a mechanism for countries to cooperate on a range of e-commerce related issues.

The TPP's primary contribution to developing a modern set of rules for digital trade is its provisions addressing localization. The TPP's key provisions prohibit countries from enacting barriers to cross-border data flows or from enacting requirements that companies must use local (or locate their own) computing facilities within a country as a condition of doing business in that country.⁷³ These provisions are indeed groundbreaking, as before there were no rules in place that protected and enabled cross-border data flows. These rules also go a long way to setting a new norm for the global digital economy, as TPP member countries are home to close to 600 million Internet users, or almost one in every five global Internet users. The TPP's impact on global e-commerce and data flows will only grow if more countries join the agreement—as will happen if Indonesia, the Philippines, South Korea, Thailand, and others follow through on their expression of interest in joining the TPP—or if these provisions are adopted in other trade agreements.

However, how effective these rules will be in removing existing—and preventing future—barriers to digital trade depends in part on how TPP members interpret, enact, and enforce these rules, especially the exceptions to each of these provisions. The provisions prohibiting barriers to cross-border data flows and forced localization each contain an exception that nothing in these provisions “shall prevent a party from adopting or maintaining measures inconsistent [with the prohibition] to achieve a legitimate public policy objective.” In terms of what is a legitimate public policy, the TPP refers to current World Trade Organization exemptions for public morals, public order, and privacy.⁷⁴ Such provisions would clearly be legitimate, for example, in the case of blocking child pornography; they would not be if a government refused to allow insurance companies to locate their data on servers in another nation. The lack of legal jurisprudence (e.g., countries challenging digital trade barriers in a legal dispute at the WTO) on these exceptions makes it unclear whether barriers to data flows enacted due to privacy and cybersecurity concerns are technically allowed or not.

This raises the prospect that TPP member countries' existing barriers to cross-border data flows, such as for privacy reasons (such as in Australia, Canada, and Malaysia) or national security reasons (such as Vietnam), may be allowed to remain in place (or even be potentially copied by other TPP members). The TPP includes language that tries to limit the potential for such exceptions to be misused by stating that any rule that contravenes these prohibitions “is not applied in a manner which would constitute a means of arbitrary or unjustifiable discrimination or a disguised restriction on trade” or “does not impose restrictions...greater than are required to achieve the objective.” However, the effectiveness of these limitations will likely depend in part upon implementation, and potentially, enforcement through the TPP's dispute resolution mechanism to

determine whether such barriers to data flows are indeed an unjustifiable trade barrier and/or unnecessarily restrictive.

The TPP's much-improved framework for digital trade and data flows was let down in one key area—financial data. The United States undermined its own interests in the TPP by pushing for the financial sector to be exempted from the agreement's prohibitions on measures that would force data to be stored within a country's geographic borders. This rule, made at the insistence of U.S. financial regulators, unfortunately undermined the United States' natural position as a leader of the global digital economy and as an advocate for the free flow of data.

As ITIF argued in its report, *Financial Data Does Not Need or Deserve Special Treatment in Trade Agreements*, the TPP's special treatment of financial data was unnecessary and redundant, given financial regulatory reforms introduced after the global financial crisis (in the Dodd-Frank Wall Street and Reform and Consumer Protection Act) and existing trade provisions that provide an exemption for prudential regulation.⁷⁵ This special treatment of financial data was also dangerous as it created a pernicious loophole that could be misused for protectionist purposes by other countries, such as China, India, or Russia. Allowing forced local storage for financial data on regulatory grounds could have been the start of a slippery slope that allowed these countries and others to force local data storage for other types of data, such as health and education, based on broadly and poorly defined “regulatory” concerns.

Making a special case out of financial data would be highly problematic. Giving countries a free pass to require certain data to be stored inside their borders would raise costs for U.S. financial services firms, and the firms would likely pass those costs on to the businesses and customers they serve. The special carve out also validates the false impression that moving data across borders is somehow inherently riskier than storing it locally, which would embolden data mercantilists and undermine U.S. efforts to push back against such measures.

Thankfully, the Obama administration has recognized that this provision needs fixing. Reports on the outlines of this fix indicate it will go a long way toward removing this loophole. The fix sets out specific steps to facilitate regulatory access to financial data among TPP member countries, and in doing so, makes any potential localization a truly final resort, while ensuring that countries remain committed to not enacting policies that require data localization or other barriers to data flows.⁷⁶ As ITIF has argued, in an ideal world this provision would be dropped completely from the TPP and any other future U.S. trade agreements.⁷⁷ However, given the position of financial regulators, the fix seems to find a middle ground for facilitating data flows and legitimate government access to data.

Looking Ahead—Building on TPP in TiSA and T-TIP

The last few months have seen mixed progress on establishing movement toward free trade in data. In many nations, trade negotiators are working to build an international consensus and enforceable regime for the free flow of data across borders. However, at the same time, law enforcement and intelligence communities are seeking to preserve or extend their access to data. These two goals are in fundamental tension and unless

nations can put in place a reasonable and consistent framework to govern lawful government access to data, nations will be more likely to restrict cross-border data flows and trade, commerce, law enforcement, and intelligence gathering will all suffer.

Indeed, the turbulence in the system now underscores the urgency of addressing these issues, both in terms of advancing new trade regimes to establish enforceable rules for free trade in data and in crafting international standards for government access to data. However, the United States' recent success in negotiating the TPP, the Umbrella Agreement with the European Union (which enables sharing of law enforcement data), and the Privacy Shield (which manages privacy related data issues) shows that success is possible. Another productive step has been congressional passage of the U.S. Judicial Redress Act (since incorporated as part of the Privacy Shield), which grants EU citizens standing to sue the U.S. government concerning its collection of EU data.

Nevertheless, a key challenge to achieving strong outcomes on data flows in upcoming trade agreements will be ensuring that privacy and national security exemptions are specific and narrow enough to ensure that members are not able to use these as an excuse for digital protectionism. As noted, the exemptions under existing international agreements, such as the WTO's General Agreement on the Trade in Services (GATS), are widely referenced and used in bilateral and regional trade agreements, but are vaguely defined and untested by legal challenges, thereby providing a loophole for data protectionism. The United States should use trade agreements and other international mechanisms to push for greater information sharing and cooperation on the legitimate and practical concerns involved in improving a country's cybersecurity and privacy protections. This reduces a country's ability to misuse concerns over these issues as a guise to enact data protectionist policies. As with the TPP, this involves cooperation on a wide range of issues such as protecting personal information, protecting consumers online, cybersecurity, and government access to online information. Directly addressing these legitimate concerns will allow stronger rules on cross-border data flows and localization.

The Trade in Services Agreement (TiSA) is the United States' most immediate opportunity to build on the TPP. A high-standard TiSA agreement would effectively set a new global norm for rules that support and protect the free flow of data. This is because TiSA has a large and diverse membership of developed and developing countries—it includes 15 non-TPP members, including the European Union, Colombia, Pakistan, South Korea, Taiwan, and Turkey. TiSA countries represent 75 percent of the world's \$44 trillion services market.

As ITIF argues in *Crafting an Innovation-Enabling Trade in Services Agreement*, for TiSA to build and improve upon the TPP's efforts to address data localization it needs to explicitly cut the false link between geography and data policies concerning privacy and cybersecurity.⁷⁸ This should be a key litmus test to evaluate any final agreement. The United States should not budge from its commitment to use TiSA to enact strong rules to protect data flows, especially as more countries are likely to sign onto TiSA after it is completed. TiSA member countries are already discussing how the agreement can be expanded from a plurilateral agreement outside the WTO (which it is now) into a multilateral agreement under the WTO. Such an expansion means the rules in TiSA would formally become the core of the international trading system for services and data.

Holding firm to this commitment is important because as much as TiSA's membership is notable for whom is involved, it is equally important to recognize which countries are not—data mercantilists such as China, India, Indonesia, and Russia. An upfront commitment for these countries to join TiSA should be for them to remove data localization measures, practices and other barriers to cross-border data flows.

The United States has another significant opportunity to shape the rules governing digital trade in its critical negotiations for a Transatlantic Trade and Investment Partnership (T-TIP) with the European Union. U.S. trade negotiators must insist that strong cross-border data provisions be included. If the T-TIP is truly going to be a “21st century trade agreement,” it must give data flows the same level of consideration it would have given manufacturing in a 20th century agreement.

Unfortunately, the prospects for T-TIP to set new standards for unimpeded digital trade and data flows are not looking sanguine. First, the United Kingdom's decision to leave the European Union will likely delay further negotiations as European Union countries re-evaluate their positions in T-TIP (minus the United Kingdom) as the United Kingdom and the European Union try to figure out how to reconfigure arrangements for trade, political, and other issues. Second, T-TIP negotiations over digital trade and data flows have lagged other issues, as the European Union has proven unwilling to discuss these issues until the transatlantic data transfer agreement, the Privacy Shield, is in place.⁷⁹ While the European Union's efforts to negotiate and implement the Privacy Shield agreement are commendable, they should not hold back efforts to create a broader framework to support digital trade and the free flow of data. Thankfully, the European Union recently announced that Privacy Shield should be implemented shortly, so hopefully T-TIP negotiations can catch up after this happens.⁸⁰ Finally, when negotiations do start in earnest, they are likely to be challenging as a growing range of EU policymakers are turning against trade and are attached to the notion that data needs to be stored locally for it to be secured or for privacy to be maintained. All these factors, when taken together, pose a great threat to T-TIP which, to be effective, needs to include data localization measures.

The challenge now for forward-looking policymakers will be to approve TPP, focus on TiSA and T-TIP, and look beyond them. The United States should push further to protect the free and unfettered movement of data across the globe—for example by championing a “Data Services Agreement” at the World Trade Organization, which would commit participating countries to protect cross-border data flows and prevent signatory countries from creating barriers to them. It would be akin to the Information Technology Agreement (ITA)—which 54 countries commendably agreed to expand with 201 new product lines earlier this year—for cross-border data flows. At the same time the United States pushes for stronger, broader, and more enforceable trade regimes on cross-border data protection, it must also lead on reform of government access to data. Otherwise, many nations will likely use concern over government “snooping” as an excuse to restrict cross-border data flows, even if they have signed a trade agreement covering the issue.

To address this, the United States and European Union should collaborate toward creating a “Geneva Convention on the Status of Data,” as ITIF writes in *The False Promise of Data Nationalism*. The purpose of such a convention would be to resolve international questions of jurisdiction and transparency regarding the

exchange of information. This would allow for the development of global rules on data sharing and ensure that legitimate concerns regarding privacy and cybersecurity are taken into account as cross-border data flows increase. This multilateral agreement would establish specific rules for government transparency, create better cooperation for legitimate government data requests, and limit unnecessary access to data on foreign citizens. It would also settle questions of jurisdiction when companies encounter conflicting rules, assist nations in reassuring individuals at home and abroad that the era of mass electronic surveillance unencumbered by effective judicial oversight is at an end, and better hold nations accountable for respecting basic civil liberties. And just as the principles of the Geneva Convention are taught to soldiers in basic training, the principles of a Geneva Convention for Data should be taught to network administrators and IT professionals worldwide, thereby ensuring that the ethics of the agreement are embedded at all levels of industry and government.

The United States could also strengthen its MLAT regime by having the government expedite and simplify the MLAT process through a variety of measures such as increased funding for the Department of Justice's Office of International Affairs and the introduction of standardized, online requests. It could also allow countries with high human rights standards to join the eventual U.S.-UK MLAT agreement.

At the same time U.S. policymakers should insist that other nations not use variations in privacy laws as a justification for limiting free trade in data, whether policymakers in these nations are doing so out of a sincere concern for privacy or whether they are using privacy as a guise for data protectionism. If the EU precedent (for data privacy policies) stands only one of two outcomes are possible. The first is that all nations will have to put in place domestic privacy rules as strict as Europe's, or in fact, as strict as the nation with the strictest rules in the world. Otherwise, the nation with the strictest rules will simply say that data cannot leave its nation. To be sure, this is an outcome that most U.S. privacy advocates relish, for they have long advocated that the United States adopt EU-style privacy laws, ignoring the real economic and innovation costs that would come from doing so. When firms using the Internet cannot use data effectively because of draconian privacy rules, the result, as studies have shown, is less revenue, meaning a less robust Internet ecosystem.⁸¹ In fact, in looking at the impacts of the European Union's previous (2002) Privacy and Electronic Communications Directive (PECD), Avi Goldfarb and Catherine Tucker found that they resulted in an average reduction in the effectiveness of online ads of approximately 65 percent.⁸² The authors write "the empirical findings of this paper suggest that even moderate privacy regulation does reduce the effectiveness of online advertising, that these costs are not borne equally by all websites, and that the costs should be weighed against the benefits to consumers." If European advertisers reduced their spending on online advertising in line with the reduction in effectiveness resulting from stricter privacy regulations, "revenue for online display advertising could fall by more than half from \$8 billion to \$2.8 billion." And without that revenue it has been more difficult for European Internet firms to thrive. And now many U.S. privacy advocates are using this breakdown to push their innovation-restricting policy agenda to impose European-style privacy regulations onto the United States. But as noted above, it is a "red herring" to assert that the only way to protect the commercial privacy and security of a nation's citizens' data is to restrict the export of that data. Companies simply cannot escape legal responsibilities for data by moving it outside of a nation. Moreover, the United States should not allow other nations to dictate U.S. laws and regulations about the Internet when doing so

will have no effect on trade—doing so would set a dangerous precedent for other policy issues, such as freedom of expression.⁸³

The second possible outcome is that nations will effectively levy a privacy “tariff” on all companies in nations that do not adopt their rules, as they will have to use more complex and costly arrangements to transfer data across borders. Neither solution is acceptable in a global economy.

As G20 countries increasingly consider digital trade issues, another step the United States should take is to work to obtain G20 leaders’ endorsement of the OECD Internet policymaking principles, which include allowing cross-border information flows and respecting human rights, as well as endorsement of interoperable privacy protection, such as APEC’s privacy framework.⁸⁴

Conclusion

In conclusion, data is the lifeblood of the modern global economy. The TPP represents the best opportunity to establish high-standard rules that will permit digital trade to flourish to the maximum possible extent—and ensure that U.S. enterprises, many of which have pioneered the creation and innovative use of the Internet and other digital technologies, can enjoy more open access to partners’ markets and be able to seamlessly move data across international borders. If the TPP is not adopted the global digital economy will be put at risk, because a significant opportunity will be lost to put an affirmative stake in the ground demonstrating that localization barriers to digital trade are unacceptable in the modern global economy. The United States should view the TPP as a building block toward stronger and more comprehensive rules for digital trade and data flows in TiSA, T-TIP, and elsewhere. The United States should use these trade agreements to protect the ability of individuals and companies to engage in data-driven commerce without geographic restrictions. Companies are using data in creative and wondrous ways to create new value for the global economy. Policymakers must be equally visionary in shaping rules that protect citizens’ rights to privacy, without unduly encumbering data’s catalytic economic growth and innovation potential. America’s ability to grow its economy and jobs will depend on it. Thank you again for this opportunity to appear before you today.

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Chairman REICHERT. Mr. Padilla.

**STATEMENT OF CHRISTOPHER PADILLA, VICE PRESIDENT,
GOVERNMENT AND REGULATORY AFFAIRS, IBM CORPORATION**

Mr. PADILLA. Thank you, Mr. Chairman. A privilege to be here today on behalf of IBM.

And I would make one point, and that is to say this from IBM as a technology company, the digital trade is not a technology company issue. It is about every industry, because every industry and all consumers are becoming increasingly digital. And to illustrate that point, I would like to use an example, a hypothetical example.

Imagine that you as Members of the Committee were invited to Brussels by the European Parliament for an interparliamentary dialogue on trade. If you check in for an evening flight to Brussels via London, the minute you do so, the airline sends data ahead of you to Heathrow to facilitate the transfer of your baggage between flights, to send security and customs clearance information, and even to communicate your meal preferences for the next flight.

While you are flying, the engines on your aircraft are automatically transmitting data ahead of you to ground crews in London via a satellite link through a data center in the United States saying that they need some minor maintenance when the plane lands. When you land at Heathrow, you might take advantage of your layover to use your U.S. ATM card to get some local currency. You might post a few photos on your Facebook account. You might check The Weather Channel app on your iPhone to see if it will be raining in Brussels, which it probably will be. And you might even use the app on your device to look at the Wimbeldon app and watch Serena Williams win another championship.

You are not even in Brussels yet, and in less than 12 hours you have created, caused, or benefited from literally scores of cross-border movements of data. Your flight information, your baggage count, your meal preferences, your banking transaction, your Facebook post, your weather inquiry, and even your sports fix would not have been possible or as easy if data were not permitted to flow freely in the cloud.

And at IBM we know this because we touched each one of those transactions through your airline reservation system, through engine maintenance systems, through banking networks all run and managed by IBM. Or the IBM Weather Channel app on your iPhone, which is the most downloaded app there is. Or if you watched Wimbeldon on your Wimbeldon app on your device, that came too from IBM. And we supported it through data centers in Toronto; New York; San Juan, Puerto Rico; Melbourne; and London.

Now, imagine for a minute that your trip had proceeded, but there were onerous rules preventing your data from going ahead of you to Europe or if the data you generated while you were in Europe was required to stay there within the European Union. This is not a hypothetical risk. In fact, there was a very real possibility, just a few months ago, that transatlantic data flows might have been interrupted, absent a special US/EU privacy shield agreement signed just yesterday in Brussels to allow those flows to continue.

There is continued pressure for digital protectionism from France to India to Brazil to China. Countless countries are seeking to restrict the flow of data or require that it be stored locally.

So the point is that this is not just an issue for companies like IBM. It affects countless industries: Airlines, express delivery firms, retailers, banks, engine manufacturers, and every one of us as a consumer. The simple fact is this: If data cannot flow freely, 21st century commerce cannot happen. I am happy that Congress and the administration recognize this with language in Trade Promotion Authority supported on a strong bipartisan basis that made clear that this should be a strong negotiating objective of the United States in future trade agreements.

And in TPP, the United States has negotiated the most far reaching, groundbreaking really, provisions regarding digital trade ever seen in a trade agreement. These protect the cross-border movement of data and prevent regulations that require data to be stored locally. They also set a vital precedent for every future agreement, particularly our current negotiations with the European Union.

American companies are leaders in digital trade, as you said, Mr. Chairman, and, therefore, we have the most to lose from digital protectionism or data nationalism. Data touches each of our lives every day. But by negotiating trade agreements and trade rules to keep that data flowing freely, not only do we protect commerce, but we protect the freedom of expression, as Mr. Rangel said. This is United States leadership, and we are once again leading toward a more prosperous, open, and interconnected future.

Thank you for the opportunity to be here.

Chairman REICHERT. Thank you.

[The prepared statement of Mr. Padilla follows:]

**Testimony of Christopher A. Padilla
Vice President, Government and Regulatory Affairs, IBM Corporation**

“Expanding U.S. Digital Trade and Eliminating Barriers to U.S. Digital Exports”

**Before the Ways and Means Trade Subcommittee
United States House of Representatives**

July 13, 2016

Chairman Reichert, Ranking Member Rangel, and Distinguished Members of the House Trade Subcommittee, thank you for the opportunity to appear before you today to discuss IBM's views on the importance of digital trade to the health of the U.S. economy and to creating opportunities for American workers.

I would like to begin with an example of how our work and our lives are touched by the everyday movement of data across borders. Let's imagine for a moment that as Members of Congress you have been asked to participate in an inter-parliamentary dialogue on trade with the European Parliament in Brussels.

As you check in for an evening flight to Brussels via London, the airline sends data ahead of you to Heathrow to facilitate the transfer of your baggage between flights, and to communicate your meal preferences to the next flight crew.

While you're flying across the Atlantic, the engines of your aircraft are automatically transmitting ahead to ground crews in London, via a satellite link to a data center in the United States, that they will require some minor maintenance upon landing. The necessary parts are searched on a database in France, pre-ordered from inventory in the UK, and sent via express delivery to Heathrow.

When you land, you take advantage of your layover to use your U.S. bank ATM card to get some local currency, post a few photos to your social media accounts, check the Weather Channel app on your iPhone to see if it will be cloudy in Brussels (spoiler alert: it will be), and – while you're there – to watch live feed on your tablet of Serena Williams winning another Wimbledon title via the tournament app.

You're not even at your destination but in less than 12 hours, you have created, caused, or benefitted from literally scores of cross-border data flows. Your flight information, your baggage count, your meal preferences, your banking transaction, your social media post, your weather inquiry and your sports fix – none of it would be as easy and seamless as you've come to expect were data not permitted to flow freely in the cloud.

At IBM, we should know, because IBM touched each one of those transactions:

- Via airline reservation and information systems managed by IBM globally;
- Via inventory management systems and logistics and delivery systems supported by IBM software and data analytics;

- Via data centers and banking networks IBM manages in the U.S. and Europe;
- Via billions of real-time weather forecasts generated each day from thousands of weather stations linked to IBM's Weather Channel app;
- And even via the app for fans to get real-time updates from Wimbledon, from the Masters, from the Australian Open, or many other sporting events.

Now, imagine for a moment how different your trip might have been if onerous rules prevented your data from traveling ahead of you to Europe. Or if the data you generated in Europe was required to stay there, or be managed only via data centers geographically located inside the European Union, or via a "Schengen cloud."

These are not hypothetical risks – in fact there was a very real chance earlier this year that trans-Atlantic data flows might have been stopped absent a special US-EU agreement to continue them. And there is continued pressure in countries around the world – from France to India, from Brazil to China, from Turkey to Indonesia, for data that is generated locally be stored locally as well.

The cross-border movement of data is not a technology company issue – it's an issue affecting every one of us, every day. And whether it is airlines, express delivery carriers, banks, engine manufacturers, weather forecasters or sports fans – the modern economy is powered by data.

The simple fact is: If data cannot flow freely, 21st Century commerce cannot happen.

