

December 17, 2018

Ms. Lisa Barton
Secretary to the Commission
Hearings & Investigations Division
United States International Trade Commission
500 E Street S.W.
Washington, DC 20436

RE: Investigation No. TPA-105-003, United States-Mexico-Canada Agreement: Likely Impact on the U.S. Economy and on Specific Industry Sectors (Post-Hearing Submission)

Dear Ms. Barton:

I write in response to the United States International Trade Commission's Investigation No. TPA-105-003, United States-Mexico-Canada Agreement: Likely Impact on the U.S. Economy and on Specific Industry Sectors. The Information Technology and Innovation Foundation is the world's leading think tank for science and technology policy. The following written submission draws on ITIF's expertise and previous work on a range of innovation-related issues that have been negotiated in the United States-Mexico-Canada Agreement (USMCA), including issues pertaining to digital trade, data flows, intellectual property, lifesciences, and manufacturing.

Sincerely,

Nigel Cory

Associate Director, Trade Policy, The Information Technology and Innovation Foundation

Stephen Ezell

Vice President, Global Innovation Policy

CONTENTS

Introduction	3
USMCA Can Foster More Integrated North American Production Networks	3
USMCA Updates Rules Governing North American Digital Trade and Sends a Clear Signal About U.S. Goals for Global Digital Trade	
USMCA Improves the Rules for Digital Trade, Data Localization, and Personal Data	5
USMCA Ensures Financial Services Data Can Flow Freely, While Allowing Regulatory Oversight	8
Protecting Internet-Based Services/Apps That Provide Communication and Other Services	11
The USMCA Strengthens Important Intellectual Property Protections	13
Improve Online IP Enforcement in Canada and Mexico	14
Canada: Able to Keep Flawed "Notice-and-Notice" System	15
Mexico: Will Enact a Safe Harbor Framework, But Considerable Uncertainty About Implementation	16
Copyright	17
Biologics and the Life-Sciences Sector	17
Prohibiting Forced Technology Transfers: Protecting Encryption and Source Code	19
The USMCA Strengthens Disciplines Against Innovation Mercantilism	19
USMCA's Disappointing Outcome on Small Package Trade and De Minimis Thresholds	20
USMCA's Broader Economic Impact	22
Conclusion	23
Endnotes	24

INTRODUCTION

The North American Free Trade Agreement (NAFTA) has proven instrumental in deepening trade and investment linkages among North American nations, and its successor, the United States-Mexico-Canada Agreement (USMCA) is well-positioned to continue to facilitate robust North American trade and integrated production networks going forward. Since its entry into force in 1994, NAFTA has played a pivotal role in deepening and integrating North American economies, with the value of annual trade quadrupling since then to over \$1.3 trillion annually today. Free exchange with North American trade partners has also significantly increased cross-border investment, with U.S. investment in Mexico growing ten-fold to over \$100 billion annually.¹ Canada and Mexico are America's top two trading partners and consume 34 percent of America's exports. In fact, 43 U.S. states exported at least \$1 billion in goods to those countries last year. Fourteen million U.S. jobs depend on trade with Canada and Mexico, and in 17 states trade with those two nations accounts for at least 100,000 jobs.² Similarly, trade with the United States supports 10 million Mexican jobs and 2 million Canadian ones.

While NAFTA represented a cutting-edge trade agreement back in 1994, the USMCA takes a number of important steps in updating the original agreement to reflect the realities of modern trade, including introducing new disciplines governing digital trade and upgrading intellectual property (IP) provisions. Furthermore, USMCA looks beyond North America in creating new, high-standard disciplines confronting what ITIF labels "innovation mercantilism," which refers to trade practices often used by countries employing forms of state-led capitalism, such as currency manipulation or support for state-owned enterprises (SOEs), that enables these countries and their enterprises to compete in global marketplaces on non-market-based terms. The following submission provides a detailed assessment of some of USMCA's key outcomes.

