

**Testimony of
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**Before the
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Trade Subcommittee**

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

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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 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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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.

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.

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 <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>