IBM is uniquely positioned to offer our insights on the digital transformation currently reshaping the worldwide economy. We're an information technology company that has been around for over 100 years. Throughout our history, global trade has been a hallmark of IBM's growth and success.

In its latest transformation, IBM has become a "cloud platform and cognitive solutions company." Since IBM operates in over 170 countries and earns about two-thirds of its revenue outside of the United States, digital trade is essential to our company's future – and to the future of our clients.

I gave the example of your hypothetical trip to Europe. Let me give another. Perhaps you have heard of IBM Watson from its win on the TV quiz show *Jeopardy!* in 2011 against two of the world's best human contestants. (Though you may have heard around the cloakroom that your former colleague Rep. Rush Holt did win one round against Watson in a contest on Capitol Hill that same year.)

Well, Watson has come a long way since 2011, when it did one thing: answering questions in natural language. Today, Q&A is just one of more than 30 Watson capabilities – all of which have been turned into digital services delivered via the cloud. With Watson, every digital application, product and process can understand, reason and learn. Watson is the world's first truly cognitive system.

We are currently providing Watson solutions to clients in over 40 countries, including leaders and startups in health care, financial services, retail, energy, automotive,

government and more. Watson can now speak Japanese, Spanish, Brazilian Portuguese and Arabic. And it can “see” – it is being used to help radiologists scan thousands of medical images.

But if Watson were not able to communicate across borders – to share insights, to glean intelligence from countless online medical journals, or to analyze customer or patient data against databases stored in cloud centers worldwide – then Watson would be less robust... less cognitive, if you will.

Digital trade isn't just about business, it's about working across countries, cultures and languages to solve humanity's biggest problems. Consider some social challenges from today's headlines: Zika. Ebola. Cancer.

Alarming healthcare challenges that have touched too many of our families, and they don't respect lines on a map. Right now, more than 700,000 people on six continents are coming together to create a virtual supercomputer – the World Community Grid – that medical researchers are using to find better treatments for these diseases, and others. It's a tool facilitated by IBM that harnesses spare computing power on computers and mobile devices around the world over... transmitting data between those computers seamlessly and instantly to create a virtual – and free – supercomputer for social good. It wouldn't be possible if that spare computing power and data could not transit seamlessly and instantly across borders.

If you're still not convinced, let's look at some numbers:

- IBM estimates that there are currently over 9 billion connected devices around the world making up the Internet of Things.
- And these devices generate 2.5 billion gigabytes of data every day – yet 80% of the data are unstructured or “raw,” creating a largely untapped new “natural resource.”
- According to the World Bank's 2016 World Development Report, a typical day in the life of the Internet sees 186 million Instagram photos sent around the globe; 152 million Skype calls being made; 36 million Amazon purchases transacted; 8.8 billion YouTube videos watched; 803 million Tweets sent; 4.2 billion Google searches undertaken; 2.3 gigabytes of web traffic created; and 207 billion emails sent – all in just a typical day.
- All that data generates economic and social value. In 2015, big data vendor revenues grew 23.5% from the year before, and that growth is only expected to continue. Data-driven revenues that were \$18.3 billion in 2014 are expected to reach \$92.2 billion over the next ten years.

These statistics illustrate the essential role of data in today's global economy, and American ingenuity is leading the way.

Digital trade has already produced significant benefits for the U.S. economy. The USITC estimated in 2014 that digital trade had increased U.S. real GDP by 3.4 to 4.8 percent; real wages by 4.5 to 5.0 percent; and aggregate employment by up to 2.4 million jobs. The McKinsey Global Institute found that data flows were 45 times larger in 2014 than in 2005, generating \$2.8 trillion in value for the global economy.

The U.S. clearly has a competitive advantage in digital trade:

- 13 of the top 20 Internet-based companies are American.
- The United States is the top creator of digital content of all types – from business software to entertainment.
- And the United States is the world's leading exporter of services, over half of which, nearly \$400 billion, are digitally enabled.

In today's networked world, international commerce simply cannot function without constant streams of information flowing swiftly and seamlessly across borders. But the benefits of digital trade for American companies and their employees are at risk due to the rise of "digital protectionism," in which countries block cross-border data flows and require the use of local data centers to provide services. We have seen these barriers proliferate – in Europe, in Latin America, in the BRICs economies, and elsewhere.

Congress and the Administration have recognized this reality and responded – in a notably bipartisan way. With strong and bipartisan leadership from both Republicans and Democrats in Congress, digital trade was included as a key negotiating objective for the United States when Trade Promotion Authority was passed last year.

The Obama Administration responded and delivered what Congress sought – and then some. In the Trans-Pacific Partnership, the United States has negotiated the most far-reaching digital provisions found in any trade agreement. These provisions are truly groundbreaking, and they enjoy very broad-based support. TPP is important because it will ensure that digital barriers cannot take root in 12 economies that account for nearly 40% of the world's GDP.

But TPP is equally important in that it sets a vital precedent for digital trade provisions in future trade agreements, including the Transatlantic Trade and Investment Partnership (TTIP) and the Trade in Services Agreement (TiSA).

If the United States wants to lead the technological race in the 21st Century, it must be at the forefront of writing the digital "rules of the road." Why? Because digital trade holds the potential to create tremendous growth for the United States and the world – as long as our trading partners do not impose barriers that destroy economic opportunities before they are created. Because we are the leaders in this space, American companies have the most to lose from digital protectionism.

Data touches each of our lives, every day. America is at the forefront of data-driven innovation, and we are fostering an open and competitive global digital economy. Our

talented entrepreneurs and engineers are poised to unleash data not just to facilitate your business trip to Brussels – but to make life better for everyone. By negotiating trade rules to keep data flowing freely across borders, the United States is once again leading the global economy toward a more prosperous, open, and interconnected future.

Thank you for this opportunity. I look forward to your questions.

Chairman REICHERT. Mr. Beckerman.

**STATEMENT OF MICHAEL BECKERMAN, PRESIDENT AND CEO,
INTERNET ASSOCIATION**

Mr. BECKERMAN. Thank you, Mr. Chairman and Ranking Member, Members of the Committee. I appreciate the opportunity to testify on digital trade.

My name is Michael Beckerman, and I am president and CEO of the Internet Association. Internet Association represents nearly 40 of the world's leading Internet companies. And our mission is to foster innovation, promote economic growth, and empower people through the free and open Internet.

I will focus my testimony this morning on two key points. The first being that the importance of the effective digital trade policies will provide a frictionless access to global markets. And second, I will talk about the Internet Association's trade policy recommendations that I think will help grow the economy. And I ask that my full written testimony be submitted for the record.

Internet platforms are the global engine of the innovation economy. The Internet sector represents an estimated 6 percent of U.S. GDP in 2014, totaling nearly \$1 trillion and nearly 3 million American jobs. In addition to the economic contribution to the Internet industry, our member companies are transforming the way we do business at home and abroad by lowering barriers to entry and providing unprecedented growth opportunities for American businesses, large and small, and entrepreneurs.

The Internet, I believe, is the greatest American exporter of the 21st century, and cross-border trade is no longer only defined by shipping containers or freight lines. Today, trade is just as likely to be data flowing freely across borders or even a swipe of an app.

In addition to borne Internet industries, the Internet is yielding dramatic benefits for traditional industries that have nothing to do with technology at all. In a recent study, we found that more than 75 percent of the economic value that has been generated from the Internet is being captured by companies in traditional industries. Many of them are small businesses from agriculture to manufacturing and beyond. And it is no accident that many of the world's leading Internet companies have been born and are scaled here in the United States, something that we should be proud of and encourage.

But while the Internet has become a major driver of economic activity and global growth around the world, governments have continued to engage in harmful policies that we think need to be addressed. These include activities that block and censor content or mandate that data be stored locally. These activities directly threaten the free and open nature of the Internet and act as digital protectionism that stifles trade and investment.

The ability of Internet platforms to export innovative online services to new markets is also dependent on a foreign country's ability to promote balanced and equitable enforcement of intellectual property rights. Without adequate limitations and exceptions in copyright law, such as fair use, the Internet industry would face significant barriers to entry in foreign markets, and U.S. creators would lack sufficient freedom to create and distribute new works abroad.

Outside the area of intellectual property, intermediary liability protections, reflected in Section 230 of the Communications Decency Act, provide the backbone of Internet policy by enabling U.S. companies to host user-generated content without being held liable.

The Internet ecosystem flourishes when users and content creators are empowered through an open architecture that promotes free expression and unrestricted exchange of ideas and information. The Internet Association strongly supports including intermediary liability protections and trade agreements like TiSA and others to promote e-commerce and democratic discourse.

Historically, pro-Internet policies have been absent from trade agreements. While we recognize there may be a diversity of views on TPP, we feel that the TPP does acknowledge the benefits of the full balance of copyright law, requiring countries to adopt innovation critical limitations and exceptions, as well as safe harbors to protect the basic functionality of the Internet. The TPP also promotes a more inclusive trade economy by supporting the ability of small businesses to use the Internet to serve customers and users in key markets globally by streamlining the customs process and increasing the de minimis limits for small businesses.

We believe that the true test of any trade agreement should be judged by its implementation. And we look forward to working with both the Committee and the administration to ensure that digital trade provisions in TPP and other agreements thoughtfully are implemented.

And finally, as I close, we hope that the Committee will continue to work closely with the Internet community to find ways to create a more inclusive system for negotiating trade agreements, such as creating a chief digital trade negotiator that will better reflect the realities of today's digital Internet economy.

And with that, I want to thank you for having me testify today. And I look forward to any questions the Committee may have.

Chairman REICHERT. Thank you.

[The prepared statement of Mr. Beckerman follows:]

United States House of Representatives

Committee on Ways and Means

Subcommittee on Trade

Hearing on Expanding U.S. Digital Trade and Eliminating Barriers to

U.S. Digital Exports

Testimony

by

Michael Beckerman, President & CEO

Internet Association

Chairman Reichert, Ranking Member Rangel, and Members of the Subcommittee on Trade, thank you for the opportunity to testify today on “Expanding U.S. Digital Trade and Eliminating Barriers to U.S. Digital Exports.” My name is Michael Beckerman and I am the President and CEO of the Internet Association.

The Internet Association represents nearly 40 of the world’s leading internet companies.¹ Our mission is to foster innovation, promote economic growth, and empower people through the free and open internet. As the voice of the world’s leading internet companies, our job is to ensure that all stakeholders understand the benefits the internet brings to our economy.

Today, I will address the following points in my testimony:

1. The internet is revolutionizing our economy, with the internet sector contributing to economic growth and opportunity by facilitating exports for Small and Medium-sized Enterprises and traditional businesses.
2. The growth of the internet is underpinned by strong laws and policies in the United States that enable the free flow of information, create a balanced copyright framework that unleashes opportunities for creators and innovators, and include clear intermediary liability protections that enable internet services to provide frictionless access to global marketplaces for businesses of all sizes.

¹ Members of the Internet Association include Airbnb, Amazon, Coinbase, DoorDash, Dropbox, eBay, Etsy, Expedia, Facebook, FanDuel, Google, Groupon, Handy, IAC, Intuit, LinkedIn, Lyft, Monster Worldwide, Netflix, Pandora, PayPal, Pinterest, Practice Fusion, Rackspace, reddit, Salesforce.com, Snapchat, Spotify, SurveyMonkey, Ten-X, TransferWise, TripAdvisor, Turo, Twitter, Uber Technologies, Inc., Yahoo!, Yelp, Zenefits, and Zynga.

3. While the United States leads the world in its digital policy framework, U.S. companies face significant market access barriers in other countries that lack similar frameworks. We have seen a rising tide of digital protectionism and bad policy frameworks abroad that threaten to undermine the internet's growth.

4. To combat this trend, the United States needs a trade policy that is better oriented to the digital economy – both in future trade agreements and in the implementation of the Trans-Pacific Partnership (TPP). In particular, the U.S. must ensure that balanced intellectual property laws, limitations on liability for online intermediaries, streamlined trade facilitation and customs procedures, and rules on the free flow of information and data across borders are applied and vigorously enforced in current and future trade agreements.

I. Introduction to the Internet Industry

Internet platforms are the global engine of the innovation economy, with the internet sector representing an estimated 6 percent of U.S. GDP in 2014, totaling nearly \$967 billion, and accounting for nearly 3 million American jobs. Internet Association's member companies are transforming the way we export and do business at home and abroad by lowering barriers to entry and providing unprecedented growth opportunities for American businesses and entrepreneurs. The internet sector itself is a major U.S. export industry – the majority of many of our companies' users and revenues come from outside the U.S. – while also transforming trade for small, medium, and large businesses.

Cross-border trade is no longer defined by shipping containers and freight lines – but is now just as likely to be data flowing freely across borders. Buyers and sellers from around the globe are now connected instantaneously through the internet. Small businesses and entrepreneurs are harnessing the power of the internet to reach new markets and connect with new customers. Businesses of all sizes are taking advantage of the benefits the digital economy provides by embracing internet-enabled technology. In addition to ‘born-internet’ industries, the internet is yielding dramatic benefits for traditional industries. A recent study found that more than 75 percent of the economic value created by the internet is captured by companies in traditional industries, many of them small businesses.² It is safe to say that nearly every country, sector, and all types of businesses are using the internet in some form to increase efficiency, growth, and competitiveness.

Our members are introducing international audiences to American musicians, writers, and directors through services like Spotify, Pandora, and Netflix, promoting small hospitality providers through TripAdvisor and Yelp, and are revolutionizing how entrepreneurs source materials and supply their customers through Amazon. Frictions in international marketing are also alleviated by platforms like eBay and Etsy that make sellers’ products fully searchable. Cloud services from Amazon, Dropbox, Google, Rackspace, Intuit and others enable entrepreneurs and small businesses to instantly build a global network footprint, running

² McKinsey Global Institute, “Internet matters: The Net’s sweeping impact on growth, jobs, and prosperity,” May 2011 (<http://www.mckinsey.com/industries/high-tech/our-insights/internet-matters>)

anything from an e-commerce site to a bank to a genomics company without building their own IT infrastructure. And platforms like Facebook Live and YouTube are giving entrepreneurs the ability to showcase their products to a global audience, all in real time.

In the United States, the open, technology neutral, innovation without permission ecosystem of the internet has grown exponentially since it was first used commercially in the early 1990s. Between 2004 and 2009, the digital economy was the fastest growing sector of the U.S. economy, representing 15 percent of U.S. GDP.³ Today, 73 percent of Americans are using the internet on a daily basis,⁴ while over \$8 trillion is exchanged through global e-commerce each year. The United States is a net exporter of internet related products and services and according to the United States International Trade Commission, U.S. exports of digitally enabled services (one measure of international digital trade) grew from \$282.1 billion in 2007 to \$356.1 billion in 2011, with exports exceeding imports every year.⁵ In its short history, the internet as a universal driver of trade and global growth has proven to be highly beneficial to the United States economy, empowering and democratizing consumers and users worldwide.

³ McKinsey Global Institute, "Internet matters: The Net's sweeping impact on growth, jobs, and prosperity," May 2011 (<http://www.mckinsey.com/industries/high-tech/our-insights/internet-matters>)

⁴ Pew Research Center, "One-fifth of Americans report going online 'almost constantly'" by Andrew Perrin, <http://www.pewresearch.org/fact-tank/2015/12/08/one-fifth-of-americans-report-going-online-almost-constantly/>

⁵ United States International Trade Commission Investigation No. 332-531 USITC Publication 4415 July 2013 Digital Trade in the U.S. and Global Economies, Part , July 2013, (<https://www.usitc.gov/publications/332/pub4415.pdf>)

To put the power of the internet as an export platform in perspective, over 67 percent of eBay-enabled SMEs in Washington State are selling to 4 or more continents and are selling, on average, in eighteen foreign market destinations.⁶ In New York City, StereoBuyers, known to its eBay customers as High End Audio Auctions, is a locally owned, family-run business focused on buying and selling high-end, pre-owned HiFi audio equipment. The seed of StereoBuyers was planted in the mid 1990s. As a college student, Adam Wexler wanted a high end stereo, but could not afford one. That's when he got the idea to buy and sell stereo equipment that had been traded into a local HiFi shop. After graduation, Adam continued to run StereoBuyers part time until 2009, when he left his full-time job as one of Manhattan's top high-end AV salesmen and designers to pursue the business full-time. StereoBuyers exports about 30 percent of its products.

Another example of how platforms are helping SMEs ease marketing frictions is Phil Ford's "Bone Suckin' Sauce" from Raleigh, North Carolina. Phil initially stumbled upon his sauce in 1987 when he attempted to reproduce his mother's recipe. After some encouragement, he brought the sauce to market in 1992, which has since won numerous awards including receiving an A+ rating by Health Magazine – the only barbecue sauce to receive this rating. Today, the company exports its products to over 50 countries with 15 to 20 percent of its business coming from these exports. Both domestic and export sales are steadily growing. The company attributes an increase in sales of its product to its Facebook engagement. To attract new

⁶ The State of Small Online Businesses in America: Results from eBay's 5-Year Study (http://www.ebaymainstreet.com/sites/default/files/vf_lowres/eBay_washington_Small-Online-Business-Factsheet_lores.pdf)

customers, the company promoted its Facebook post – “Which is better on the grill? Fish, chicken, vegetables, or steaks?” – to encourage conversation among fans. As a result of the Facebook ads, online store sales jumped 83 percent, online store visitors increased by 28 percent, and the company saw a nine-fold increase in engagement with the promoted posts versus the non-promoted posts. Patrick Ford, the International Marketing Director of Ford’s Gourmet Foods, acknowledged the importance of the company’s Facebook page in helping drive sales when he said, “there’s no other place where we can reach so many of our customers and place our product right in front of them.”

II. The Free and Open Internet – Why Does Trade Policy Matter?

Internet platforms have transformed trade – but for the internet to continue to provide frictionless access to global marketplaces for businesses of all sizes, and for the U.S. internet sector itself to continue to grow, trade policy must keep up with this fundamental transformation. In particular, we need trade policy that recognizes and advances the open architecture of the internet, which has created new opportunities for cross-border trade and investment, enabling small businesses around the world to connect with customers and suppliers in the global market without building their own multinational supply chains. An internet-connected entrepreneur can now sell products and services across borders at the click of a button or the tap of a screen. With the help of internet platforms, small businesses grow up to four times faster than businesses that do not embrace the web, create twice as many jobs, are 50 percent more likely to be exporters, and

bring in twice as much revenue through exports as a percentage of sales.⁷ Additionally, 97 percent of U.S.-technology-enabled commercial sellers engage in exporting; reaching nearly 30 markets whereas traditional U.S. businesses that export reach on average two to three different markets per year.⁸

The rise of this new generation of exporting platforms has, perhaps unsurprisingly, been accompanied by the rise of new forms of digital protectionism – which harms both internet services and the small businesses that rely on these services to reach a global customer base. We have seen a significant increase in the number of countries that are imposing data and infrastructure localization requirements. We have seen European countries enact so-called “ancillary copyright laws” that forbid activities clearly allowed under U.S. law and deny U.S. stakeholders effective access to those markets. Countries like China, India, Russia, and Ukraine have sought to hold intermediaries liable for content posted by users, or have required intermediaries to block, censor, monitor, and filter communications and content that travels over their services. And many countries lack flexible copyright rules such as fair use – which creates significant barriers to entry for U.S. companies that are hoping to do business in those markets.

This matters for trade, because 95 percent of consumers are now outside of the United States. In order to ensure the continued growth of the internet, and to ensure that U.S. exporters are able to

⁷ Enabling Traders to Enter and Grow on the Global Stage, 2012
(https://www.ebaymainstreet.com/sites/default/files/EBAY_US-Marketplace_FINAL.pdf)

⁸ *Ibid.*

reach over 3 billion internet connected consumers worldwide, the U.S. must push back against these market access barriers abroad.

III. Supporting Policies that Encourage the Growth of the Internet Worldwide

This is where trade policy comes into play. The sustained growth of the internet as a global vector for innovation, trade, and commerce is made possible by laws and policies that preserve the vitality of an open and consumer-oriented internet environment – and trade agreements can help protect this environment by promoting a U.S.-style open innovation framework in other countries.

It is no accident that many of the world’s leading internet platforms have been born, scaled, and continually reimagined in the United States. Without adequate protection of foundational policies that have grown the innovation economy, internet industries and the businesses they support face barriers to market entry in foreign countries. These foundational policies should be fully reflected in our trade policy.

For instance, the Internet Association strongly believes copyright policy in trade agreements must reflect the balanced framework in U.S. law, which provides not only strong protections and enforcement, but also robust and flexible limitations and exceptions, including fair use and copyright safe harbors. Without these flexibilities, a website could not provide snippets and links to other websites; an internet service could not “cache” copies of files, which allows an internet browser to respond to inputs in a matter of milliseconds; and artists could not produce

mash-ups of existing content to create new works. These policies are crucial to continued economic growth: industries relying on fair use generate total annual revenue of \$4.7 trillion,⁹ and contribute about \$2.2 trillion in added value—just over 16 percent of total U.S. GDP.¹⁰

In addition, outside of the area of intellectual property, the intermediary liability protections reflected in Section 230 of the Communications Decency Act (CDA) enable U.S. companies to host user-generated content without being held liable for such third party content – which fuels content creation at home and is crucial to the free flow of information abroad. The internet ecosystem flourishes when users and content creators are empowered through an open architecture that promotes free expression and unrestricted exchange of ideas and information. Online intermediaries – big and small – connect users to goods and services, facilitate social interactions, and drive economic activity across borders.