USMCA CAN FOSTER MORE INTEGRATED NORTH AMERICAN PRODUCTION NETWORKS

In the broadest sense, USMCA covers (by either keeping existing provisions or enacting new ones) a broad range of issues—from low/no tariffs to services market access to visas for skilled professionals to trade and customs facilitation to intellectual property—that together allow U.S. firms to work with counterparts in Canada and Mexico as part of increasingly complex and dynamic production networks. These firms and networks will be able to use USMCA provisions to ensure the efficient (quick, low-cost, and hassle free) movement of goods, services, people, ideas, and data in order for the North American economy to become more globally competitive. In this way, USMCA builds on one of the greatest benefits from NAFTA, which was the creation of continentally integrated markets and production networks, particular for sectors like autos, where parts and components may cross the borders of USMCA partner countries as many as eight times before being installed in a final assembly plant. This deep integration is demonstrated by the fact that U.S. inputs actually account for 40 percent of the value of Mexico's exports to the United States, and 25 percent of Canadian ones. This is actually in significant contrast to the nature of U.S. trade with China, where just 4 percent of the inputs into finished manufactured goods that enter the United States from China were originally manufactured in the United States.³

In essence, the United States (and Canada) with Mexico form a high-wage/low-wage partnership, bringing complementary labor forces, investments, innovation capacity, and industry strengths together to create a region that's very competitive globally. Within this relationship, the United States represents the source of much of the research and development (R&D), design, innovation, and high-value-added manufacturing, while Mexico provides some of the lower-tech, lower-cost, and more labor-intensive manufacturing activity. This economic relationship makes regional North American manufacturing value chains more cost-competitive with Asian ones. USMCA is well-positioned to play an important role in supporting the flow of goods and services across North American borders as part of complex production networks that source intermediate goods and services from wherever is most competitive. The USMCA can thus play an important role in making North America a more globally competitive manufacturing environment.

USMCA UPDATES RULES GOVERNING NORTH AMERICAN DIGITAL TRADE AND SENDS A CLEAR SIGNAL ABOUT U.S. GOALS FOR GLOBAL DIGITAL TRADE

The USMCA enacts rules that support the critical role that data flows play in digital trade, updating a legal framework that was enacted (in 1994) when the Internet as we know it barely existed. The USMCA does this both in name (with the chapter being labelled digital trade as opposed to electronic commerce) and in substance. This chapter is increasingly important to the U.S. economy, as digital trade and cross-border data flows are expected to continue to grow faster than the overall rate of global trade. Today, 22 percent of global economic output can be attributed directly to digital commerce and it's expected that the continued application of emerging digital technologies—such as cloud computing, data analytics, 3-D printing, and the Internet of Things (IoT)—will increase global GDP by another \$2 trillion by 2020. Accordingly, it's appropriate that the USMCA includes a chapter dedicated to addressing digital trade and establishes a number of new, high-standard norms to govern North American digital trade.

USMCA includes a disparate collection of outcomes important for digital trade. The USMCA is the first trade agreement in the world to promote the publication of open government data. Article 19.18 of the agreement officially recognizes that "facilitating public access to and use of government information fosters economic and social development, competitiveness, and innovation." Though the deal does not require parties to publish open government data, to the extent they choose to publish this data, it directs them to adhere to best practices for open data, including ensuring it's provided in open, machine-readable formats. Additionally, the deal directs parties to try to cooperate and identify ways they can expand access to and the use of government data, particularly for the purposes of creating economic opportunity for small and medium-sized enterprises (SMEs).⁵ Further, the USMCA prohibition on customs duties on digital products such as apps, music, and e-books that are transmitted electronically will help ensure the free flow of digital goods across borders in North America. This is important to lock in as some countries have considered enacting tariffs on digital imports.

USMCA Improves the Rules for Digital Trade, Data Localization, and Personal Data

The USMCA supports the United States' data-driven economy and balanced, sectoral approach to data privacy, which has enabled it to become the world leader in innovative digital services. Of the 15 largest digital firms in the world, all are either American or Chinese.⁶ Of the top 200, only 8 are European.⁷ There are clear reason for this, and one is that the United States has taken a more light-touch approach to digital regulation, including with regard to the free flow of data and privacy issues.

The USMCA takes positive steps toward prohibiting data localization laws and those that require the use of local computing facilities. However, these provisions do not cover financial data (but even here, USMCA achieved a good outcome, as elaborated below) and government procurement. On the latter, Canada lamentably requires all electronic data (deemed sensitive) under government control be stored in a government of Canada-approved computing facility located within the geographic boundaries of Canada.