The Internet Association supports including Section 230 of the CDA in trade agreements to promote e-commerce and democratic discourse. Reliable intermediary liability protections have a significant impact on platforms like eBay, Etsy, Google Search, Yelp, YouTube, and TripAdvisor that are helping U.S. small and medium-sized businesses reach global customers. Inadequate intermediary liability laws make it impossible for e-commerce platforms to operate and serve as trade-enabling marketplaces. For instance, without proper intermediary liability

⁹ Thomas Rogers & Andrew Szamoszegi, Comp. & Commc'ns Indus. Ass'n, Fair Use in The U.S. Economy: Economic Contributions of Industries Relying on Fair Use 20 ch.1 (2011), <http://bit.ly/1MloZnp>.

¹⁰ Ibid.

rules, an internet service would be unable to maintain open user review and customer feedback mechanisms that businesses need in order to gain support for their products in new markets.

For example, in Turkey, internet services face liability if users post blasphemous, discriminatory, or insulting content, making it very difficult to run an e-commerce or other internet platform. Content-filtering requirements and other liability risks in China “pose a significant burden to foreign suppliers, hurting both internet sites themselves, and users who often depend on them for their businesses.”¹¹ Russia has ordered all of Wikipedia to be blocked due to problematic content on a single page. Under India's intermediary liability rules, “foreign companies providing internet services are forced to choose between needlessly censoring their customers and subjecting themselves to the possibility of legal action.”¹²

Internet-enabled small businesses also rely on simplified customs procedures that help facilitate the movement of goods and services across borders. The Internet Association supports policies that encourage trading partners to increase arbitrarily low de minimis thresholds to decrease trade barriers experienced by internet-enabled businesses. Additionally, provisions ensuring duty free treatment for all technology goods and services and the limitation of non-tariff barriers that can be imposed on technology and other goods would help internet-enabled small businesses engage in global trade and commerce.

¹¹ 2016 National Trade Estimate Report on Foreign Trade Barriers (NTE), (<https://ustr.gov/sites/default/files/2016-NTE-Report-FINAL.pdf>)

¹² *Ibid.*

The internet is a borderless medium. Movement of electronic information across borders is critical to global businesses, but the rules governing flows of digital goods, services, and data are uncertain. Consistent with these goals, the Internet Association supports the inclusion of provisions in trade agreements and implementing legislation that protect legitimate, cross-border information flows, including language that promotes compatible privacy regimes and measures that link market access or other commercial benefits to local infrastructure and investment.

IV. Building and Implementing a Trade Framework that Advances the Digital Economy

As the Committee considers policies that will help encourage digital trade, the Internet Association supports efforts that promote strong international rules and balanced intellectual property laws, limit liability for online intermediaries, streamline trade facilitation and customs procedures, and encourage the free flow of information and data across borders – including for cross-border financial services platforms. We believe the United States should continue to negotiate, implement, and vigorously enforce trade agreements that promote the free and open internet.

Historically, pro-internet policies have been absent from trade agreements. While we recognize there is a diversity of views on the TPP, the agreement acknowledges the benefits of the full balance of copyright law – requiring countries to adopt innovation-critical limitations and exceptions, as well as safe harbors that protect the basic functionality of the internet, social

media, and online platforms. For too long, U.S. trade agreements have failed to reflect the balance of U.S. copyright law, under which individual creators, rights holders, internet platforms and users have all benefitted. The TPP also promotes a more inclusive trade economy by supporting the ability of small businesses to use the internet to serve customers and users in key markets, while also allowing for the transfer of information across borders, prohibiting the use of inefficient localized computing facilities. Although we believe the true test of any trade agreement should be judged on its implementation, the Internet Association believes the TPP is a step in the right direction. We look forward to working with the Committee and the Administration to ensure the digital trade provisions in the TPP are thoughtfully implemented.

The Committee and the Administration should also ensure that all TPP parties:

- Adopt or maintain comprehensive ISP safe harbor provisions that cover the full range of service providers and functions, with prohibitions on monitoring duties and strong due process protections.
- Adopt a comprehensive framework of copyright exceptions and limitations for the digital economy, modeled on the multi-factor balancing test in 17 USC § 107, or other flexible rules that allow for ongoing digital innovation, including in commercial contexts.

The Internet Association is also closely monitoring the Trade in Services Agreement (TISA) negotiations. TISA represents one of the best opportunities to liberalize international rules to expand trade in services between 23 members of the World Trade Organization, representing 70 percent of world trade in services. Specifically, the internet industry supports efforts to include

an intermediary liability provision in TISA that reflects Section 230 of the CDA. This provision would help unleash growth and investment in internet services by providing a safe harbor from liability rules that would otherwise hold intermediaries liable for content posted by their users. The intermediary liability protections found in Section 230 of the CDA are a perfect example of future proofed legislation that allowed internet platforms to scale and spurred unprecedented economic growth and innovation. Section 230 of the CDA excludes intellectual property and criminal issues, which are more appropriately addressed in other models. We look forward to working with U.S. trade negotiators and the Committee as TISA negotiations come into focus.

The Internet Association also welcomes the recent breakthrough on the U.S.-EU Privacy Shield. The Privacy Shield represents a positive outcome and a win for innovation and growth both here and in the EU. We commend Congress, the Administration, and the European Commission for taking the necessary steps to ensure information and data will continue to flow across the Atlantic. Absent an agreement, many U.S. small businesses and consumers could have experienced significant challenges in the EU market. Additionally, as Congress and U.S. trade negotiators review policies the EU is considering to unify their digital market, we caution against policies that may turn into disguised protectionism against innovative U.S. internet platforms. We believe the best path forward for digital growth and jobs is a positive reform agenda that promotes the free and open internet on both sides of the Atlantic. There is no reason why digital trade and a digital market within the EU cannot be a win-win for both the U.S. and the EU.

Finally, we hope the Committee will continue to work closely with the internet community to find ways to create a more inclusive system for negotiating trade agreements. Our industry supports increased transparency and will continue to seek reforms that give all stakeholders a meaningful voice in the process.

V. Conclusion

The internet industry is committed to working with Congress and U.S trade officials to ensure the internet remains the greatest American export of the 21st century. Future trade agreements should continue to take into account the economic benefits the internet industry brings to every sector of the economy. As I highlighted in my testimony, internet platforms are intrinsically trading platforms that give U.S. small businesses, entrepreneurs, developers, and startups the tools they need to compete and win in the fastest growing markets in the world. Breaking down barriers to digital trade and supporting pro-internet policies that promote the free and open internet are critical to the long-term growth of our sector. As the Committee continues to analyze policies that support the growth of internet-enabled trade, I look forward to working with Members of this Committee to address our shared goals and priorities.

With that, let me thank you again for inviting me here today to testify on behalf of the internet industry. I am happy to answer any questions you may have.



Chairman REICHERT. Ms. Shukla, you are recognized.

**STATEMENT OF KAVITA SHUKLA, FOUNDER AND CEO,
FENUGREEN LLC**

Ms. SHUKLA. Chairman Reichert, Ranking Member Rangel, and Members of the Committee, thank you so much for the opportunity to be here today and to share my story.

My name is Kavita Shukla. I am the founder and CEO of Fenugreen FreshPaper, which is a social enterprise taking on global food waste with a really simple innovation. FreshPaper actually began as my middle school science project. It was inspired by a trip to visit my grandparents in India. And when I accidentally drank some unfiltered tap water, my grandmother gave me a homemade mixture of spices as a remedy. And when I didn't get sick, I became really curious.

So back home in Maryland, I started tinkering around with different spices and jars of dirty pond water. And I started to observe that it seemed like some of the spices were slowing down the growth of bacteria and fungus. And one day, when I was at the grocery store with my mom and I saw some moldy strawberries, I began to wonder if perhaps I could apply my spice mixture to keeping food fresh.

And so to make a long story short, after spending most of my high school years meticulously rotting fruits and vegetables in my garage, I created FreshPaper, infused only with organic spices that can keep food fresh for up to two to four times longer.

Today, we lose more than 25 percent of our world's entire food supply to spoilage. FreshPaper poses a really simple and sustainable solution to the massive global challenge of food waste.

I was a senior in high school when I found out that I would be issued a patent for FreshPaper. It was a pretty unlikely outcome to my story, possible only in this country. I was aware, even at that age, that my grandmother, with all of her brilliance, she never had the opportunity to pursue her ideas. And here I was 17, I had a patent, and I was on my way to Harvard to pursue mine.

So as soon as I got to college, I set out to build a nonprofit. But what I really ended up learning is how hard it can be to give something away for free. And like many aspiring entrepreneurs, I started to believe that I would need more experience, more money, more resources, just more than I had and more than I was. And I stopped believing that I alone would ever be enough to bring my idea out into the world.

So it wasn't until the summer of 2011, nearly a decade after I first started working on my science projects, that I finally had the courage to take just one more step with my idea. And I decided to take it to my local farmers market in Cambridge, Massachusetts. I stayed up all-night and handmade a batch of FreshPaper in the kitchen of my tiny studio apartment. And early the next morning, my cofounder and I stood on the streets just handing out sheets to anyone who would stop by. Our hope, really, was to help our local community have greater access to fresh, healthy food.

But as the weeks went on, we were amazed by the response. What we really started to hear from people was that FreshPaper was making it possible for them to afford eating fresh, healthy food

and feeding it to their families. And so I was inspired to think a little bit bigger.

I set up an online store, and on a whim we enabled international markets. In less than a minute, FreshPaper was available worldwide. And while we were only selling FreshPaper in one local store, the Harvest Co-op, we were shipping FreshPaper to places like Spain, Australia, Canada, the U.K., Indonesia, Japan, and Brunei. I now joke that we went global by accident. With just a few errant clicks, my farmers market stand had access to an almost infinite global market.

But, of course, at the time we had no idea how to ship globally. But at every roadblock we Googled our way out, and we discovered that there were digital tools to actually make this a reality. We found that PayPal could collect foreign payments, that Intuit QuickBooks could help us keep track of our earnings, and that UPS had a program, Mail Innovations, that really simplified customs.

So even though we had started with less than a thousand dollars, we had no outside funding, no marketing budget, and really no experience, within a few months, we were carting wheelbarrows of orders to our local post office and shipping our made-in-USA product to places I could have never imagined. Those international orders helped us keep our fledgling business alive, giving us time to build our customer base locally.

Today, FreshPaper is on the shelves of some of the largest retailers in the world, from Whole Foods to Walmart. And we are working with international distributors to bring FreshPaper to more retailers, farmers, and families across the globe. And just recently, FreshPaper became the first product to be launched globally by Amazon as part of Amazon Launchpad, which made our simple idea available in 180 countries overnight. The Internet took my farmers market stand global.

But my story is not unique, and I don't believe that it should be. I have seen the power of international markets in an open global Internet. I am here because I believe we have to reduce barriers to unleash our country's entrepreneurial talents and to encourage small business owners to think global from day one.

Entrepreneurs live to work hard, to hustle, to spend sleepless nights figuring out how to make the impossible a reality, to push through resistance, the naysayers, and the doubt. And in the unlikely event of our success, share the benefits with our communities, to create American jobs, to build factories, and to design organizations that will outlive us. But we cannot do it alone. We need your help. Give us access. Help us reduce barriers to the spread of our ideas, and we will work hard to figure out the rest.

Thank you so much for the opportunity to be here.

Chairman REICHERT. Thank you.

[The prepared statement of Ms. Shukla follows:]

Testimony before the House Ways & Means Subcommittee
on Trade

July 13, 2016

**Hearing on Expanding U.S. Digital Trade and Eliminating Barriers to U.S.
Digital Exports**

Kavita Shukla
Founder and CEO
Fenugreen FreshPaper

1. About Fenugreen FreshPaper

Good morning. Chairman Reichert, Ranking Member Rangel, and members of the Committee, thank you for the opportunity to be here today.

My name is Kavita Shukla. I'm the founder and CEO of Fenugreen FreshPaper, a social enterprise taking on global food waste with a simple innovation.

Five years ago, I set up a stall at my local farmer's market with the hope of helping my local community have greater access to fresh, healthy produce. I never could have imagined that within a few months, my idea would be shared across the globe, and that one day, my invention would land on the shelves of some of the largest retailers in the world -- from Whole Foods to Walmart. I'm here to share the story of how accessing global markets made all of this possible.

This was my idea: FreshPaper, a simple piece of paper infused with organic spices that keeps fruits & vegetables fresh for up to 2-4 times longer. A simple, sustainable solution to the massive global challenge of food waste.

FreshPaper began as a middle-school science project, inspired by my grandmother. After immigrating to the United States with my family as a child, I returned to visit my grandparents in India, and accidentally drank some unfiltered tap water. My grandmother gave me a homemade mixture of spices as remedy, and I ended up not getting sick. That experience sparked my curiosity, and when I got back home to Maryland, I was inspired to start a science project to learn more about the spices my grandmother used. After tinkering around in my garage with jars of dirty pond water and spices, I discovered that some of the spices seemed to stop the growth of bacteria and fungus.

One day, after seeing moldy strawberries while grocery shopping with my mom, I wondered if my spice mixture could keep produce fresh for longer. To make a long

story short, after spending most of high school meticulously rotting fruits and vegetables, I created FreshPaper.

FreshPaper ended up winning a 1st place award at the Intel International Science Fair, and I was a senior in high school when I was issued a patent for FreshPaper. It was an unlikely outcome to my story, possible only in this country – my grandmother with all of her brilliance never had the opportunity to pursue her ideas, and at 17, I had a patent and was on my way to Harvard to pursue mine.

I was so excited about how FreshPaper could help people like my grandmother in areas like the village where she was from, and I couldn't wait to get my invention out into the world. I learned that, while the world's farmers harvest enough food to feed the planet, almost 800 million people go hungry every day,¹ and that over 1 billion people live without access to refrigeration.² FreshPaper, I believed, could help address global food waste and hunger.

As soon as I got to college, I set out to build a non-profit, and ended up learning how hard it can be to give something away for free. After trying and failing over and over, my friends and advisers suggested that I consider a more "realistic" career path. Like many aspiring entrepreneurs, I was told that I needed more experience, more degrees, more money – more than I had, and more than I was. So I gave up.

In the summer of 2011, more than a decade after I first started working on my science project, I decided to give my idea, and myself, one last chance.

I stayed up all night making a batch of FreshPaper by hand in the kitchen of my tiny studio apartment, and early Saturday morning, a friend and I set up a stall at our local farmer's market in Cambridge, Massachusetts. We stood in the street handing out sheets to passersby.

In the weeks and months that followed, we were amazed by the response. People started telling us, "FreshPaper makes it possible for me to afford feeding my family fresh fruits and vegetables." As I began to realize that my small sheet of paper was having an impact on our local food system, I was inspired to think bigger.

¹ United Nations Food and Agriculture Organization, International Fund for Agricultural Development, World Food Programme, *The State of Food Insecurity in the World 2015. Meeting the 2015 international hunger targets: taking stock of uneven progress*. Rome, FAO.

² International Energy Agency, *Key World Energy Statistics 2015*. OECD/IEA 2015

2. About our global journey

We created a very basic online store, and on a whim, we enabled international markets. In less than a minute, FreshPaper was available worldwide. While we were selling FreshPaper in just one local store, the Harvest Co-Op, we were shipping FreshPaper across the world to places like Spain, Australia, Canada, the UK, Indonesia, Japan, and Brunei.

I now joke that that we went global by accident. With just a few errant clicks, my farmer's market stand now had access to an almost infinite global market.

Of course, we had no idea how to ship globally – at the time, we didn't even know how to make a pallet. But at every roadblock, we Googled our way out, and through trial and error found digital tools to make our global business a reality. We found out that PayPal could enable us to collect foreign payments and convert currencies, that Intuit Quickbooks could help us keep track of our earnings, and discovered that UPS Mail Innovations simplified the customs process.

We had started with less than a \$1000 – we had no outside funding, no marketing budget, and no experience. But within a few months, we were carting wheelbarrows of orders to our local post office, and shipping our made in the USA product to places I could never have imagined. Those international orders helped keep our fledgling business alive, giving us time to build our customer base locally.

Once we started shipping out these international orders, FreshPaper started to be featured by newspapers and media outlets around the globe. I was invited to speak about FreshPaper in Japan, Denmark, France, the UK, and Switzerland. I found myself addressing the World Trade Organization in Geneva, and on stage with Sir Richard Branson at the Global Entrepreneurship Congress in Liverpool.

FreshPaper even won the world's largest prize for design (the INDEX: Design to Improve Life Award), previously awarded to Apple and Tesla, which provided us with a crucial 100,000 euro prize that helped us scale our production. Last summer, FreshPaper became the first product ever to be launched globally by Amazon as part of Amazon Launchpad, a program designed for startups, making our simple idea available in 180 countries overnight. The Internet took our farmer's market stand global.

Today, FreshPaper is made in factories in the Midwest and Maryland, and we're working with international distributors to launch in retailers across the globe, and to reach more farmers and families worldwide. We've seen the power of international markets. We are here today because of an open global Internet. But the excessive costs, paperwork, and logistics to access these global markets are still challenges that we and other entrepreneurs face every day.

3. The role of government policy in eliminating barriers to digital exports

I'm here because I believe we must reduce barriers to unleash our country's entrepreneurial talents, innovations, and energy, and encourage small business owners to think global from day one.

My story is not unique. Nor should it be. I often think of the jam-seller who set up a stall at her local farmer's market. The single mom I met who was making ends meet by selling items on eBay. The young programmer dreaming up the next big app. Entrepreneurs across this country drive our economy with their ingenuity, with their grit, with their optimism, and with their success.

But we cannot do it alone.

We are happy to work hard, to hustle, to spend sleepless nights figuring out how to make the impossible a reality, to push through the resistance, the naysayers, and the doubt – and, in the unlikely event of our success, share the benefits with our communities, create American jobs, build factories, and design organizations that will outlive us.

We need your help.

Ensure that an open, global Internet is available so that our partners, customers and community from around the world can connect with us, and so that we can use technology to operate our business on a global basis. Utilize trade agreements and other platforms to reduce tariffs on the products we make, and to simplify customs procedures. Help entrepreneurs like me understand the resources that the U.S. Government has for startups looking to take their business global.

Give us access and reduce barriers to the spread of our ideas, and we'll work hard to figure out the rest.

Thank you so much for the opportunity to testify.



Chairman REICHERT. Mr. Ahmed.

STATEMENT OF USMAN AHMED, HEAD OF GLOBAL PUBLIC POLICY, PAYPAL INC.

Mr. AHMED. Chairman Reichert, Ranking Member Rangel, and Members of the Subcommittee, I would like to thank you all for giving PayPal the opportunity to testify today on the important topic of digital trade and its impact on U.S. exports.

PayPal operates an open, secure, and technology agnostic platform that businesses use to transact with customers around the world. With our 170 million customer accounts and 14 million merchant accounts, PayPal is a truly global payments platform that is available to people in more than 200 countries, allowing customers to get paid in more than 100 currencies.

About 25 percent of the volume on PayPal is cross border. Our PayPal PassPort tool is a free online resource designed to educate and empower small businesses to expand their reach by uncovering new peak sales opportunities outside their own borders. PayPal's purchase protection program offers cross-border buyers peace of mind by reimbursing the full purchase price plus any shipping costs if there are any complaints. And this includes the purchases of services as well as digital goods. We also offer a seller protection program, meaning that both the buyer and the seller can transact with confidence. This trust is essential to the digital marketplace.

Finally, PayPal's core innovation is security. PayPal does not expose the merchant or the consumer financial information, meaning that both sides of the transaction feel safe, particularly when transacting across borders. At PayPal we have sat at the center of the digital trade revolution since 1998. And this is a revolution that has profound impacts on the concept of trade as we know it. PayPal helps businesses like Home Depot, Uber, and Subway with their global transactions. But more importantly, we help hundreds of thousands of small businesses across the United States to go global.

Traditionally, international trade was solely the domain of the largest businesses. But a small business can now use the Internet in combination with a host of online services providers to engage in trade at a geographic scale similar to the largest businesses. This democratization of trade has tremendously positive development, inclusion, and growth implications.

Digital technology has helped business owners like Stan Carson from Wenatchee, Washington, who operates a sporting goods equipment store and employs 28 people, as well as Jamie Wankum from South Sioux City, Nebraska, who employs 10 people in his electronic business, to export their products to countries around the world.

Over 65 percent of U.S. merchants that use PayPal and operate in digital trade, of our top merchants, 65 percent operate in digital trade. Compare this with numbers from the U.S. Department of Commerce, which finds that less than 1 percent of America's companies export. When we surveyed 170 U.S. small- and medium-size enterprises that have an online presence, we found that those that engaged in digital trade had double the sales revenue of those who

only sold domestically. These amazing developments, though, are tempered by the barriers that limit the benefits of digital trade.

In our survey of U.S. small businesses, we learned that shipping, regulatory compliance, and customs were the top barriers to small business cross-border commerce. Digital trade has also brought on a new wave of localization requirements, captured most poignantly by regulatory requests for digital companies to store data in country. Trade policy represents an opportunity to resolve some of these issues.

The U.S. Government has already taken important steps to enhance the environment. The Congress passed the Customs Reauthorization Act, making it easier to move small e-commerce shipments across borders. This is actually an export promotion issue because U.S. online businesses often struggle with retail returns. The U.S. International Trade Commission has sought to measure the value of international trade, and the Commerce Department's export.gov contains templates designed to educate small businesses on how to engage in digital trade. Moreover, the United States Trade Representative has been promoting important language on national treatment for cross-border financial services, as well as small business trade facilitation. But more can be done.

Customs and duties regimes can be simplified. De minimis levels can be raised, and a prohibition on data localization requirements can be expanded to cover cross-border financial services. The U.S. must continue to look for opportunities to open up the market for digital trade and create rules that provide certainty for small businesses and consumers that engage in the cross-border digital marketplace.

Thank you again for the opportunity to address this Committee on this important issue. And I look forward to answering any questions.

[The prepared statement of Mr. Ahmed follows:]

TESTIMONY OF

Usman Ahmed

Head of Global Public Policy

PayPal Inc.

BEFORE THE

United States House of Representatives

Committee on Ways and Means

Subcommittee on Trade

Expanding U.S. Digital Trade and Eliminating Barriers to U.S. Digital Exports

PRESENTED

Longworth House Office Building, Room 1100

July 13, 2016

10:00 AM

I. Introduction – Who is PayPal

Chairman Reichert, Ranking Member Rangel, and members of the Subcommittee, I would like to thank you all for giving PayPal Inc. the opportunity to testify today on the important topic of digital trade and its impact on U.S. exports. PayPal operates an open, secure and technology agnostic payments platform that businesses use to transact with their customers online, in stores, and increasingly on mobile devices. In 2015, 28% of the 4.9 billion payments we processed were made on a mobile device. With our 170 million consumer accounts and 14 million merchant accounts, PayPal is a global payments platform that is available to people in more than 200 markets, allowing customers to get paid in more than 100 currencies, withdraw funds to their bank accounts in 57 currencies and hold balances in their PayPal accounts in 25 currencies.

Our company is a truly global business – with 47% of our gross revenue coming from activity outside the United States. But, PayPal is not just a global business based in the United States; it is actually a platform that enables hundreds of thousands of U.S. entrepreneurs, small businesses, as well as mid-size and large businesses, to reach customers around the world. The point of payment has traditionally been an area where transactions are abandoned. Customers need confidence that their payment will be handled securely and they want the comfort and convenience of paying in familiar currency, using their preferred method. PayPal can help merchants meet these consumer demands through our globally trusted brand, in particular when the merchant is located in a different country than the consumer. About 25% of our total payment volume is cross border trade. Our services enable a new kind of a global trade that is

truly beneficial for small businesses across America, from the local hardware store to the small software company selling an app around the world. The 2013 World Economic Forum (WEF) Enabling Trade report found that the use of technology platforms can reduce the burdens small businesses face when selling overseas, increasing cross-border small business sales by 60-80%.ⁱ

PayPal is focused on efforts to promote digital trade. Our PayPal Passport tool is a free online resource designed to educate and empower small businesses to expand their global sales by uncovering new peak sales opportunities outside their own borders. We have partnered with the U.S. Department of Commerce to do webinars and in-person seminars designed to make small businesses aware of this free resource. PayPal's purchase protection gives cross border buyers piece of mind by reimbursing the full purchase price plus any original shipping costs if there are any complaints; including purchases of services and digital goods. Finally, PayPal does not expose merchant or consumer financial information, meaning that both sides of the transaction feel safe and secure when engaging in a cross border sale.

II. The Power of the Internet to Facilitate Trade

The notion that the Internet has transformed the global economy is now well understood. The McKinsey Global Institute reports that the Internet accounts for 21% of GDP growth in advanced economies and facilitates \$8 trillion each year in e-commerce; McKinsey estimates that digital flows now have a larger impact on GDP growth than goods trade.ⁱⁱ Importantly, McKinsey also reports that 75% of the impact of the Internet is being realized by traditional

industry. Thus, the use of the Internet to facilitate commerce is not just an Internet industry trend, but is actually a phenomenon that is affecting every segment of the U.S. economy. The U.S. International Trade Commission report on digital trade found that that digital trade boosted gross domestic product by 3.4 to 4.8%, through enhanced productivity and reduced international trade costs, and the effect on total employment ranged from no change to an increase of 2.4 million full-time equivalents.ⁱⁱⁱ

There are about 3.5 billion Internet users globally.^{iv} The United States has less than 300 million Internet users. So over 90% of the addressable market for U.S. businesses leveraging the Internet is in other countries. Moreover, digital trade is a growth market for U.S. businesses. Cross border business-to-consumer e-commerce is expected to be a \$424 billion market by 2021.^v A report from Progressive Economy finds that low-value or “micro” U.S. exports increased by 103% between 2005 and 2010, more than twice the increase for all exports; these low-value shipments often tend to be e-commerce shipments.^{vi} In U.S. export markets like Spain, Mexico, and Japan research firm Ipsos estimated that cross border online consumer spending will experience nearly 30% year-over-year growth in 2016.^{vii}

III. Small Business Digital Trade

PayPal is proud to sit at the center of the digital trade revolution. It is a revolution that has profound impacts on the concept of trade as we know it. Traditionally, international trade was solely the domain of the largest businesses who could take on the capital costs, establish the

regional contacts, and comply with the regulatory requirements associated with international trade. A small business can now use the Internet in combination with a host of online service providers to engage in trade at a geographic scale similar to large businesses. This democratization of trade has tremendously positive development, inclusion, and growth implications.

Insights from our data at PayPal demonstrate the tremendous impact that digital technology is having on U.S. small businesses. Over 65% of U.S.-based PayPal top merchants engage in digital trade. Compare this with numbers from the U.S. Commerce Department, which finds that less than one percent of America's companies export. When we surveyed 170 U.S. small and medium sized businesses that have an online presence we found that those businesses that engage in cross border trade report double the sales revenue of those businesses who only sell domestically. One in three businesses who reported that they currently only sell domestically intend to start selling cross-border in the next year.^{viii}

To contextualize these statistics it is useful to examine the following case studies of U.S. small businesses engaged in digital trade:

- Stan Carson from Wenatchee, Washington spent much of his career as an engineer in the US Coast Guard, but in 1994 he started a brick-and-mortar sporting goods store. Stan began his online business in 1997 and it has grown consistently since then. Stan has seen the benefits of digital trade as he now employs 28 individuals. "Selling

internationally provides us with the ability to better source our products and broadens our market share," he said.

- Jamie Wankum from South Sioux City, Nebraska managed international sales for Gateway Computers for 15 years before starting his online business focused on recertified electronic products. Jamie now employs 10 people and exports his products through his website brownbox.com as well as a number of online marketplaces.

IV. Barriers to Digital Trade

The opportunity described above is tempered by the barriers that limit the benefits of digital trade. Small businesses in particular face a host of barriers to engaging in digital trade. In our survey of U.S. small businesses we learned that shipping, regulatory compliance, and customs/duties were the top three barriers to cross border commerce. Furthermore, consumers expect that a business of any size will provide a seamless cross border online commerce experience with language translation, mobile optimization, free shipping, and a safe, easy, way to pay for their products and services. These are all major challenges for any business, but present particular challenges for smaller businesses engaging in digital trade.

Trade scholars claim that one of the "new issues" raised by digital trade is data localization, but this issue is merely a modern manifestation of a classic trade barrier known as a localization requirement. PayPal believes it is especially important that new international trade agreements prohibit localization requirements that impact the digital ecosystem. For example,

PayPal was recently forced to withdraw its services to Turkish users – both merchants and consumers – because Turkish rules governing a local payments license insist that payments systems be fully localized in the country. We are concerned with other countries developing similar requirements on foreign companies seeking to provide services globally.

V. The U.S. Government and Digital Trade

The legislative and executive branches of government have recognized the importance of digital trade and have taken several actions in the last few years to support it. In Congress, the passage of the Customs Reauthorization Bill importantly raises the de minimis, the level below which imports are exempted from duty and paperwork. This is not just an import issue that enables business and consumers to more easily procure foreign merchandise; it is also an export issue because U.S. small businesses that export online have faced tremendous issues accepting returns on e-commerce shipments from international customers. The Customs Reauthorization Bill facilitates the return of these low value shipments because it eliminates the need for these goods to be subject to duties and paperwork upon re-entry to the United States. The Department of Commerce has also effectively promoted digital trade with the appointment of its first Director of Digital Economy, the build out of export.gov (a one-stop shop for information and portal to access the Department's export assistance centers), the creation of the Digital Attaché pilot program, and Secretary Pritzker's Startup Global initiative to emphasize the digital and offline resources available to startups and small businesses interested in accessing the global marketplace. The Office of the United States Trade Representative has also been working diligently to harmonize digital trade standards around the world. The Trans-

Pacific Partnership (TPP) contains important language on national treatment for cross border financial services, a bar on customs duties on digital products, regulatory transparency and coherence, as well as small business trade facilitation.

There is even more that the U.S. government can do. By improving customs and duties systems, consistently educating businesses on updated best practices, and promoting safe and secure services, governments can help to combat some of the major barriers reported by small businesses. The U.S. government can also encourage the use of technical solutions that are being created to resolve some of these barriers. Trade agreements could go further in prohibiting localization requirements affecting cross border financial services companies. Ambassador Michael Froman has stated publicly that the United States Trade Representative is looking to address this issue in the context of the Trade in Services Agreement (TISA), which would be a welcome addition and one that we would also like to see included in the Transatlantic Trade and Investment Partnership (TTIP). All of these efforts will no doubt help to improve the environment for digital trade.

The United States is in a competition to get global policy on digital trade right. The European Union has its Digital Single Market Initiative. The Regional Comprehensive Economic Partnership – an agreement between China, India, and several other nations in the East Pacific – is looking into e-commerce and digital trade. The United States must continue to look for opportunities to open up the market for digital trade and create rules that provide certainty for businesses and consumers engaged in the cross border digital marketplace.

Chairman Reichert, Ranking Member Rangel, and members of the Subcommittee, we respectfully submit this testimony and hope to work with you to continue to expand the opportunities presented by digital trade, in particular for U.S. small businesses.

ⁱ World Economic Forum, *Enabling Trade* (2013)

ⁱⁱ James Manyika, Susan Lund, Jacques Bughin, Jonathan Woetzel, Kalin Stamenov, and Dhruv Dhingra, *Digital globalization: The new era of global flows* (February 2016) available at: <http://www.mckinsey.com/business-functions/digital-mckinsey/our-insights/digital-globalization-the-new-era-of-global-flows>; and McKinsey Global Institute, *Internet Matters: The Net's Sweeping Impact on Growth, Jobs, and Prosperity* (May 2011) available at: http://www.mckinsey.com/insights/high_tech_telecoms_internet/internet_matters

ⁱⁱⁱ U.S. International Trade Commission, *Digital Trade in the U.S. and Global Economies, Part 2* available at: <http://www.usitc.gov/publications/332/pub4485.pdf>

^{iv} Internet World Stats (accessed on June 30, 2016) available at: <http://www.internetworldstats.com/stats.htm>

^v Forrester Research, *Online Cross Border Retail Forecase, 2016 to 2021*

^{vi} Gresser, Edward. "Lines of Light: Data Flows as a Trade Policy Concept." (2012).

^{vii} PayPal & Ipsos, *Cross-Border Consumer Research 2015* available at: <https://www.paypalobjects.com/digitalassets/c/website/marketing/global/pages/stories/docs/paypal-insights-2015-global-report.pdf>

^{viii} Ipsos and PayPal, *Cross Border Merchant Research 2016* available at: <https://www.paypalobjects.com/digitalassets/c/website/marketing/global/shared/global/media-resources/documents/us-deck-paypal-merchant-insights-usa-report-2016.pdf>

Chairman REICHERT. Thank you, all of you, for your testimony. Thank you for being here today. And we will have some questions for you, and I appreciate you staying for the questions. Like you were going to get up and leave anyway. Right?

Ms. Shukla, your testimony is inspiring in this Committee and others. You know that, on the Ways and Means Committee, we have heard some pretty inspiring stories as we sit here and listen to the testimony of Americans who have realized the American dream, and still have dreams and hopes ahead. So congratulations on your success.

And thank you to all of you for your testimony again today.

You mentioned that selling on Amazon's global platform helped you make sales in export markets. Can you explain a bit more how Amazon has helped you make the most of your export opportunities?

Ms. SHUKLA. Sure. You know, when I first began, I really just was able to click a button and make my product available on a lot of international markets. But one of the most difficult things I realized was actually getting the product to the end customer. And there have been so many incredible digital tools that have helped us. But the time was still actually very, very long. It would sometimes take somebody in Switzerland 6 to 8 weeks to get our product. And that is obviously a very long time. And there were significant regulations that we had to work out.

So one of the amazing things about Amazon Launchpad—and we are still in the very early stages. So we are just starting to see all of the traction that is coming out of that. But one of the amazing

things is that they helped us go through the compliance for all of the markets that we are selling in. So it was made available in all of Amazon's countries that they sell to, which is over 180 countries, I believe. But it also made the time that it takes for the customer to receive it much more efficient. And for a small business like ours, that is incredible. We can't possibly have that kind of speed or that efficiency in getting the product to customers. And that, I think, really will unleash a whole new set of opportunities for us, because there are so many more people we can reach. As they get it more quickly there is a lot of other opportunities that come out of that, including repeat purchases, the ability to work with larger customers, and farmers as well.

Chairman REICHERT. Are there any other digital platforms that you have used?

Ms. SHUKLA. So we have used Shopify and BigCommerce. We have used PayPal, of course, to help us do our payments. Every credit card company has been helpful in figuring out, from AmEx to Visa and MasterCard, they have all been very helpful in figuring out how to accept foreign payments. Because that was a challenge I certainly didn't foresee. Of course, it was easy to get an order, but then customers wanted to pay in different ways. We had to make sure if we needed to process a refund, there was a way to do that, if the product didn't show up or got caught in customs.

But I think the opportunity right now with Amazon simplifies kind of all of that because all we do now is ship it to one of their warehouses abroad or even domestically, and they will take it abroad. So I think we are excited to see what happens as we launch on Launchpad, because I think it will be a very different way of doing business for us. A lot less hassle, a lot more efficiency.

Chairman REICHERT. Thank you.

Mr. Ahmed, in your testimony, you shared a great example of a small business from my district that benefited from selling its good internationally, businesses like Performance Equipment in Wenatchee, Washington. It is in the central part of the State. Kind of in a rural area of the State. They need a convenient, secure payment system in order to export. And this is true for businesses of all sizes, obviously.

Restrictions on cross-border data flows clearly would make it difficult to maintain an efficient payment network that is global in scope. Can you identify any other barriers that make it difficult or impossible for PayPal to operate in a certain market?

Mr. AHMED. Cross-border data flows are certainly a central piece of the underlying certainty that businesses like ours need when approaching other markets. Other issues that are actually addressed in the Trans-Pacific Partnership that are quite important include the bar on duties for digital goods. It is an important provision, as you want digital goods to flow freely across borders and not be stopped at a border to collect duties. So that particular provision would be quite impactful and quite important.

Chairman REICHERT. Has the United States had success in TPP or other negotiations in addressing such barriers?

Mr. AHMED. Yes. Thank you, Chairman. The digital goods issue has been in previous free trade agreements, including the Korea

Free Trade Agreement, and is now a part of the Trans-Pacific Partnership as well. And so that is an important protection.

Chairman REICHERT. Could you describe how important it is to ensure that these commitments are enforced?

Mr. AHMED. Certainly. The certainty comes from the enforceability of the agreement. There are many diplomatic negotiations that may occur. But the benefit of a trade agreement is that it is enforceable and that countries that feel that the agreement has been violated can bring a dispute and get that dispute resolved in a binding form.

Chairman REICHERT. All right. Thank you.

Mr. Rangel, you are recognized.

Mr. RANGEL. Thank you, Mr. Chairman. And again, I thank you for bringing this exciting panel to us to hear their testimony. I wish I could staple them to every town hall meeting that I attended just so that you can shatter the fear and the ignorance of people not having the slightest idea as to where our country is going with trade, what are you up to when you talk about putting—I remember when I came to Congress, I pulled up a friend of mine's name in the computer. He said, how could you possibly have my background in a computer? And you go to a foreign country people, don't want you to take their picture.

And quite frankly, there is a fear of what you don't know. And there is a feeling that you don't want people to know what you don't know. And privacy is a good thing. That is yours. And I just hope that there is some way for our country to take advantage of this competitive edge that we have, because to me, we are talking a new language.

We have been fortunate that the international community has adopted English in trade agreements. But it seems to me that technology is the new international language. And I would think that there are at least 100 Congressional districts that if you talked about science, technology, and trade, the first thing Americans say: What is in it for me? And if you are 60 years old, it is hard for us to have an imagination as to what could possibly be in it for them. Technology has just passed them by.

But, boy, if we knew that our kids and our grandkids would learn this new language, to see how easy it is for them to manipulate games and gadgets and how their minds are receptive, and to see how grandparents can learn so much from the younger people, if only we had an educational system that would allow everyone to see what trade with the European Union, what trade in the Pacific could mean to them.

Mr. Padilla, you talk about technology and your outfit like all America knows what is going on. But in our school system, they haven't the slightest idea as to the opportunities they have. It breaks racial barriers. It breaks cultural barriers. It makes you a potential successful citizen of the world. And yet when we talk about trade, people say: How many jobs are we going to lose this time?

So I don't know what question to ask you, except I wish that your testimony could be the preamble to TPP. I wish people could see the opportunities to TPP.

And the other bookend should be infrastructure. Because without communication, without transportation, I don't care what is in TPP, it just won't work.

And your message, especially you, Ms. Shukla, in breaking down the new world of technology to your grandmother and to your mother with things that everyone understands, and all of you have done a remarkable job there, leads me to believe that we in the Congress have to have a better way of interpreting what world trade and technology means for the future of our great Nation.

So, Mr. Chairman, I thank you for this illuminating panel, and yield back the balance of my time.

Chairman REICHERT. Thank you.

Mr. Smith.

Mr. SMITH. Thank you, Mr. Chairman. Thank you to our panel. Some inspiring stories obviously, Ms. Shukla. I am glad that your grandmother shared her intellectual property with you and that you have taken that globally. I am trying to think back if I could take any of my grandparents' intellectual property and pursue some economic opportunity.

But this is such an important topic. And what I like about technology, digital technology, is the opportunity it presents consumers through utilizing so much of the technological infrastructure that is out there, and market opportunities, but also an entry into the marketplace for the little guy. And it's just—I mean, the stories are many. And I don't want to take up my time describing all of those, but it is just truly amazing what we can do, what the little guy can do, to access the world, as Ms. Shukla has certainly spoken very well about.

The empowerment of producers—and when I say “producers,” I happen to mean agriculture producers, as a representative of the largest agriculture district in America where producers themselves have been able to be more efficient for the world marketplace. And I think there are great examples of how utilizing resources more efficiently, whether it is water, land, or even chemicals, that there is economic opportunity associated with that as well.

Mr. Atkinson, could you discuss why digital trade is important to industries, such as agriculture, and maybe reflect a little bit on those uses?

Mr. ATKINSON. I am sorry. Was the question about agriculture?

Mr. SMITH. Agriculture, right.

Mr. ATKINSON. So one of the things—dynamics that is happening in agriculture is we are moving to smart agriculture, precision agriculture, both on sort of the biological side, but also on the IT side where farmers now are planting crops and the ability to know down to actually the square meter each part of land, does it need a little more water, a little less. And this notion of precision agriculture is critical. But to really maximize that benefit you have to have large data sets.

And one of the things that is going to happen with agriculture and many other industries is what is called machine learning or cognitive computing or artificial intelligence, where we not just learn from one farmer, but the ability to have a lot of farmers together. And again, the data would be anonymized, so there would be no risk to an individual farmer. But if we could know how, in

general, all cotton farmers or all wheat farmers around the world, how this is working, that would really, really provide a lot of innovation and improvement. But again, if you have this requirement that the data can only be in one small place, you are giving up this big opportunity for machine learning and artificial intelligence to really advance the field.

Mr. SMITH. Right. Very well. Thank you.

Mr. Beckerman, how do your companies help ag producers navigate the barriers and challenges of international trade?

Mr. BECKERMAN. Thank you for the question, Congressman. The Internet is all about reducing friction and connecting people around the world and connecting supply and demand in a seamless instantaneous way. And that happens in every single industry, including agriculture. Everything you see, what happens on the payment side from companies like PayPal and others. There are technology Internet companies like AgLocal that provide almost like an eBay for agriculture.

And what you see in every single industry, including agriculture, is our companies in the industry and digital trade, it is just making it easy cutting out the middleman and making—you know, you can focus on farming and reach customers around the world.

Mr. SMITH. All right. Very good. Thank you.

And again, I want to add emphasis to the fact that while Uber and Lyft might make our lives easier, what I find even more inspiring is that someone can pursue opportunity on the other end of that by being a driver or providing various services in the shared economy. It is certainly the way of the future, and I find it exciting and inspiring. And I am glad you are here today.

I yield back.

Chairman REICHERT. Mr. Doggett.

Mr. DOGGETT. I am fortunate to represent Rackspace, which I believe, Mr. Beckerman, is one of the members of your association. And I would ask you, for them and for other members of your association, to just comment a little more about the importance of getting an agreement that can be fully implemented with Europeans on privacy.

Mr. BECKERMAN. Thank you. Rackspace is a terrific company. Europe is obviously a huge market and an incredibly important one. And we applauded the Privacy Shield Agreement that was just inked this week because it does help data flows across the Atlantic between Europe and the United States. And that is key for all of our companies, large and small, to be able to have customers in Europe. And our companies obviously take privacy and security of all the users very seriously. And this agreement and being able to do business in Europe is critical for companies like Rackspace and others.

Mr. DOGGETT. If that agreement is fully implemented, you have referenced the TPP, of which there are some good provisions and some very troubling provisions, but what is to be gained in other parts of the world by having similar agreements to that that we have entered with the European Union?

Mr. BECKERMAN. Well, there are 3 billion Internet users around the world. And for most of our member companies, they have more users now and more people using the services abroad

than they are in the United States. And so the more that we can have trade agreements globally around the world that take into account some of the policies I talked about on intellectual property, copyright, on intermediary liability, and generally having data be able to flow seamlessly across borders and not having forced localization of servers throughout the world, those provisions are going to be key in other markets too.

Mr. DOGGETT. Would you envision, and I think Mr. Ahmed may have referenced this as well, that we do this through the World Trade Organization to deal with these issues in one agreement for the entire world?

Mr. BECKERMAN. Well, there are certainly updates that will need to be made. The last time, I think, they did a WTO negotiation was back in the 1990s, and most of our member companies didn't exist.

Mr. DOGGETT. Right.

Mr. BECKERMAN. And we certainly wouldn't have a hearing like we are today and stories like we are hearing today back in the 1990s. And so we definitely need updates and improvements.