USMCA's key data flow provision stipulates that, "No Party shall prohibit or restrict the cross-border transfer of information, including personal information, by electronic means if this activity is for the conduct of the business of a covered person." By framing it as an obligation to prevent a negative measure (i.e., no party shall prohibit or restrict) it focuses on preventing or removing the specific trade barrier at the heart of the issue, rather than establishing a positive affirmation. For example, that a party shall allow data to flow, such as in the Trans-Pacific Partnership (TPP)/Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP), which provides that parties "shall allow the transfer of information by electronic means, including personal information, for business purposes."

While semantic, it's one of a few differences between the Trans-Pacific Partnership/Comprehensive and Progressive Trans-Pacific Partnership (TPP/CPTPP) and USMCA agreements that strengthen the provision and limits the potential for exceptions to be misused to undermine its value. For example, the USMCA's provision on computing facilities is the same as the CPTPP's, in that it is simple and definitive, stating that "No Party shall require a covered person to use or locate computing facilities in that Party's territory as a condition for conducting business in that territory." However, the USMCA provision does not include subsections about exceptions to this provision, namely that a country would be able to breach this commitment in the CPTPP if it was needed to achieve a "legitimate public policy" objective, which could include privacy and public interest and morals issues. This is a looming problem for global digital trade as some countries consider data localization a legitimate public policy tool (without explaining why it's necessary and why alternative policies are not used) and therefore look to use these types of overly broad exceptions to enact the very policies they're designed to prohibit. For instance, Vietnam directly references similarly broad exceptions for national security and the public interest in World Trade Organization (WTO) agreements in justifying data localization requirements under its new cybersecurity policy.

The USMCA also includes important data privacy provisions that reflect a few key pillars for open, innovative, and global digital trade involving personal information—that businesses are free to transfer

personal data across borders, that personal data privacy protections should flow with the data, that each country addresses the various principles of privacy (such as those listed in Article 19.3.3) in their own way (i.e., social, political, and other differences mean that there is no harmonized legal approach to protecting privacy), and that countries should make their respective privacy frameworks compatible and interoperable (article 19.13.6).

The first section on personal information protection (section 19.8) opens with the recognition of the economic and social benefits of protecting the personal information of users of digital trade and the contribution that this makes to enhancing consumer confidence in digital trade. Recognizing the different approaches, this opening paragraph is followed by the provision that each party shall adopt or maintain a legal framework that protects the personal information of the users of digital trade, and that this can be achieved through comprehensive privacy, personal information, or personal data protection laws, sector-specific laws covering privacy, or laws that provide for the enforcement of voluntary undertakings by enterprises relating to privacy.

Canada, Mexico, and the United States also agreed to use USMCA to send a signal that they support efforts to encourage the development of mechanisms to promote compatibility between different data privacy regimes around the world (Article 19.3.6). This paragraph is largely similar to the TPP/CPTPP, but with one important difference, as it explicitly recognizes that the Asia Pacific Economic Cooperation (APEC) Cross-Border Privacy Regime (CBPR) as one of these valid mechanisms to facilitate cross-border information transfers while protecting personal information. While not mentioned, the broader reference to data transfer mechanisms would also likely include the European Union-United States Privacy Shield and U.S. efforts to negotiate CLOUD Act executive agreements with other countries around the exchange of data for law enforcement purposes. The parties agreed to exchange information on these and other mechanisms applied in their jurisdictions and explore ways to extend these or other suitable arrangements to promote compatibility between them.

The USMCA's focus on compatibility and interoperability touches upon a weakness in U.S. engagement in the global digital economy, in that the United States has largely failed to advocate for the effectiveness of its regulatory approach to data privacy. In contrast, the European Union has actively sought to expand its regulatory model, particularly its General Data Protection Regulation (GDPR), to other countries through both advocacy and enforcement of the rules themselves, advocating a false narrative that many have bought into that the GDPR is pro-innovation. Unfortunately, Europe's strategy here appears to have been successful. For example, in 2017, Colombia issued rules copying the GDPR's approach to international data flows by preventing businesses from transferring personal data outside the country without the permission of users, unless the other country is found to provide an "adequate level" of protection. The USMCA includes the types of provisions that the United States Trade Representative (USTR), U.S. Department of Commerce, and other U.S. government agencies could use as the basis for broader engagement with other nations to counter

the false narrative about the European Union's efforts to convince other countries that there exists a "one-size fits all" approach to privacy protections and that they should replicate what Europe has enacted.