Mr. DOGGETT. Thank you very much.

Thank you, Mr. Chairman.

Chairman REICHERT. Ms. Jenkins.

Ms. JENKINS. Thank you, Mr. Chairman, for holding this hearing. And we thank our experts for their testimony today. It has been very informative.

Last year, I had an opportunity to visit a small engine parts supplier in Basehor, Kansas, called R&S Equipment. They ship parts all over the U.S. and also sell parts globally. They shared with me that day some of the challenges with their products clearing customs shipment tracking when they sell internationally. But even with their challenges, they want to continue to grow their international customer base. So this testimony this morning has been very helpful to me.

My question maybe first is for Mr. Beckerman, kind of as a followup to Mr. Smith who has a district very similar to mine, a very rural district. Can you just tell us how your member companies enable small businesses located in rural districts like mine to get online and begin exporting? And then what are the most significant barriers for these small businesses from our trading partner nations when they make their first sale overseas?

Mr. BECKERMAN. Thank you for the question. You know, I think stories like we heard about FreshPaper and others exist in every single one of your congressional districts in industries where you might not expect. And again, our companies are platforms that are helping to connect people around the world. And it is everything from on the payment side with what we are hearing from PayPal and Amazon. Amazon just had their Prime Day yesterday. And my guess is there are probably sellers and small businesses in every single State that were able to benefit from that and sell around the world.

The problem is it's—typically, it has been very complicated with customs and duties and what you owe and currency and things like that, and Internet companies are just about reducing the friction, getting rid of the middleman, and making it easy for a constituent,

with a click or a swipe, being able to sell around the world. And I think, you know, if we had this hearing back in the 1990s, you wouldn't have had small businesses talking about how easy it is to be a global seller or accessing a global market. And it is easy if you are a two-person business, you are able to access the Internet and be able to reach customers in any country almost.

Ms. JENKINS. Okay. Thank you.

Since I still have time, Mr. Ahmed, can you elaborate on what PayPal can do to help small exporters in rural areas like mine and some of the challenges facing your company?

Mr. AHMED. Certainly. So to the example you just raised of the auto parts company, one of the solutions that we have is a product called PayPal PassPort, which addresses the issue of seasonality. So different product lines have different seasons in different countries where they are going to be purchased more likely. And so we provide that business with intelligence on where those products are going to be most likely to sell around the year so that they can have a steady income from global customers.

And then on the policy side, the issue that might most address the concern of R&S Equipment would be raising the de minimis level, and that is the level below which imports are not subject to duty. So I would imagine many of these auto parts are below \$800, for example. And that is the duty level that the Customs Reauthorization Act has raised the U.S. de minimis level to. And so the Customs Reauthorization Act encourages the United States Trade Representative to get other countries to raise their level as well. And if we can do that, that would probably really benefit a company like R&S Equipment accessing global markets.

Ms. JENKINS. Thank you.

I yield back, Mr. Chairman.

Chairman REICHERT. Thank you.

Mr. Kind.

Mr. KIND. Thank you, Mr. Chairman. Thanks for holding this hearing.

And I want to thank the witnesses for your testimony here today on such a crucial topic, as far as trying to break down or eliminating the barriers to digital trade.

We have an important trade agreement pending before Congress right now, Trans-Pacific Partnership. And sometimes, with all due respect to Mr. Padilla here and your testimony, sometimes these trade agreements are perceived as being done in the interest of the multinational, the Fortune 500 companies, but as we heard from you today, Ms. Shukla, the tremendous impact it has on new startups and small businesses.

And, Mr. Atkinson, I was struck by your testimony where you wrote that, if I got this right, 82 percent of the top grossing apps in the United States industry are created by small companies and startups. That is tremendous. So could you just take a minute and kind of explain the significance of making sure that we get cross-border data rules done right and the impact it can have on the startup community and small businesses throughout our country?

Mr. ATKINSON. Yes. First of all, I would just have to reiterate the point, I do think sometimes we forget that large business still employs the majority of Americans. And they pay certainly a sig-

nificantly higher average wage, they are more likely to provide benefits, they are more likely to be unionized, they are more likely to provide health care.

Mr. KIND. Right.

Mr. ATKINSON. So I don't think we can—I don't think we should dismiss the fact that if trade agreements help large companies, that is also helping American workers.

But clearly, one of the advantages of cross-border data flows and all of these Internet tools we have been hearing about is they give small companies tools that they couldn't otherwise have. IBM doesn't need any of these tools. They have got experts all around the world. They know how to do this. But for a small company it is quite difficult. And one of the challenges is that as more and more of the global economy becomes traded, in other words the ability to have competition for all of this, if we are not having the ability to get in those markets, it is going to come back. And it is not just that our small companies won't have the business, it will be that their small companies will have the business and it will be some FreshPaper from some other country that we are buying from rather than selling our FreshPaper. So that is why it is critical.

I think we have real advantages, being arguably the most entrepreneurial nation on the planet. This is really important for us for our small business community going forward.

Mr. KIND. In fact, the Trans-Pacific Partnership is something that hopefully we will have a chance to consider and vote on later this year. But, you know, we took a very serious run when it comes to cross-border data rules, the localization issue. I think we are going to have an announcement shortly on the landing zone as far as the financial services and the localization issues that many of us have been working on. So I think it is a significant step in the right direction where we need to go with global digital trade. It literally is the lifeblood right now of the global economy.

Could you, Mr. Atkinson, speak to the consequences if somehow this Congress can't figure out a way to get TPP done and the agreement falters and falls apart?

Mr. ATKINSON. Well, I think we are at a critical inflection point, at least with digital trade in the world, because at one level we are poised on a knife edge. We can go one of two ways. We can go the way of openness and globalization, and that inherently will advantage the U.S. because that is our core strength right now compared to other countries in the world. If we don't pass the TPP, with these very strong provisions to have digital openness and digital trade, I would predict that what we are going to see is the tipping point just going the other way to essentially a regime of digital nationalism, sort of a pre-World War II Balkanized digital economies. And that, first of all, that is going to be bad for the global economy, but in particular it is going to be bad for us. So TPP to me is a very important signal to get this right.

Mr. KIND. I think the other thing to consider here is TPP, in reality, is not going to just be limited to the 12 nations that are at the table negotiating, there are many others that are expressing interest in joining, including possibly at some time in the future, China. And if we can get the rules done right now embodied in this agreement, then that is something that China will have to adopt.

And I commend the administration's announcement today. They are taking another aggressive WTO action against China for illegal export subsidies on nine raw materials that are holding domestic manufacturers back in this country. That is 13 cases they have taken against China. We have won every single one of them. Twenty-two total through the WTO. We have won every single one of them. So it is not just important to get the rules done right in the agreement, it is the followup.

Mr. Ahmed, as you said, the enforceability of this is going to be very important as we move forward. Again, we thank you for your testimony today.

I yield back, Mr. Chairman.

Chairman REICHERT. Thank you.

Dr. Boustany.

Mr. BOUSTANY. Thank you, Mr. Chairman, for holding the hearing, and I want to thank all of you. This is a really important hearing.

And to Mr. Kind, I really appreciate your line of inquiry and the concerns you raised, because I fully agree with you here.

I have been struck by how getting digital trade and the rules of the road correctly crafted is so important because digital trade is the grand enabler for small businesses to really participate fully in a global economy, which plays to our strength in this country. And I was made aware of this report by Sandvine estimating that legitimate audiovisual and music services account for 70 percent, 70 percent of Internet bandwidth during peak hours. And the U.S. Chamber's Global IP Center looked into this connection between strong protection for copyright and the digital economy, and not surprisingly found a number of important correlations.

Economies with stronger copyright protection have greater access to digital technologies and creative content than economies with less favorable IP environments. Pretty intuitive. And also they have seen more than double the amount of online creativity than that of economies with weaker copyright environments.

So with regard to this, I mean, clearly copyright protections are vital as we go forward. And I just invite some commentary with regard to that.

Mr. Atkinson, if you want to—

Mr. ATKINSON. Yeah. Well, thank you for that question. It is important to get the balance right. I think the U.S. has gotten the balance right with the Digital Millennium Copyright Act and Section 230, and at the same time strong protection for copyright. We have done our own studies, for example, correlating strong copyright protection with strong innovation, as well as strong content production. And they are strongly correlated, as you rightly note.

So I would agree with Mr. Beckerman that trade agreements should include some kind of provisions like Section 230 for intermediate liability protection. But also for safe harbor kind of on both sides, safe harbor and liability protection for if you are hosting content inadvertently from someone else. But at the same time, safe harbor if you take it down because you think it is infringing, you shouldn't have risk on that if you are doing it in good faith.

But I would caution the Committee on one regard, and that is with regard to exporting fair use. Fair use is a really very specific

term that is in U.S. jurisprudence around a number of cases that have evolved over the years. And the fair use provision evolves over time.

One of the challenges is really that one person's fair use is another person's piracy. And what we see in the countries, particularly in the TPP, very troubling rates of piracy. For example, software piracy rates in the U.S. are at 19 percent, but in Malaysia are 55 percent, Mexico 57, Chile 61, Vietnam 81. And so I would worry that if we just put fair use into that agreement or other agreements, that we are giving consensually these countries a get out of jail free card that they can justify already rampant levels of piracy just by, you know, saying, well, this is fair use, which it clearly isn't.

Mr. BOUSTANY. Right. And I understand the Second Circuit has described fair use as one of the most troublesome concepts in copyright law. And it seems innocuous, two words, but hundreds and hundreds of cases, some 1,100 pages to explain what this means. So you are saying it is not advisable to use this concept going forward in—

Mr. ATKINSON. Yeah, I wouldn't use this concept. It is really unique to the U.S. system. And other countries don't have the same kind of legal system that we have. I think it is important to recognize that USTR included provisions around exceptions and limitations in the TPP. This has been from what is called the Berne Convention over the years. And we can work to strengthen those. But I think sort of exporting fair use per se would be ill-advised.

Mr. BOUSTANY. I appreciate that. And with regard to the Privacy Shield agreement that was just negotiated and completed, I would be certainly interested in understanding, as I look at this more closely, is this really state of the art? Is this what we need? Are there things missing that we need to consider as we continue to look at this very rapidly evolving field? If there is any commentary now, I would appreciate it.

Mr. BECKERMAN. I think the privacy shield is incredibly important, particularly for companies that are small or mid-size companies that want to be able to have data flows across the border to Europe. And we are happy it got done. And I think that was something that was probably in the way for getting other trade deals done.

And if I may, I would like to comment a second on the copyright conversation. Our members are on the front lines every day fighting piracy and copyright violations around the world. And what we have sought for in this trade agreement and in others is to have the same balanced copyright policy that we have here in the United States, with fair use exceptions limitations. That is the U.S. balance that I think works very, very well here for creators. We think that should be part of trade deals around the world, and we think it is an important component that needs to be included.

Mr. BOUSTANY. Thank you.

Mr. PADILLA. Mr. Boustany, if I could add on privacy shield, it is vitally important to every company engaged in transatlantic commerce, not just small- and medium-sized companies. But in fact, any business that moves data across the Atlantic can benefit from privacy shield. The administration has done a very good job

in negotiating a successor to the Safe Harbor agreement that was in place for 15 years. This agreement is likely to be challenged in European courts again in the near future. And this issue won't go away. And it underscores why it is so important for us to move ahead with digital trade provisions in the TTIP negotiations with the European Union. We have to lock these things in, otherwise there will be uncertainty about whether or not commerce across the Atlantic, the single biggest trade relationship we have, can continue.

Mr. BOUSTANY. Thank you. I yield back.

Chairman REICHERT. Mr. Paulsen.

Mr. PAULSEN. Thank you, Mr. Chairman, also for holding the hearing. And this has been great testimony and very helpful. And it was mentioned earlier about TPP now prohibiting the localization measures for data in all sectors except for financial services, of course, and government procurement, allowing those specific exceptions to achieve legitimate public policy objectives. But, you know, I guess I am pleased that most of those localization measures would be prohibited under TPP. But I hope that clear and enforceable commitments are also made in that financial services sector, as was mentioned.

I am really encouraged that the administration and USTR have been moving forward with that fix addressing those deficiencies in TPP. But I think a lot of us, and myself in particular, are very interested in knowing and learning more to ensure that the proposed fix, that has been talked about, is actually going to be enforceable, that it is going to be operational in all 11 TPP countries because you have got four countries that are obviously not in the TiSA fix potentially that have to be addressed. And so we are going to be looking for that.

But we were just talking about the Atlantic and Europe, and so I just want to shift and ask a question here, because I do understand that progress has been made on digital, you know, digital issues. It has been a little slower in the TTIP discussions in general so far. And we have got to see really solid commitments there, if it is going to get, you know, my support, I think the support of others as those TTIP negotiations move forward. So here is the question. Can you just describe maybe what are some of the barriers right now that U.S. digital exporters face unique to the EU? Expand a little bit what our conversation was just going, but what are some of the unique barriers that we have right now as you look at trade with the European Union?

Mr. PADILLA. I could give a real-time example, Congressman, actually just from yesterday. The biggest thing that we are seeing in Europe is demands to store data within the European Union. And as Rob mentioned, there is this view within Europe, particularly in the last few years that somehow if the data remains within Europe, that it is going to be more secure. That is just not true. The geographic location of the data doesn't really make a difference with regard to what privacy or security laws apply.

But IBM makes a software product that we sell to a Belgian bank. It is a cyber security product so that when people do their online banking, they are more secure. That data that in order to update malware and virus threats, we call on databases in the

United States and in Israel. And just yesterday, we met with the Belgian data protection authority that said we don't want you to do that. We don't want you to get the updates on the malware from Israel because we don't trust Israeli surveillance laws. We don't trust American surveillance laws either, for that matter. And this is an increasing trend. You know, this doesn't just happen in China. This is an example from Belgium. And I would imagine that many companies are probably experiencing similar things.

Mr. PAULSEN. Anyone else have any feedback in that area that—is there any other progress being made?

Mr. BECKERMAN. I mean, I would agree with that. I think when you look at what forced localization is, it is nothing more than protectionism, really. And it hurts trade and investment. And the way the Internet works is the free flow of information across borders and not requiring companies to build data centers. And that is a perfect example of yours, and so that needs to be fixed.

Mr. ATKINSON. So Mr. Padilla brought up the point of Israel. I just can't resist pointing out, I think it is ironic that the Europeans have gone after us with regard to safe harbor inadequacy. At the same time, they don't trust Israel, and yet Israel still has a safe harbor with Europe and has agreed to cut us off. So the Israelis cut us off. There are no cross-border data flows between Israel and the U.S. now under the new Israeli rule because they wanted to gain the favor of the Europeans, even though the Europeans don't trust the Israelis.

So if the Europeans want to be consistent about this, they shouldn't just be talking about us, they should be talking about all the other countries that they have agreements with and whether their security systems are adequate. And they have not done that. So from the outside it appears that the Europeans are singling out the U.S. perhaps for reasons because we are the dominant IT player in the world.

Mr. PAULSEN. Thank you, Mr. Chairman.

Chairman REICHERT. Thank you.

Mr. Pascrell.

Mr. PASCRELL. Thank you, Mr. Chairman. And we certainly—you have certainly selected a great panel, without exception.

Mr. Atkinson, the administration just didn't wake—I can't picture this—just didn't wake up one morning and say and come to the conclusion that within financial data or digital trade that we are going to protect financial communication. I mean, you were very specific about this. And I want you to tell me, as I ask many panelists on many different issues, what is the administration's position or why did they come to that position, do you think? And what specifically do you object to?

Mr. ATKINSON. So I think the administration came to that position for several different reasons. One is, I don't think they had fully enough understanding of how digital trade—trade in data work and the security systems involved. So I think there was that problem. The other more legitimate issue was that they were concerned about what is called resolution. If there is a U.S. bank and there is a problem with it and they have to resolve it and the data is perhaps in another country and the other country says, you can't

have that data for some reason. That is a legitimate concern that financial regulators would have.

But the answer to that legitimate concern is to not prohibit Citibank or some other bank from storing data in Canada or some other country, it is to make sure that every country in the TPP agrees that when there is a resolution issue, that they will not block that data flow.

Mr. PASCARELL. And how would that be resolved? How would that be—what oversight could we have on that? We have a difficult, difficult time in carrying out what we place in these trade deals, regardless of what the product is, and bringing justice to bear. Why would this be any different? In fact, wouldn't it be more difficult to oversee those kinds of things, financial data?

Mr. ATKINSON. Well, first of all, there are already some other—and I apologize, we wrote a report on this and I didn't write the report, but there are other provisions in there that as well that would help them. And we already have a global financial system where we rely on other countries to do certain things. And we don't say that all finance has to be national. So I see this as relatively similar to many other financial issues.

Mr. PASCARELL. You do?

Mr. ATKINSON. Pardon me?

Mr. PASCARELL. You do see the similarity. You say that this should be handled like everything else.

Mr. ATKINSON. Well, my point was we do have an internationalization of the finance system, that Treasury and other regulators allow certain things to be international. That is because we have trust and we have global agreements. And I don't see that as any different. I just also see this as a relatively modest, low risk problem that if it were to occur—and by the way, I would say, by the way, the fact that USTR is proposing a fix suggests that USTR at least has come to the realization that cross-border data flows here are viable.

Mr. PASCARELL. From the latest numbers that we have, the size of this digital growth in cross-border data has been relatively—was 45 times what it was in 2005. I mean, that is a huge number. We trade in goods. That has been relatively flat. This technological trade has been a boon to tech companies, no question about it. Many small- and medium-sized businesses that have been able to expand their market overseas in an unprecedented way. We know that the U.S. is by far the global leader in digital trade. Our companies lead the world in creating digital products and providing data storage. We are talking about \$400 billion in services that we have exported. Fascinating number.

So as this technology continues to innovate and become more and more integrated into our daily lives, the average American, which is very frequently forgotten in every trade deal, we want to make sure our trade agreements continue this expansion in a way that provides access and maintains security, privacy, and jobs by the way.

So I want to ask you this question as a followup. We have strong innovation protections built into U.S. laws, but we know that more U.S. companies now have a majority of users and consumers overseas. What do you think we can do through the TPP implementa-

tion to advance gold standard U.S. laws about copyright and about digital trade?

Can we get an answer on this, Mr. Chair? It will only take a few—

Chairman REICHERT. If you could—we are already over time—if you could make your answer quick, please.

Mr. PASCARELL. Thank you.

Chairman REICHERT. Who are you asking?

Mr. PASCARELL. Mr. Atkinson.

Mr. ATKINSON. Well, I think the TPP agreement has struck a good balance with regard to the need for openness, the need for intermediaries to have some liability protection, and the need to protect copyright. I do think, though, that one of the challenges, and when we look at the global economy, is there are many, many countries who are copyright scofflaws and who are just engaged in systemic stealing. And as a big producer of IP in content as the U.S. is, that directly hurts U.S. jobs.

Mr. PASCARELL. Thank you very much.

Thank you, Mr. Chairman.

Chairman REICHERT. You are welcome.

Mr. Kelly.

Mr. KELLY. Thank you, Mr. Chairman. I thank the panel for being here.

Ms. Shukla, I got to tell you, your story is one of those stories that people look at and say, you know what, this is an incredible thing that you have been able to do. And the fact that you were able to do it, I think, gives great encouragement to everybody.

Listen, last month I had an opportunity to go to a Transatlantic Legislators' Dialogue meeting at The Hague with Representatives Diaz-Balart and also Costa. And we had an opportunity then to talk about trade with some of the EU parliamenters. Angela was with me. And I think that when we look at how we try to form trade agreements, and then we look at the digital part of what it is that we are trying to do—

And, Mr. Ahmed, you talked about automobiles and how we are able to do things. I have got to tell you, this has changed completely the way everybody does business. And the access to global markets I think is the thing that is probably the most stimulating about this.

Mr. Atkinson, you talked about how this is growing and growing and growing, and every day we seem to find other markets that we can get into and we see other opportunities that are there that were never there before. And I got to tell you, from a guy who had operated a small town business in a little town of about 25,000 people, you can take that opportunity when it comes to parts or automobiles or anything—I am an automobile guy—you can sell that product almost anywhere right now globally—for me it is the United States, I have to stay with that, I am not going to get shipping overseas—but the other part of it is there for everybody.

But when it comes down to these agreements, and we talk about access to a global market, and we talk about—and I think my experience with the EU was different, because I think it is the intent, if we are really going to do trade agreements, that they have to be fair. And so tell me, and each of you, if you could, talk about the

barriers that are put in place any time we try to put an agreement together.

And I think, Mr. Ahmed, you said something that was really good, you said certainty comes from enforcement. So all these things may be well intentioned as we talk about building these agreements and, you know, certainly, I look at the global opportunity, but I also look at we are the strongest economy in the world. So whenever it comes time for us to sit down and hammer out agreements, and USTR is trying to do those things right now, tell me, the digital—in that market, the challenges are there and the barriers that actually exist for you that somebody may look at and say, no, I don't see that, but it is there.

If you can, just kind of run through it so we can explain how difficult it is to actually have a fair and balanced field. While the intent may be there, the actual final result is not. And I know we have had conversations about this already and the scope of the hearing is about how difficult it is. For you to compete globally, and for you to have trade agreements globally that are fair and balanced, tell me some of the things that can take place that the average person wouldn't see and how it is affecting your businesses.

Mr. ATKINSON. Well, to be clear, I don't have—actually, I do have a business. I have a business that employs 15 people, and we actually are global. We get some revenues overseas, if you will.

But I think the key issue here is twofold. One, TPP is an important agreement because it has enforceable provisions that are not in other agreements. One of the reasons China can get away with what it gets away with is because the WTO framework is still quite weak, particularly in these new areas. So that is number one.

Number two, I fully agree with your concern about enforcement. And we have long been on the record that we need to have more enforcement, we need USTR to do more in these spaces, they need more resources to do better enforcement. But you are right, trade agreements without enforcement are not worth as much.

Mr. PADILLA. As a large company, the biggest barrier we face is every country we go to, we get the request to build a data center locally, even if it is not necessary. I mentioned the Wimbledon app, which we supported from five or six data centers around the world, it shows the global nature of it.

Mr. KELLY. Just to interrupt, isn't that the beauty of the Internet? You don't have to have bricks and mortars in the place that you are doing business.

Mr. PADILLA. That is correct. You don't need to. We shouldn't have to have a data center in Brazil in order for a Brazilian to watch Serena Williams on the Wimbledon app, but there are regulations proposed that would require that.

Mr. BECKERMAN. It is a great question. And I think going back to also with what Mr. Pascrell was asking, he said why are the most innovative companies, the Internet companies that we represent, why have they been born here in the United States and grown here in the United States and the lion's share of the value from the Internet sector, which has been the fastest growing part of our economy in the last few years, why has it happened here in the United States? And a lot of it is because of policy that people don't see and they take for granted every single day. And that is

the balanced U.S. copyright laws that we have, that is the intermediary liability protections that we have here in the United States. Those are two of the most fundamental and key components of the Internet economy and why you have seen companies like Amazon and Facebook and Google and Etsy and PayPal, all the other great Internet companies that exist born in the United States, grown in the United States, and now serving 3 billion people around the world. And without exporting also those copyright policies, balance, including fair use and intermediary liability protections like we have in the U.S., CDA 230, those are key, and people don't see it, and they take it for granted every day.

Chairman REICHERT. The gentleman's time has expired.

Mr. KELLY. Thank you. Ms. Shukla, I really would have liked to hear from you because this does make it possible for somebody your size to actually compete globally. It is a market that was never there before. I think the beauty of it all is the fact that you don't have to have large sums of capital to actually compete in a global economy. Thanks so much.

And I yield back.

Chairman REICHERT. Mr. Neal.

Mr. NEAL. Thank you, Mr. Chairman.

I just finished a really good book, *The Rise and Fall of American Growth*, by Robert Gordon, he is a professor at Northwestern University, in which he lays out a series of events that he argues occurred between 1870 and 1970, which he says is the great period of economic achievement in American history because of innovation. And he formulates a number of positions, including the combustible engine, including sanitation, including the radio, electricity and basic things, and he makes the argument in the post-1970 period that we have had some big achievements, but really nothing comes close in terms of what the polio vaccine did or penicillin.

But he also makes a pretty important argument that has been consistent with what you have offered today in which he says that our patent system was second to none, and that it was the rule of law that really gave us this elevated position in terms of achievement, innovation, and creativity. And he argues that as we have proceeded to a globalized economy, that is a lot harder to do. So for the panel, maybe discussing the nexus between intellectual property rights and digital trade, the whole notion of who has a proprietary interest in protecting their own achievement.

Mr. ATKINSON. Well, thank you, Congressman. By the way, my sympathy for having to go through that 700-page book, which I have read myself. I just have to say I am not anywhere near as pessimistic as Bob Gordon is about our future. I think our future around innovation and productivity is still very bright. He is really very much of a pessimist. But you are right in the sense of his analysis linking intellectual property to growth.

This is, I think, important to the U.S. in particular because as the global innovation leader, innovation relies on intellectual property. And we just wrote something yesterday from a colleague of ours, Jason Potts, who is a professor in Australia, who has argued that what we are seeing essentially is gunboat intellectual property theft. In other words, it is not just companies that steal U.S. intellectual property, it is foreign nations. And they aid and abet the

theft of U.S. intellectual property solely for competitive reasons, solely to gain advantage on us. And that is really a unique thing that hasn't really occurred before in the global economy, using IP strategically and illegally.

And again, I stress that that is why trade agreements have to have strong IP protections, because there are just so many jobs. I think it was the Department of Commerce report a few years ago that showed that something around 30 to 35 percent of U.S. jobs were IP-dependent. So this is a very important thing to get right in the trade agreements. And TPP does take important steps in that direction.

Mr. PADILLA. If I could mention, Mr. Neal, one other provision of TPP that goes to this. IBM certainly believes in innovation. We are the largest recipient of U.S. patents for 23 years in a row. The newest way for people to steal intellectual property is through cybercrime, through breaking into people's systems and exfiltrating data rather than just through copying things, as used to be the way in the past. And interestingly, TPP has some good provisions in it that require cybersecurity cooperation between the signatories. That is an important new area. And as we talk about digital trade and all these benefits, ensuring security not only of data but of intellectual property online is essential. And I think TPP takes some initial steps in that positive direction.

Mr. PADILLA. Thanks. I will have to check that book out also. It sounds good.

You know, the United States obviously has done something right that has allowed for these companies to grow and have all the benefits for creators around the world. And we think TPP is taking steps in the right direction in that regard. But obviously, for all future trade deals, this is going to need to be included, and we are going to have to look at what has the U.S. done right that has enabled such incredible innovation here for creators and everybody.

Ms. SHUKLA. Well, I certainly don't know much about intellectual property policy, but all I can speak to is my personal experience. I do feel like the benefit I had of getting a patent at that young age changed everything for me. It made it possible for me to actually even think about creating a business when I was ready. And today, I am able to use that business to get FreshPaper to people in the developing world, to do more with it based on my own personal mission. I think that has been incredibly valuable and gave me a chance.

Mr. AHMED. I would say that one of the interesting additions in the Trans-Pacific Partnership is a chapter at the end called small business, the small business chapter. It is the first small business chapter. And it is designed to educate small businesses on how they can take advantage of the Trans-Pacific Partnership. And so provisions that are there to help them can now be, you know, made clear to them how they can take advantage of them. And so I think that is a very important provision that is new there.

Chairman REICHERT. Mr. Meehan.

Mr. MEEHAN. Thank you, Mr. Chairman.

And I want to thank the panelists. It has been a terrific panel. One of the realities of being the last to ask questions is we have been through a lot of territory here. So I don't want to be redun-

dant, but I have certainly—we have, many of us have worked together on things, from cybersecurity to other areas over the time. And I think there is just some recurring themes. And so my question would be to use it to either jump on any of these with something that you would like to communicate before you go or is there one particular thing we ought to be focused on in your ideas that would help us more effectively move?

When I see themes, the things that concern me the most are the inability for us to reach the kinds of agreements that create rules of the road in which we start to get common standards that serve as a check against the recalcitrant countries like China or Russia or others, that if we fail to create these agreements, they will step in. The second, of course, is the protectionism and the concern that what you are having is countries that may from time to time use data localization and other things as a way to sort of protect against the incursion of good new products coming into their—they are worried about losing market share because of more innovative progress. So how much are we using these things as barriers that actually have another intention, which is to protect their own?

And, of course, the last is the protection of these properties once we go. If we have a system that is organized in a way in which people are respecting the data flow, we have standards, there is more of a system that is in place to protect the integrity of that information, both companies that may steal as well as nations that may steal.

So with that, what are your thoughts with respect to the overarching themes, or if there is some specific thing we ought to be focused on to assure that we create a safer world of opportunity for intellectual trade? Why don't I just go right across.

Mr. ATKINSON. Well, thank you, Congressman. I don't have anything specific other than, I think, two broader general points. One is, a number of countries who are problematic in this space, they are doing it not out of malice but out of maybe ignorance, if you will. And that is why a TPP framework and expanding it into TiSA and others is important because it just sets the rules of the road that they know they have to do these things and it is the right thing to do. There are other countries who are doing it, they know quite well what they are doing, and they are doing exactly as you said, they are protecting domestic businesses, they are going after U.S. companies. And there it is important, again, to get these countries in trade agreements, but also really to focus more significantly than we have had in the past on enforcement. So I think these two things are critical.

Mr. PADILLA. I would say, as you said, Congressman, much of the history of the post-war trading system has been about removing barriers that were already in place, particularly tariffs and things like that. These provisions are about preempting barriers, preventing them before they are put in place, by and large. And that is why it is so important that we try to move ahead on TPP as quickly as possible and then replicate these provisions in other agreements. Because if we put this off 2, 3, 4 years, what we will be doing is trying to take down barriers that are already disrupting commerce rather than what we are trying to do today, which is to prevent them.

Mr. MEEHAN. Thank you.

Mr. BECKERMAN. Thank you. Specifically, when you are looking at China and Russia, obviously two major concerns are censorship and forced localization and ensuring that we have data flows. And just generally speaking, I think what we have heard from probably everybody is, you know, we don't want to see a Balkanization of the Internet and have different sets of policies in different countries. And we don't want to have—

Mr. MEEHAN. Because sometimes forced localization can also be termed forced utilization, in which you are required to go through portals or gates that they will set up with competitors of yours.

Mr. BECKERMAN. Exactly. So we just want to reduce friction, you know, connect supply and demand seamlessly. That is important.

Mr. MEEHAN. Thank you.

Mr. AHMED. Well, first, thanks to Congressman Kelly, Congressman Kind, and others who have really raised the profile of this financial services data flows issue because that is a very important issue going forward to resolve. And then I would also add that in the Customs Reauthorization Act and in future trade agreements, addressing this issue of de minimis will be really impactful for small businesses because they are often dealing in, you know, low denomination items that can be tremendously benefited by raising de minimis around the world.

Mr. MEEHAN. Ms. Shukla, the closing comment is yours.

Ms. SHUKLA. I really appreciate the opportunity to be here. And I think it has been very inspiring for me to hear about everything that goes into making this opportunity for me possible and for all the entrepreneurs like me, everything that goes into making the opportunities that we have today here. And I think I would just encourage you to remember the millions of entrepreneurs across the United States who have these innovations and ideas, who have access to these incredible tools, and we just need a little bit of help being able to access global markets so that we can really unleash those energies. Thank you. I appreciate your help.

Mr. MEEHAN. Well said.

Mr. Chairman, I yield back.

Chairman REICHERT. Thank you.

And thank you again to the witnesses for your attendance today and taking time out of your busy schedules to be here. Excellent testimony, as you heard from both sides of the aisle.

Mr. RANGEL. Mr. Chairman?

Chairman REICHERT. Yes, sir.

Mr. RANGEL. Because their testimony was so important, I wonder whether any of you have any suggestions to how this panel could be more effective in getting this message out to our country. Because, believe me, between your lips and our constituents' ears there is a gap.

Chairman REICHERT. How about one of you tackle that one?

Mr. BECKERMAN. I am happy to try.

Chairman REICHERT. All right.

Mr. BECKERMAN. I mean, I think probably the best thing, as you know, Congressman, all politics are local. And I think there are multiple FreshPaper stories in every single congressional district,

regardless of rural or urban or coast to coast, and there are many stories exactly like this. And that is, I think, what we want to tell, you know.

Mr. RANGEL. Let me thank the panel. You have done a great job.

Chairman REICHERT. Thank you, Mr. Rangel. As the ranking member knows and members of the panel know, there are national business organizations and employee organizations that are out there helping us get out the word about the positive effects of trade across the country. In fact, some businesses have taken—I think Caterpillar has a sticker that they put on each one of their products as to which country they are headed to let the employees know that, you just made this piece of machinery and it is headed to Colombia, or wherever. There are other countries that put on their paychecks, X percent of your paycheck this week has been as a result of a trade agreement with country whatever. So there are those efforts ongoing, but I think sometimes that the rhetoric across the country overtakes the common sense and the reality of what trade really does for America.

Your testimony today, the hearing today was really designed in a way to help educate America. And we have to continue on with that process. And I am going to be looking forward to the next product that Ms. Shukla comes out with, because FreshPaper, some of the members up here were whispering whether or not that might work on our face rather than an apple or a peach. Mr. Kelly, he wasn't asking me that question. But anyway, thank you so much for your presence today and your excellent testimony and answers to our questions.

I am required to say please be advised that members will have 2 weeks to submit written questions to be answered later in writing. Those questions and your answers will be made part of the formal hearing record. Our record will remain open until July 27. And I urge interested parties to submit statements to inform the Committee's consideration of the issues discussed today.

With that, the Committee stands adjourned.

[Whereupon, at 11:46 a.m., the Subcommittee was adjourned.]

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Submissions for the Record

STATEMENT FOR THE RECORD

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SUBMITTED TO

United States House of Representatives Committee on Ways and Means, Subcommittee on Trade

1102 Longworth House Office Building

Expanding U.S. Digital Trade and Eliminating Barriers to U.S. Digital Exports

July 13, 2016
10:00 AM

Chairman Reichert, Ranking Member Rangel, and members of the Subcommittee, I would like to thank you for giving eBay Inc. the opportunity to submit a statement for the record on this important topic.

eBay Inc. is a global commerce leader including the Marketplace, StubHub and Classifieds platforms. Collectively, we connect buyers and sellers around the world, empowering people and creating opportunity through Connected Commerce. Founded in 1995 in San Jose, California, eBay is one of the world's largest and most vibrant marketplaces for discovering great value and unique selection.

In 2015, eBay enabled \$82 billion of gross merchandise volume and today, 58% of our Marketplaces business is international. Our platforms enable hundreds of thousands of US entrepreneurs, small businesses, as well as mid-size and large businesses, to reach customers around the world. We empower over 164 million buyers globally on our marketplaces with users in 190 countries. Our platform facilitates a new kind of a global trade that is truly beneficial for Main Street businesses across America.

eBay Inc. is an Internet and mobile technology-based business, but in the 21st Century global economy, every business that operates internationally in any significant scale depends on access to, and transmission of, digital goods and services, including logistics, online services, distribution networks, finance and professional services. The Internet accounts for 21% of GDP growth in advanced economies and facilitates \$8 trillion each year in e-commerce. The United States is the unquestioned world leader in Internet-enabled business, innovation and entrepreneurship. But data moving across borders is not just an Internet industry phenomenon; it impacts every business, including manufacturers, agricultural businesses, and financial services providers. McKinsey reports that 75% of the impact of the Internet is being realized by traditional industry.ⁱ The US International Trade Commission estimates that digital trade has already boosted US gross domestic product by 3.4% to 4.8% through enhanced productivity and reduced international trade costs, and the effect on US total employment ranged from no change to an increase of 2.4 million full-time equivalents.ⁱⁱ

My team at eBay Inc. has spent the last four years conducting research on the growth of global trade by technology-enabled small businesses.ⁱⁱⁱ In April 2016, we released the United States Small Online Business Growth Report^{iv} which provides an in-depth look at trade and growth figures for eBay-enabled small businesses and entrepreneurs (annual sales of \$10K or more) in all 50 states as well as the District of Columbia. The report also provides a state-by-state snapshot of the counties with the most eBay-enabled small business activity per capita.

The report findings reveal that nearly every eBay-enabled small business in each state is an exporter, and that eBay-enabled small businesses as a whole have been experiencing sales growth rates that exceed their state economy averages. The research also shows that active eBay-enabled small businesses emerge from communities nationwide, rural and urban alike. These findings further bolster the argument that the technology-enabled platform commerce model, which significantly reduces the cost of doing business over distances, is a highly inclusive model of trade. For example, our research revealed that 97% of eBay-enabled small businesses in the United States export. This figure dwarfs the export activity of traditional US businesses, which stands at approximately 1% nationwide. Additionally, nationwide, eBay-enabled small businesses that export reach an average of 18 foreign markets.

Alongside these impressive statistics, there are many excellent examples of small business success stories including:

- The McClellan Family from Ferndale, Washington, started Hardware Sales, formerly Powder Sales, in 1962, specializing in sales of dynamite to loggers, miners, and road builders. This family-owned business became an integral part of their small Washington state community, as the one-stop hardware store. However, in 2007, the success of mainstream big box retailers, forced the family to adapt to the changing retail landscape by opening a Hardware Sales Internet division. That's when they brought in Steve Douge, who had experience in online sales to run their Internet division. What started as an eBay only operation has now expanded to its own website. The company regularly gives back to the community through their work with the local Boys and Girls club, as well as donating tools and equipment to organizations such as Habitat for Humanity and other non-profit building projects. Hardware Sales exports around 25% of its products.
- Adam Wexler of Brooklyn, NY operates StereoBuyers, a locally owned, family-run business focused on buying and selling High-End pre-owned HiFi audio equipment. The seed of StereoBuyers was planted in the mid-1990s. As a college student, Adam wanted a high end stereo, but could not afford one. That's when he got the idea to buy and sell stereo equipment that had been traded into a local HiFi shop. After graduation, Adam continued to run StereoBuyers part time until 2009, when he left his full-time job as one of Manhattan's top high-end AV salesmen and designers to pursue the business full-time. In 2012 Hurricane Sandy completely wiped out Adam's business and putting his warehouse and products in 7 feet of water. Luckily, through hard work and determination, Adam and the StereoBuyers team were able to build themselves back up. StereoBuyers exports about 30% of its products.

This trade activity represents a new model of SME exporting that has emerged in parallel to the SME "Global Value Chain" model where small enterprises engage in trade as a component of a giant commercial enterprise. We have coined the term "Global Empowerment Network" to describe this new model by which small businesses are able to create a storefront presence online and compete directly in global markets through e-commerce platforms with vibrant customer bases. The Global Empowerment Network combines a set of services and conditions enabling SMEs to transcend borders, reach customers on a global scale, and facilitate business transactions.

There are four key building blocks that fuel the Global Empowerment Network: (1) Connectivity to the global Internet at low cost and without gatekeepers; (2) Global platform-based marketing, marketplace and payment services; (3) Efficient, modern and "connected" package-level logistics and delivery services; and (4) Legal, regulatory, and public policy framework supporting direct SME-to-consumer global commerce.

Our United States Small Online Business Growth Report also provides key recommendations for policy makers to drive even greater economic growth among small American business that use the Internet to export. These include:

- Increase Low Value Customs "De Minimis" Thresholds Across the Globe
- Support the Trans-Pacific Partnership Agreement (TPP) and Other Efforts to Modernize Trade Policy
- Modernize Postal Systems to Support Small Business Digital Trade
- Promote the US Standard of Intellectual Property Law in Trade Agreements
- Ensure a Free and Open Internet
- Explore Flexible International Regulatory Cooperation Solutions

- Provide Coordinated Export Promotion Assistance to Internet-Enabled SMEs

The kind of cross-border trade being done by these, and hundreds of thousands of other “micro-multinationals” spread across America, is growing rapidly. Research from Progressive Economy finds that low-value or “micro” US exports increased by 103% between 2005 and 2010, more than twice the increase for all exports.^v Moreover, the 2013 World Economic Forum (WEF) Enabling Trade report found that the use of technology platforms can reduce the burdens small businesses face when selling overseas, increasing cross-border small business sales by 60-80%.^{vi}

Finally, it is key to realize that when examining the barriers and opportunities for U.S. business in the digital age, our discussion is not merely about business or policy; it is about people. Globalization and trade are fundamental realities of the world in which we live. Unfortunately, a significant number of people have not yet been able to directly take part in the global marketplace because they own or work in businesses that have, traditionally, been too small or too remote. But now the Internet, and the global data-based businesses and platforms that underpin 21st Century commerce, are enabling small business and consumers, for the first time, to truly enjoy the benefits of direct participation in the global market.

We sit at the dawn of a new era of globalization that is far more inclusive than the one that preceded it – a future where millions of small businesses from across the US can participate in their local economy and also increase revenue through access to customers around the world. This is good economics because it means more growth and wealth, and it is good for society because it means a more inclusive future. We need to make the right policy choices to achieve this future.

Chairman Reichert, Ranking Member Rangel, and members of the Subcommittee, we respectfully submit this statement for the record and pledge to work with you to ensure that US small businesses and consumers can realize the true benefits from the Internet.

ⁱ McKinsey Global Institute, Internet Matters: The Net’s Sweeping Impact on Growth, Jobs, and Prosperity (May 2011) available at: http://www.mckinsey.com/insights/high_tech_telecoms_internet/internet_matters

ⁱⁱ U.S. International Trade Commission, Digital Trade in the U.S. and Global Economies, Part 2 available at: <http://www.usitc.gov/publications/332/pub4485.pdf>

ⁱⁱⁱ The Full range of research can be found here: <http://www.ebaymainstreet.com/lab>

^{iv} Available at: <http://www.ebaymainstreet.com/policy-papers/us-small-online-business-growth-report>

^v Gresser, Edward. “Lines of Light: Data Flows as a Trade Policy Concept.” (2012).

^{vi} World Economic Forum, Enabling Trade (2013)

United States House of Representatives

Committee on Ways and Means

Subcommittee on Trade

Hearing on Expanding U.S. Digital Trade and Eliminating Barriers to

U.S. Digital Exports

Testimony

by

Etsy

Chairman Reichert and Members of the House Ways and Means Trade Subcommittee, thank you for the opportunity to submit written testimony on the importance of expanding U.S. digital trade and eliminating barriers to U.S. digital exports.

Etsy is a marketplace, founded in 2005, where people around the world connect to make, sell, and buy unique goods. Our community is the heart and soul of Etsy and is made up of creative entrepreneurs who sell on our platform, thoughtful consumers looking to buy unique goods in our marketplace and the Etsy employees who maintain our platform and nurture our ecosystem. Our community also includes the retailers who participate in our Wholesale offering and the manufacturers who form responsible partnerships with Etsy sellers. As of December 2015, Etsy has 1.6 million active sellers present in almost every country around the world – selling everything from food to furniture. We have 25 million active buyers worldwide, and in 2015 our sellers sold \$2.39 billion worth of goods.

The internet has made it easier for anyone to start and grow a business, and Etsy sellers typify this new face of digitally-enabled entrepreneurship. Fully 86% of our US sellers are women, and most operate their businesses on their own out of their home, using the Etsy platform to reach consumers around the world. While 30% operate their creative business as their sole occupation, for the rest it's an important source of supplemental income, contributing an average of 15% to annual household income.¹

¹ "Building an Etsy Economy: The New Face of Creative Entrepreneurship", 2015. www.etsy.me/sellercensus

The creative entrepreneurs who sell on Etsy may not be the businesses one imagines when considering the exporters who could benefit from global trade agreements, yet as of March 31, 2016, 30.3% of gross merchandise sales on Etsy involve a buyer or a seller outside the United States. Many Etsy sellers start selling goods internationally from the moment they open their shops. Unfortunately, existing trade laws have not kept up with the growth of global e-commerce and the opportunities it provides to micro-businesses.

Most independent, creative businesses lack the infrastructure and information to navigate complicated international trade rules. Customs and duties vary by country, and credible information about each country's requirements can be difficult to find. Packages are often delayed in customs or subject to unforeseen import taxes that the buyer must pay before receiving their package. Package tracking often stops at the border, creating unnecessary friction in international transactions. In the face of these challenges, buyers may reverse transactions or request refunds, the cost of which the seller often bears.

In addition to customs and duties requirements, e-commerce regulations vary widely between countries. Discrepancies in consumer protection or privacy laws pose a challenge for individual sellers, who must find relevant information on requirements for each country before shipping an item, or who may unknowingly break local laws when they allow buyers from other countries to purchase their goods. International trade agreements offer opportunities to reduce the barriers that prevent digitally-enabled micro-businesses from exporting their goods.

A Universal De Minimis Customs, Duties and Tax Exemption

Many countries already set customs and duties exemptions for goods under a specific monetary value, yet these de minimis thresholds vary widely between countries. For example, goods under \$800 are exempt from US customs and duties, while anything over roughly \$20 is subject to customs and duties in Canada. These duties, tariffs and taxes create considerable friction for US exporters, leading to reversed transactions and forgone sales for the micro-businesses who sell on Etsy. Negotiating a universal low-value customs, duties, and tax exemption that covers most peer-to-peer transactions would eliminate the biggest barrier that internet-enabled entrepreneurs face.

Open Customs and Duties Data

Customs and duties vary by country, and credible information about each country's requirements and restrictions can be difficult to find. Whereas a traditional small business might expand incrementally, digital platforms like Etsy allow a small business to offer her products worldwide from the moment she opens her shop. For an Etsy seller, the challenges arise not in breaking into a new market, but in figuring out what rules apply to a particular product in a particular country *after* the purchase has been made, when there is considerable pressure to ship a good quickly. These sellers scour the internet for credible information, occasionally canceling a transaction where information is unavailable, or simply shipping the good and hoping for the best. While many trade agreements include provisions to make this information publicly available, there is an opportunity to bring this requirement into the 21st century by requiring governments to make

relevant information available in a common format through an open API, which third-party developers could use to create user-friendly tools for their customers.

Intermediary Liability

In the US, Section 230 of the Communications Decency Act (CDA 230) protects intermediaries from liability for the actions of their users. This key principle of intermediary immunity (also called “safe harbor”) from liability has helped Etsy grow and evolve over the last ten years, enabling 1.6 million active sellers to open an online shop and pursue their passion. Online marketplaces must create a safe and trusted environment for transactions to occur, but should not incur the same legal responsibilities and liabilities as those who use their platforms. Including intermediary liability provisions in trade agreements would allow startups to build new global platforms without creating undue risk, and enable these platforms to provide opportunities to micro businesses around the world.

Thanks to the power of the internet and an increasingly global economy, would-be entrepreneurs can start a business and reach a global market of consumers for the price of an internet connection. Policy makers should take advantage of the opportunities to promote entrepreneurship at every level by reducing barriers micro-businesses face when operating at a global scale.

U.S. House of Representatives Ways & Means Committee
Comments on Expanding U.S. Digital Trade and Eliminating Barriers
to U.S. Digital Exports

Presented by:

Jennifer Topolski, Owner, J. Topolski

July 13, 2016

Chairman Reichert and Members of the House Ways and Means Trade Subcommittee, thank you for the opportunity to submit written testimony on the importance of expanding U.S. digital trade and eliminating barriers to U.S. digital exports. As a creative entrepreneur who operates a global e-commerce business, I believe that there are several opportunities to reduce the barriers I face to exporting my goods.

I graduated from college in 2005 with an illustration BFA and immediately began working as a freelancer in various creative industries. I worked as a fine artist assistant, a stylist, a photo retoucher, a graphic designer, a ceramicist, and an illustrator, all while working on my own art and design as time allowed. In 2008 a friend told me about Etsy, an online marketplace where anyone could sell their handmade work, and I decided to open up a shop selling my ceramic work and jewelry. Slowly and steadily, I learned the ins and outs of running a business; particularly an online business. I worked constantly to learn how to improve my search engine rankings, how to handle customer service, how to file sales taxes, and the mountains of other things small business owners must figure out. My sales consistently improved and I began to turn down freelance work in favor of working on my own business. By 2013, I no longer accepted contract work at all, and I now have my first "full-time job" running my own business.

It is an amazing thing to live in a time where anyone with an internet connection, a camera, and a craft can sell their work to anyone in the world. It opens a tremendous opportunity for countless people with an entrepreneurial spirit, who historically may not have had the resources to begin a business. Whether these businesses provide supplemental income for stay at home parents, something to help make ends meet between jobs, or a full-time income, most of us would not have been able to do this before the internet age.

The internet has created an on-ramp to entrepreneurship, but now more and more micro-entrepreneurs are entering a field that is not structurally prepared to let our businesses run smoothly. Yes, you can learn a lot from a Google search, but it doesn't replace the legal department that a traditional business

would have in-house. In a global marketplace, I frequently struggle to make sense of international laws. After doing all the work to design, create and sell my jewelry, I then have to put on my international exporter hat, investigating questions like: *Can I ship this ring to Australia? Is this gemstone Kimberly Process certified? Is precious metal allowed into the country via the postal service at all, or only Fedex? Is silver considered fine jewelry by their postal laws, or just gold and platinum? What is the de minimis VAT threshold for the country I am shipping to? Does this country require a packing slip on the outside of the box to clear customs? Is their postal service on strike? If so, what do I do?*

These are typical questions I need to think about, and many industries beyond jewelry have similar concerns. I rely on the USPS website and their posted international restrictions, although I don't know how frequently it is updated.

In addition to investigating the laws that govern my products, I also must manage my customers and their expectations. "When can I expect my package?" is a perfectly reasonable question, but 1-5 weeks is not a very reasonable answer. Unfortunately, it is an honest one. Once a package leaves the US, I cannot do anything to retrieve it, or often even track it. I don't know postal laws in other countries, and even if I can find the information in English, I may not be able to explain it well to a customer. I have found a few websites that estimate VAT and GST taxes, but sadly many customers are still outraged at the amount of money they must pay to their customs agency for the privilege of international shopping. I cannot immediately absorb refunds for packages that don't make it to the destination in time for an event or are refused based on the customs charge, and waiting for an unclaimed package to return back to me so I can refund a customer is stressful for both of us.

The greatest single thing that policymakers can do to help creative micro-entrepreneurs like me, who are international exporters in our own right, is to negotiate a higher de minimis customs, duties and tax exemption in trade negotiations. The US recently increased our de minimis customs exemption to \$800, which will help US sellers source materials and process returns. Using our de minimis as a benchmark, we should encourage our trading partners to increase their own de minimis exemptions, helping digitally-enabled micro-exporters like me reap the benefits of the global economy.

Additionally, instead of all of this information living online through various and cumbersome portals, we should require our trading partners to make information about their customs, duties and import taxes available in a common format via an open API, so this data can not only be accessed easily, but third-party companies and organizations can build effective and reliable tools for micro-entrepreneurs.

Running any small business is an overwhelmingly difficult task, but online businesses have some unique hurdles to clear, particularly when it comes to exporting our goods. International trade deals have the potential to reduce the barriers we face when exporting our goods, while increasing the policy transparency that is vital to all of us trying to stay on the right side of the laws. As our employment culture shifts toward a contract-based society, being self-employed will become increasingly common. The more resources we have to run our businesses smoothly, and legally, the better it will be for our entire economy.

EXPANDING U.S. DIGITAL TRADE AND ELIMINATING BARRIERS TO U.S. DIGITAL EXPORTS

COMMENTS OF PUBLIC KNOWLEDGE

I. STATEMENT OF INTEREST

Public Knowledge is a non-profit organization dedicated to promoting freedom of expression, an open internet, and access to affordable communications tools and creative works. As part of this mission, Public Knowledge advocates on behalf of the public interest for a balanced intellectual property system, particularly with respect to new and emerging technologies, and for communications policy that fosters such emerging technologies. Public Knowledge is grateful for the opportunity to address the issues raised by U.S. trade policy in this context.

II. INTRODUCTION

U.S. trade policy should encourage policies that promote innovation, competition, and the rights of internet users. These goals can be achieved in part through provisions that promote free expression and privacy, balanced intellectual property rights, protections for internet intermediaries and preservation of the open internet, as well as provisions that reaffirm contracting parties' commitments to expanding internet access and protecting human rights online. Further, U.S. trade negotiations should strive for greater transparency and inclusion in the negotiation process. Lastly, trade agreements should not strive to dictate policy choices in detail, but should provide high-level principles and guidelines, allowing parties flexibility in implementation.

U.S. internet companies currently dominate the market for internet services abroad,¹ and U.S. trade policies have the potential to affect global internet policy for billions of users.² U.S. trade policy can benefit both commerce and the interests of consumers by promoting a free, open, and competitive internet. Internet and telecommunications services contribute substantially to the GDP,³ overall productivity, and employment.⁴ The

¹ See Markham C. Erickson & Sarah Leggin, "Exporting Internet Law Through International Trade Agreements: Recalibrating U.S. Trade Policy in the Digital Age" ("Exporting Internet Law"), 24 *Catholic Univ. J. of L. & Tech.* 317, 324 (2016); see also Susan Ariel Aaronson, "The Digital Trade Imbalance and Its Implications for Internet Governance," *Global Commission on Internet Governance Paper Series*: No. 25, 7 (Jan. 2016); See *Exporting Internet Law* at 324; Ali Sternberg & Matt Schreurs, "Modernizing Liability Rules to Promote Internet Trade," *CCIA Research Paper*, 2, <http://www.ccianet.org/wp-content/uploads/2013/09/CCIA-Liability-Rules-Paper.pdf>.

² Globally, more than 3 billion people are using the internet today, with 2 billion of those users situated in developing countries. ITU, "ITU Releases 2015 ICT Figures, Statistics Confirm ICT Revolution of the Past 15 Years" (May 26, 2015), https://www.itu.int/net/pressoffice/press_releases/2015/17.aspx.

³ In 2014, the internet-related industry contributed approximately 6% percent (\$966.2B) to the U.S. real GDP. Stephen Siwek, *Internet Association, Measuring the U.S. Internet Sector*, 4 (2015), <http://internetassociation.org/wp-content/uploads/2015/12/Internet-Association-Measuring-the-US-Internet-Sector-12-10-15.pdf>. Another study shows that, in 2010, the internet contributed 1.9 percent to GDP in developing countries (\$366 billion, \$119 per capita), and 3.4 percent to GDP in developed countries, (about \$1,488 per capita). Olivia Nottebohm, et al., "Online and Upcoming: the Internet's Impact on Aspiring Countries," 8 (2012), http://www.mckinsey.com/-/media/mckinsey/dotcom/client_service/high%20tech/pdfs/internet_aspiring_executive_summary_v2.ashx.

⁴ A recent report for the U.S. International Trade Commission found that the internet-related productivity gains have increased the U.S. real GDP by 3.4-3.5%. The same study determined that the internet led to a 1.8% increase in employment. See USITC, "Digital Trade in the U.S. and Global Economies," Part 2, Pub 4485 Investigation 332-540 (2014). See also Google, "Enabling Trade in the Era of Information Technologies: Breaking Down Barriers to the Free Flow of Information," 3 (2011) ("Google Trade Paper") ("The Internet has ...enable[d] the emergence of new business models, new processes, new inventions, new and improved goods and services and ...increase[d] competitiveness and flexibility in the economy, for example by the increased diffusion of information at

OECD has stated the internet's impact on productivity "may exceed the effects of any other technology enabler to date, including electricity and the combustion engine."⁵ Done well, trade agreements can support these gains by promoting substantive norms for adapting domestic policymaking to the internationalization of business practices in the technology sector.⁶ Done poorly, trade agreements can lock in policies that fail to translate to diverse national contexts and quickly become obsolete in an era of rapid change.

III. INTELLECTUAL PROPERTY PROVISIONS IN TRADE AGREEMENTS MUST BALANCE THE INTERESTS OF INTELLECTUAL PROPERTY OWNERS AND THE PUBLIC.

To ensure that the internet will continue to drive innovation, productivity, and free expression globally, policymakers must take account of how the monopoly rights created by intellectual property law are frequently extended far beyond what is necessary to promote creativity and the dissemination of knowledge and culture. To that end, where trade agreements address intellectual property, the United States should demand a framework of limitations and exceptions to intellectual property rights that is at least as flexible as those in current the U. S. system, and that permits countries to carefully weigh the costs of expanding or creating new forms of intellectual property. Finally, U.S. trade policy should preserve sufficient flexibility for Congress and other national lawmakers to develop domestic intellectual property law and policy.

A. MAINTAINING CONGRESS'S ROLE IN INTELLECTUAL PROPERTY POLICY

U.S. intellectual property rights must serve to "promote the progress of science and the useful arts."⁷ Trade agreement provisions that restrictively prescribe elaborate intellectual property regimes can unduly constrain Congress's legislative autonomy. To the extent that trade agreements touch on domestic policy issues at all, they should focus on establishing high-level guidelines, rather than specific implementations. Further, Congress should maintain its role in shaping U.S. intellectual property policy through active participation in and oversight of U.S. trade negotiations.

B. ENSURING BALANCED INTELLECTUAL PROPERTY RIGHTS THROUGH LIMITATIONS AND EXCEPTIONS

Excessive IP regimes impose economic and social costs on society.⁸ Robust limitations and exceptions are necessary to protect innovation, growth, and free expression. They also play a valuable role in digital trade. For example, in 2011, "about one out of every eight workers in the United States [was] employed in an industry that benefit[ed]" from limitations and exceptions to copyright.⁹ Further, these industries are responsible for a substantial portion of U.S. exports.¹⁰ IP regimes without adequate limitations and exceptions would burden these industries--inhibiting market entry for new entrants, reducing investment in innovative services, and

lower cost." This impact is not limited to internet-based industries, and extends to businesses in traditional sectors. See James Manyika & Charles Roxburgh, "The Great Transformer: The Impact of the Internet on Economic Growth and Prosperity," 3 (Oct. 2011), http://www.mckinsey.com/~/media/McKinsey/Industries/High%20Tech/Our%20Insights/The%20great%20transformer/MGI_Impact_of_Internet_on_economic_growth.ashx.

⁵ OECD, "Broadband and the Economy: Ministerial Background Report," 8-9 (May 2007), <https://www.oecd.org/sti/40781696.pdf>.

⁶ See Graeme Dinwoodie, "The International Intellectual Property Law System: New Actors, New Institutions, New Sources," 10 Marq. Intellectual Property L. Rev. 205 (2006).

⁷ U.S. Const., Art. I, Sec. 8.

⁸ Jodie Griffin, "The Economic Impact of Copyright" ("Griffin"), Public Knowledge, 1 (2012), <https://www.publicknowledge.org/files/TPP%20Econ%20Presentation.pdf>.

¹⁰ See *id.* at 7.

increasing costs.¹¹

For developing countries, flexibility in the scope of IP rights and a robust framework of limitations and exceptions may also be crucial. Excessive intellectual property monopolies can actively impair those countries' economic and technological development, without providing sufficient corresponding benefits to rightsholders.¹²

Historically, U.S. trade agreements have largely failed to provide for limitations and exceptions to intellectual property rights.¹³ While KORUS marked a departure insofar as it explicitly permitted limitations and exceptions, and required limitations on intermediary liability, future trade agreements should go further towards expressly requiring such protections. While the TPP requires that signatories "shall provide" extensive intellectual property rights and enforcement mechanisms, it requires that signatories "shall endeavour to achieve" appropriate limitations and exceptions. Going forward, U.S. trade policy should ensure that trade agreements mandate parties to achieve balance in their intellectual property system through the provision of adequate limitations and exceptions.

1. BALANCED COPYRIGHT AND PATENT LAWS

In order to optimize incentives for creativity and maximize economic and social benefits, copyright and patent laws must contain a variety of balances, including: (a) adequately limited terms of copyright protection, (b) exhaustion of copyright and patent rights, (c) limitations and exceptions during the term of protection, such as the idea/expression limitation and fair use in copyright, and (d) proportionate remedies. While the TPP requires signatories to "recognize the importance of a rich and accessible public domain,"¹⁴ and requires that intellectual property provisions must be implemented "taking into account the interests of relevant stakeholders, including rights holders, service providers, users and the public,"¹⁵ future agreements should provide more specific guidelines..

a. COPYRIGHT TERM

Excessive copyright terms harm the public domain, which "provides an immense social and economic benefit to all sectors of society," without providing corresponding benefits.¹⁶ The last extension to the U.S. copyright term, from the life of the author plus 50 years to the life of the author plus 70 years, "revealed that the term extension had a negligible effect on investment decisions."¹⁷ This is because "from the perspective of investors, 'the term of protection in the USA had nearly the same present value as a perpetual copyright term.'"¹⁸ An international study on copyright term confirmed that term extension "[had] no impact on the output

¹¹ See generally Griffin.

¹² See *id.*, 8-9 citing Ian Hargreaves, *Digital Opportunity: A Review of Intellectual Property and Growth* ("Hargreaves"), 24 (2011) ("For low income countries with a weak scientific and technological infrastructure, stronger IP protection has little effect on their own economic growth and may even hinder it - while having no significant effect on the likelihood of developed country industry seeking to sell goods there"); see also *Growers Review of Intellectual Property*, HM Treasury, 59 (2006); Fisher & McGeeveran, *The Digital Learning Challenge: Obstacles to Educational Uses of Copyrighted Material in the Digital Age*, Berkman Center for Internet and Society, 12-13, (2006).

¹³ Exporting Internet Law at 341.

¹⁴ TPP Art. 18.15.

¹⁵ TPP Art. 18.4.

¹⁶ Letter from Public Knowledge et al. to ministers and lawmakers of TPP negotiating countries ("Coalition Letter") (July 9, 2014), <https://www.publicknowledge.org/documents/tpp-letter-on-copyright-term>.

¹⁷ Griffin at 4; HM Treasury, *Growers Review of Intellectual Property*, 52 (2006).

¹⁸ *Id.*

of creative works.”¹⁹

But overly long copyright terms harm those who depend on access to works in the public domain – including technology companies, libraries, archives, museums, students, artists and independent content creators, and the public at large. According to one study, “[e]conomic evidence is clear that the likely deadweight loss to the economy exceeds any additional incentivizing effect which might result from the extension of copyright term beyond its present levels.”²⁰

Given the scant benefits and high social and economic costs of overly long copyright terms, it’s clear that such terms exact “a net welfare loss to society, and effectively amount[] to a transfer of wealth to a small number of multinational copyright-holding companies...at the cost of those who depend upon access to copyright works that would otherwise be in the public domain[.]”²¹ Unfortunately, the copyright term provisions in the TPP require that some countries extend their terms, and further lock in the U.S.’s already excessive term.²² Going forward, U.S. trade policy should avoid this policy mistake.

b. LIMITATIONS AND EXCEPTIONS IN COPYRIGHT

Limitations and exceptions to copyright protection are essential to the internet’s continued success as a platform for economic growth, dynamic innovation, and free expression.²³ In the United States, these limitations include the idea/expression and fair use doctrines.

Idea/Expression

The limitation of copyright protection to creative expressions²⁴ “recognizes that copyright law should give the public flexibility to use, share, analyze, arrange and redistribute facts, news, and information without fear of liability.”²⁵ This “has had a very real, practical effect on the Internet and the information economy. One need only think of how often, every day, the Internet is used to investigate facts and how this adds to our lives,” including through the ability to fact check news sources, investigate investment opportunities, and research and evaluate products and services online.²⁶ Not all U.S. trading partners have such protections.²⁷

Fair Use

Section 107 of the United States copyright law permits certain uses of creative works notwithstanding the author’s exclusive rights in the work. It explicitly allows for “criticism, comment, news reporting, teaching including multiple copies for classroom use, scholarship, or research” as well as for uses that may be

¹⁹ *Id.* at 5; I.P.L. Png and Qiu-hong Wang, “Copyright Law and the Supply of Creative Work: Evidence from the Movies,” *Review of Economic Research on Copyright Issues* (2009).

²⁰ Ian Hargreaves, *Digital Opportunity: A Review of Intellectual Property and Growth*, 19 (2011).

²¹ Coalition Letter at 1.

²² TPP Art. 18.63.

²³ See Joshua P. Meltzer, *Maximizing the Opportunities of the Internet for International Trade*, E15 Expert Group on the Digital Economy – Policy Options Paper, E15 Initiative, Geneva: International Centre for Trade and Sustainable Development (ICTSD) and World Economic Forum (“E15 Paper”) (2015). (“Initial research shows that when a country adopts balanced copyright rules and other limitations such as fair use, companies in these countries generate higher revenues, create more jobs, and spend more on R&D, when compared to countries with more closed lists of copyright exceptions.”)

²⁴ See *Feist Publications, Inc. v. Rural Tel. Serv. Co., Inc.*, 499 U.S. 340, 346 (1991)

²⁵ Exporting Internet Law at 328.

²⁶ *Id.*

²⁷ See *id.*

considered “fair” under an application of a four-part test. Courts in the United States “have relied upon fair use and other limitations in copyright in upholding the legality of internet search engines and temporary copies that facilitate interoperability between computer programs and the development of web hosting services.”²⁸ Without fair use, “a website could not provide snippets and links to other websites; an internet service could not ‘cache’ copies of files, which allows an internet browser to respond in a matter of milliseconds; and artists could not produce mash-ups of existing content to create new works.”²⁹ And, innovations in cloud computing service, which rely on fair use,³⁰ have proven a substantial contributor to the global market for internet services.³¹

Limitations and exceptions like fair use are also critical to the ability consumers and end users of technology to make new uses of existing technologies and creative works. As one study found, “millions of citizens innovate to create and modify consumer products to better meet their needs.”³² Where users may freely innovate and share the results of their creativity, “social welfare is very probably increased . . . relative to a world in which only manufacturers innovate.”³³ User innovations likewise drive innovation at the industrial level.³⁴ Therefore, U.S. trade policy should promote the inclusion of limitations and exceptions provisions in trade agreements that permit flexible fair use-like systems. Future agreements should clarify this point.

C. PROPORTIONATE REMEDIES

To the extent trade agreements require the implementation of particular remedies for intellectual property infringement, those remedies should be proportionate. This includes limits on exemplary and deterrent damage awards under copyright laws. Such awards can be many magnitudes larger than any actual harm caused to the copyright holder. Even the threat of high statutory damages can discourage investment in business models or technologies that rely on uses of copyrighted content, “increase[ing] the costs of regulatory uncertainty for technology and start-up inventors.”³⁵

A diverse array of stakeholders have recognized the need for reform of the copyright statutory damages regime in the United States, including consumer advocates, technology companies and trade organizations, federal judges, and the Department of Commerce.³⁶ U.S. trade policy should avoid locking in this

²⁸ Griffin at 9; see also Exporting Internet Law at 333.

²⁹ Expanding Digital Trade and Reducing Barriers to U.S. Digital Exports: Hearing Before the H. Subcomm. On Trade, 114th Cong. (2015), Written Testimony of Internet Association, 10.

³⁰ *Id.* at 334-335 (“a cloud technology company operating in a jurisdiction lacking a fair use principle must weigh the potential of litigation before innovating and bringing a product or service to market. Without a flexible fair use standard, technology companies in most jurisdictions must rely on a regulatory or legislative body to approve specific uses or technologies.”)

³¹ “The global market for cloud services (or Infrastructure-as-a-Service, “IaaS”) is projected to grow from \$23 billion in 2015 to \$34 billion in 2018.136 Global spending on IaaS was projected to reach \$16.5 billion in 2015, an increase of over 30% from 2014.” Exporting Internet Law at 334.

³² Eric von Hippel et al., The Age of the Consumer-Innovator (“von Hippel (2011)”), MIT Sloan Mgmt. Rev., Fall 2011, at 28.

³³ Eric von Hippel, Democratizing Innovation, 12 (2005) (citing Joachim Henkel and Eric von Hippel, “Welfare Implications of User Innovation,” MIT Sloan Working Paper No. 4327-03 (2005)).

³⁴ Von Hippel (2011) at 29.

³⁵ Griffin at 5; Matthew le Merle et al., The Impact of U.S. Internet Copyright Regulations on Early- Stage Investment: A Quantitative Study (“le Merle”), Booz & Co., 10 (2011). In one study, “89% of venture capitalists interviewed said that “uncertain and potentially large damages made them uncomfortable investing in [digital content intermediaries].” Griffin at 5; le Merle at 18; Computer and Communications Industry Association (CCIA), Copyright Reform for a Digital Economy (“CCIA Copyright whitepaper”), 18-20 (2015), <https://www.cciainet.org/wp-content/uploads/2015/08/Copyright-Reform-for-a-Digital-Economy.pdf>.

³⁶ See, e.g., Jed S. Rakoff, “Brace Lecture: Copyright Damages: A View from the Bench,” 62 J. Copyright Soc’y 377 (2015); Pamela Samuelson & Tara Wheatland, “Statutory Damages in Copyright Law: A Remedy in Need of Reform,” 51 Wm. & Mary L. Rev. 439 (2009); Public Knowledge, Internet Blueprint (2012), <http://internetblueprint.org/issues/strengthen-the-publics-fair-use-rights-in-copyright/>; Mitch Stoltz, Collateral Damages: Why Congress Needs to Fix Copyright Law’s Civil Penalties (Jul. 24, 2014), <https://www.eff.org/wp/collateral-damages-why-congress-needs-fix-copyright-laws-civil-penalties>; CCIA Copyright Whitepaper at

regime in the United States through trade agreements, and should not export its flaws to other countries.³⁷

d. EXHAUSTION AND PARALLEL IMPORTATION

Exhaustion doctrines promote “alienability of goods,” enable consumer autonomy, and encourage more efficient use of resources.³⁸ Further, they encourage the development of secondary markets, which (i) increase access to works and technologies by driving down prices and increasing availability, (ii) support preservation, and (iii) enable users to maintain privacy.³⁹ In addition, robust exhaustion doctrines reduce transaction and information costs that users will incur if forced to navigate complex or inconsistent permissions schemes contained in license agreements, and therefore improve market efficiency.⁴⁰ And exhaustion encourages user and marketplace innovation by reducing cost barriers to experimentation and foster competition among distribution platforms by reducing consumer lock-in.⁴¹ Finally, exhaustion enables the repair and resale industry to flourish.⁴² Current U.S. law guarantees both domestic exhaustion⁴³ and international exhaustion (also known as parallel importation).⁴⁴ U.S. trade policy should preserve countries’ ability to enact rules that place exhaustion limitations on intellectual property, including preventing undue barriers to importation and other forms of trade.

e. TECHNOLOGICAL PROTECTION MEASURES AND ANTI-CIRCUMVENTION

Anti-circumvention laws prohibit bypassing digital locks used to control access to content. Where these laws can be interpreted to prohibit circumvention for noninfringing uses, they fail to take account of the interests of the public at large. Experience under the U.S. anti-circumvention law has demonstrated both its ineffectiveness in stemming copyright infringement⁴⁵ and its potential for abuse.⁴⁶ Despite the negative

18-20; Dept. of Commerce, Internet Policy Task Force, White Paper on Remixes, Forst Sale, and Statutory Damages (Jan. 2016), 5, 85.

³⁷ Further, policymakers should be wary of using trade policy to increase criminalization of intellectual property issues. As we pointed out in our analysis of the TPP, “[e]fficient enforcement is most likely in situations where a single entity can [weigh the costs and benefits] of enforcement. By contrast, with criminal enforcement, the costs are borne by the public, but the benefits may be realized only by private parties” leading to inefficient, and costly enforcement regimes.

³⁸ See generally Margaret Jane Radin, “Property and Personhood,” 34 Stan. L. Rev. 957 (1982) (discussing the importance of autonomous control over personal property); Stavroula Karapapa, “Reconstructing Copyright Exhaustion in the Online World,” I.P.Q. 2014, 4, 307, 324.

³⁹ See Aaron Perzanowski & Jason Schultz, “Digital Exhaustion,” 58 UCLA L. Rev. 889, 894-896 (2011); see also eBay, Inc., “Commerce 3.0 for Development: The Promise of the Global Empowerment Network,” 25 (“The exhaustion doctrine promotes alienability of goods, rewards innovative sourcing methods, provides a backbone for a robust secondary market, and prevents harmful downstream market restrictions.”)

⁴⁰ See Perzanowski & Schultz at 896-897; see also *Kirtsaeng v. John Wiley & Sons, Inc.*, 133 S. Ct. 1351, 1363 (2013); Molly Shaffer Van Houweling, *The New Servitudes*, 96 Geol. L. J. 885, 921 (2007).

⁴¹ See Perzanowski & Schultz, 897-900.

⁴² See *Aro Mfg. Co. v. Convertible Top Replacement Co.*, 377 U.S. 476, 497 (1964).

⁴³ 17 USC § 109(a).

⁴⁴ *Kirtsaeng v. John Wiley & Sons, Inc.*, 133 S. Ct. 1351, 1363 (2013).

⁴⁵ See Initial Comments of Mozilla in Section 1201 Study, U.S. Copyright Office FR Doc. 2016-03515 at 4 (Mar. 4, 2016) (stating “[m]ass scale infringement of copyrighted works continues today, including with the most valuable and most heavily protected examples of such content. Section 1201 and TPMs don’t prevent all infringement: at best, they reduce its impact on market success”) available at <https://www.regulations.gov/document?D=COLC-2015-0012-0055>

⁴⁶ In the years since the passage of Section 1201, it has caused harm to a stunning array of stakeholders, including researchers, people with disabilities, students and educators, libraries, innovators and entrepreneurs, creators and remixers, and everyday technology users and consumers. See Electronic Frontier Foundation, Unintended Consequences: Fifteen Years Under the DMCA (Mar. 2013), <https://www.eff.org/pages/unintended-consequences-fifteen-years-under-dmca>. In two notable

externalities of anti-circumvention provisions, they have been widely included in international trade agreements.⁴⁷ Given the well-documented harms of anti-circumvention laws, U.S. trade policy should avoid them.

f. WELL-CALIBRATED PATENT RIGHTS

Trade agreement provisions relating patent rights must take into account that patents are not granted merely to reward inventors, but rather to benefit the public as a whole by providing tailored incentives for new inventions and facilitating access to those inventions. Trade agreements should require parties to carefully balance their patent system between granting monopolies to inventors and ensuring public access to and competition in ideas and products. U.S. policymakers should be cautious about expanding patent rights, for example, by extending the term of protection or by providing quasi-patent protection for certain subject matter, where such expansions may lack the balance of existing policies.

IV. PRESERVING AN OPEN AND ACCESSIBLE INTERNET

A. UNIVERSAL ACCESS

Promoting universal, affordable access to broadband services also benefits the global digital economy because “the more users on the network, the more valuable the network becomes.”⁴⁸ Thus “[e]nsuring that citizens from every economic level and in every part of the country can access a high speed connection is an essential step in creating a robust digital economy.”⁴⁹ U.S. trade policy should therefore seek to promote universal access.

B. NET NEUTRALITY

The internet’s “legacy of openness and transparency . . . has been critical to the network’s success as an engine for creativity, innovation, and economic growth.”⁵⁰ “Closed systems are antithetical to the Internet’s success and will significantly disable its potential to support trade and innovation going forward.”⁵¹ When internet service providers throttle, prioritize, or block certain traffic on their network, they can distort competition among providers of digital services, content, and applications, thwarting the kind of innovation that has driven the growth and success of the internet.⁵² Such conduct jeopardizes the enormous net surplus value

examples, a printer manufacturer used Section 1201 to prevent consumers the right to refill their toner cartridges, and a garage door opener manufacturer sought to prohibit its customers from using aftermarket clicker transmitters. See *Lexmark Int’l, Inc. v. Static Control Components, Inc.*, 387 F.3d 522 (6th Cir. 2004); *Chamberlain Group, Inc. v. Skylink Techs, Inc.*, 381 F.3d 1178 (Fed. Cir. 2004).

⁴⁷ Exporting Internet Law at 347.

⁴⁸ eBay, Commerce 3.0 for Development (“eBay”), 27, https://www.ebaymainstreet.com/sites/default/files/eBay_Commerce-3-for-Development.pdf.

⁴⁹ *Id.*; Google Trade Paper at 8 (“[i]mproving the speed and affordability of Internet access could lead to a 4 percent increase in trade in manufactured goods.”); E15 initiative at 9 (“In terms of the impact of the Internet on trade, one study concludes that a 10% increase in Internet access leads to a 0.2% increase in exports.”)

⁵⁰ Preserving the Open Internet et al., GN Docket No. 09-191, WC Docket No. 07-52, Notice of Proposed Rulemaking, 24 FCC Rcd 13064, 13069 (2009) (“Open Internet NPRM”).

⁵¹ Google Trade Paper at 2.

⁵² See Barbara van Schewick, “Towards an Economic Framework for Network Neutrality Regulation” (“van Schewick”), 5 J. on Telecomm. & High Tech. L. 329, 386-390 (2007); Institute for Policy Integrity, Free to Invest: The Economic Benefits of Net Neutrality (“IPI”), 24-32 (2010), http://policyintegrity.org/documents/Free_to_Invest.pdf; S. Derek Turner, Finding the

generated by internet information, applications, and services, which one study estimated at \$300 billion in 2009, and has only grown since then.⁵³

Further, the internet's openness is key to its continued success as a platform for commerce. Where service providers can restrict access to information, products, or services, they increase costs for businesses and consumers. In particular, "[s]mall business entities are the most likely to be discriminated against or blocked because they do not have any leverage against Internet Service Providers (ISPs)."⁵⁴ U.S. trade policy therefore should preserve the open internet. Specifically, trade agreements should require countries to endeavor to preserve net neutrality and to foster competition in internet services. While the TPP requires signatories to "recognize the benefit" of net neutrality protections for internet users,⁵⁵ future trade agreements should go further. In addition, such agreements should clarify that a lack of clear and enforceable net neutrality rules can constitute a non-tariff barrier to trade.

C. INTERMEDIARY LIABILITY PROTECTIONS

Imposing liability on ISPs for the conduct of third parties using their services can broadly restrict the value of the internet as a platform for free expression and innovation.⁵⁶ Thus, safe harbor provisions that limit the liability of ISPs for user conduct are often necessary in many national legal regimes. U.S. trade policy should be exceedingly wary of creating or extending intermediary liability schemes, and should promote robust protections against intermediary liability. In particular, no ISP should be required to actively police or monitor the behavior of its users.

D. A SINGLE, UNIFIED DOMAIN NAME SYSTEM (DNS) IS ESSENTIAL TO THE GLOBAL FLOW OF INFORMATION ON WHICH DIGITAL TRADE DEPENDS

A unified DNS is essential to the end-to-end data flows that enable digital trade to flourish globally. A user who knows the domain name of the website with which she wants to transact can quickly and reliably reach that website whether she is located in Alaska or Abu Dhabi. From its inception, the internet has delivered seamless navigation for the world's users through a single addressing system. While the internet can continue to function without individual websites and even without significant network infrastructure, it cannot operate if the DNS no longer functions.

Governments have a legitimate interest in preventing their citizens from engaging in illegal online transactions; however, increasing levels of DNS fragmentation are antithetical to the open flow of information that has made the internet a truly global engine for cultural and economic development. To secure open, end-to-end channels for digital trade, trade agreements should require participating parties to respect the unitary and global nature of the DNS and to limit DNS fragmentation caused by domain blocking and filtering.

E. PROTECTING THE FREE FLOW OF INFORMATION WHILE SAFEGUARDING USER PRIVACY

Bottom Line: The Truth About Network Neutrality and Investment (2009), available at http://www.freepress.net/files/Finding_the_Bottom_Line_The_Truth_About_NN_and_Investment_0.pdf; van Schewick at 378, 386; IPI at 26.

⁵³ *Id.*

⁵⁴ eBay at 21.

⁵⁵ TPP Art. 14.10, *see also* PK TPP Analysis at 6-8.

⁵⁶ Carolina Rossini & Maira Sutton, "The Impact of Trade Agreements on Innovation, Freedom of Expression and Privacy: Internet Service Providers' Safe Harbors and Liability," Electronic Frontier Foundation, *available at* https://www.eff.org/files/filenode/ispliability_finl.pdf; *see also* Seth F. Kreimer, "Censorship By Proxy: The First Amendment, Internet Intermediaries, and the Problem of the Weakest Link," 155 U. Pa. L. Rev. 11 (2006).

Without adequate consumer privacy protections, policies encouraging the free flow of information and data can put consumers at risk and undermine trust in internet services.⁵⁷ This can have a deleterious effect on trade. A recent study on data collected by the Census Bureau revealed that “[f]orty-five percent of online households reported that [privacy and security] concerns stopped them from conducting financial transactions, buying goods or services, posting on social networks, or expressing opinions on controversial or political issues via the Internet, and 30 percent refrained from at least two of these activities,” a figure that amounts to “millions of households.”⁵⁸

Likewise, awareness of government surveillance of online activities can lead consumers to avoid engaging online.⁵⁹ In the same study, “29 percent of households concerned about government data collection said they did not express controversial or political opinions online due to privacy or security concerns[.]”⁶⁰ Another study directly assessed the impact of awareness of government surveillance on the willingness of people to contribute and share content on social media, finding that when users’ were reminded that their activities may be subject to surveillance, they refrained from expressing perceived minority opinions.⁶¹ This effect “severely undermines the Internet’s ability to serve as a neutral platform for information sharing and discussion,”⁶² and likely impacts internet firms’ profitability.⁶³

With the TPP, the USTR has affirmed that the TPP commits “to ensuring the free flow of the global information and data that drive the internet and digital economy, subject to legitimate public policy objectives such as personal information protection.” This is an important step towards recognizing the need for legitimate privacy protections for consumers, however it may not go far enough.⁶⁴ U.S. trade policy should therefore seek to promote the adoption of adequate privacy protections along with provisions that encourage the free flow of information. In addition, U.S. trade policy should avoid promoting unnecessary requirements for domain name registrars that harm user privacy by prohibiting the use of privacy or proxy services.⁶⁵

V. SPECTRUM MANAGEMENT

⁵⁷ Alberto Cerda & Carolina Rossini, “Information Flow and Trade Agreements: History and Implications for Consumers’ Privacy”, Consumers International, 3 (May 2013), http://a2knetwork.org/sites/default/files/tpp_and_free_flow.pdf.

⁵⁸ Rafi Goldberg, Lack of Trust in Internet Privacy and Security May Deter Economic and Other Online Activities, NTIA (May 13, 2016), <https://www.ntia.doc.gov/blog/2016/lack-trust-internet-privacy-and-security-may-deter-economic-and-other-online-activities>.

⁵⁹ See *id.*, listing “data collection or tracking by government” as a “common concern” of people surveyed in the study.

⁶⁰ *Id.*

⁶¹ Elizabeth Stoycheff, Surveillance Chills Online Speech Even When People Have “Nothing to Hide”, Slate Future Tense (“Nothing to Hide”) (May 3, 2016, 1:59 PM), http://www.slate.com/blogs/future_tense/2016/05/03/mass_surveillance_chills_online_speech_even_when_people_have_nothing_to_hide.html; Elizabeth Stoycheff, Under Surveillance: Examining Facebook’s Spiral of Silence Effects in the Wake of NSA Internet Monitoring, 93 Journalism & Mass Communication Quarterly 296 (June 2016).

⁶² Nothing to Hide.

⁶³ “[C]onsumer and business responses to government use of the Internet for national security purposes can have implications for digital trade. The Snowden leaks are estimated to cost the US cloud computing firms up to \$35 billion in lost revenue.” Joshua P. Meltzer, *Maximizing the Opportunities of the Internet for International Trade*. E15 Policy Options Paper (January 2016), <http://e15initiative.org/publications/maximizing-opportunities-internet-international-trade/>.

⁶⁴ See Burcu Kilic & Tamir Israel, “The Highlights of the Trans-Pacific Partnership E-Commerce Chapter,” Public Citizen (Nov. 5, 2015), <https://www.citizen.org/documents/tpp-ecommerce-chapter-analysis.pdf>.

⁶⁵ For arguments supporting broad availability of privacy and proxy services, see Comments of Center for Democracy and Technology, New America’s Open Technology Institute, and Public Knowledge to ICANN on the GNSO’s Initial Privacy & Proxy Services Accreditation Issues Working Group, <https://www.publicknowledge.org/documents/comments-to-icann-on-the-gnsos-initial-privacy-proxy-services-accreditation>.

Spectrum management is often necessarily international in character. Internationally, countries convene at the International Telecommunication Union to negotiate spectrum allocation and share technical best practices. To the extent trade agreements also address spectrum, they should (1) require countries to follow an “open and transparent process” for spectrum allocation “that considers the public interest, including the promotion of competition,”⁶⁶ (2) promote access to both licensed and unlicensed spectrum, and (3) encourage countries to fulfill their commitments in the WSIS+10 and Sustainable Development goals.

To enable innovation and the continued growth of internet communications, trade policies must ensure that spectrum can be put to a wide array of uses, by a wide variety of users. Too often, incumbent spectrum licensees, both private and public, can prevent or delay new, innovative spectrum uses and inhibit competition. This harms consumers, and an inability to access spectrum in particular markets can harm U.S. businesses as well. In particular, barriers to competition created by inadequate spectrum policy can limit users’ ability to access the internet, and businesses’ ability to reach users, both to the detriment of digital trade.

In general, spectrum policy should aim to achieve two goals. First, it should allow for a balance of unlicensed and licensed use. The ubiquity and usefulness of WiFi and Bluetooth shows how valuable unlicensed spectrum can be for consumers and commerce. Many people use these technologies everyday with their smartphones and laptops, and other connected devices (such as the emerging “Internet of Things”) typically rely on unlicensed spectrum as well. According to a 2014 study, “the technologies operating in unlicensed spectrum bands in the United States generated a total economic value of \$222 billion in 2013.”⁶⁷ In underserved locales, unlicensed spectrum can also expand internet access, which is a precondition to digital trade.

Second, spectrum policy should ensure that exclusive spectrum licenses are available to a wide variety of potential licensees. Spectrum is an essential input for many services, and restricting access to spectrum restricts competition. For example, mobile phone operators cannot compete unless they can access sufficient spectrum to serve and attract consumers. Policies that promote competition in the provisioning of mobile internet access are critical to keeping markets open. Without the benefits of competition, access to and the affordability of wireless services will decrease, reducing the number of consumers able to access U.S. goods and services via the mobile internet. Spectrum policy can be highly technical, and most of its details cannot and should not be addressed in the context of a trade agreement. However the U.S. trade policy can promote broader goals that benefit consumers by allowing for competition.

Respectfully submitted,

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⁶⁶ TPP Art. 13.19.4.

⁶⁷ Telecom Advisory Services, LLC, Assessment of the Economic Value of Unlicensed Spectrum in the United States, 8 (2014), <http://www.wififorward.org/wp-content/uploads/2014/01/Value-of-Unlicensed-Spectrum-to-the-US-Economy-Full-Report.pdf>.