As it relates to cybersecurity, the USMCA's provisions are on the right track in focusing on best practices, rather than the location of data. The USMCA includes the hortatory commitment to build capacity in respective domestic agencies to manage cybersecurity and to strengthen collaborative mechanisms between the partner countries. The language for this latter provision is slightly stronger than in the CPTPP. Most importantly, the USMCA's cybersecurity provision states that a risk-based approach may be more effective than prescriptive regulation in addressing cybersecurity risks. In this regard, the USMCA's focus on cybersecurity is where it should be, encouraging firms within their jurisdiction to use risk-based approaches that rely on consensus-based standards and risk management best practices to identify and protect against cybersecurity risks and to detect, respond to, and recover from cybersecurity events (Article 19.15).

The USMCA's digital trade provisions are important as they seek to prohibit data-related restrictions that threaten the U.S. economy's use of data to drive innovation and to improve firm-level competitiveness. A growing number of policymakers around the world mistakenly believe that data is more secure and private when it is stored within a country's borders, creating policies requiring certain data to be stored domestically, including for financial records in Canada and in two Canadian provinces (the British Columbia Freedom of Information Protection of Privacy Act and the Nova Scotia Personal Information International Disclosure Act, which apply to personal information in the custody or control of public bodies). A number of critics of the USMCA make the misguided and mistaken claim that local data storage leads to better data privacy and cybersecurity. These misunderstandings about the security and privacy of data result in policies that negatively affect U.S. innovation, productivity, trade, and consumer welfare.

USMA provisions directly counteract the false notion that data must be stored domestically to ensure that it remains secure and private. With regard to privacy, data owners, whether they are consumers or businesses, can rely on contracts or laws to limit voluntary data disclosures so that data stored abroad receives the same level of protection as data stored domestically. Obviously, countries have the prerogative to set how companies use data, but this again highlights that the focus should be on how companies treat data and holding them accountable to this, rather than where the data is stored.

For example, the USMCA does nothing to stop the Canadian or Mexican governments pursuing companies that operate in either country should they fail to abide by local privacy laws, such as in the case of data breaches involving personal data. In fact, this is precisely what happened with Ashley Madison (an adult dating website), which is headquartered in Canada, but has websites with users from over 50 countries, including Australia. In mid-2015, hackers published online information (details of approximately 36 million user accounts) they allegedly stole from Ashley Madison. Given the scale of the breach and users affected, the Office of the Privacy Commissioner of Canada (OPC) launched a joint investigation with the Office of the Australian Information Commissioner (OAIC), which was made possible by their participation in the APEC

Cross-border Privacy Enforcement Arrangement. Both agencies investigated Ashley Madison's information-handling practices, identifying contraventions of each country's privacy laws, resulting in the firm entering into a compliance and enforcement undertaking with each respective privacy agency.¹³ This case highlights that the location of data storage is irrelevant to privacy enforcement if a firm has a legal nexus in a country's jurisdiction, that the focus of such laws should be on the measures that companies enact to secure data, and that country's privacy regulators consider working together on cross-border privacy cases (through international cooperation mechanisms, such as with APEC).

With regard to security, while certain laws may impose minimum security standards, the security of data does not depend on the country in which data is stored, only on the measures used to store it securely. Security breaches can happen no matter where data are stored—data centers everywhere are exposed to similar risks. Such inadvertent disclosures are the result of security failures. What's important is that the company involved (which either runs its own networks or uses a third-party cloud provider) be dedicated to implementing the most advanced methods to prevent such disclosures. The location of these systems has no effect on security.

What this shows is that policymakers often misunderstand that the confidentiality of data does not generally depend on what country the information is stored in, only on the measures used to store it securely. A secure server in Canada is no different from a secure server in Mexico. Data security depends on the technical, physical, and administrative controls implemented by the service provider, which can be strong or weak, regardless of where data is stored. For example, in a practice that protects both data privacy and security, some cloud-computing companies have upgraded security controls, so that customers retain the keys used to encrypt data before it is uploaded, thereby preventing third parties, including the cloud companies themselves, from accessing their data.¹⁴

USMCA Ensures Financial Services Data Can Flow Freely, While Allowing Regulatory Oversight

USMCA provides a much-needed improvement in how the United States uses trade agreements to support the global free flow of financial data alongside financial oversight. In the TPP, the United States created a loophole for data localization by excluding financial data from the agreement's prohibitions on data transfer restrictions and not specifying (in detail) the exact interests and emergency scenarios where this would be acceptable. Ultimately, the U.S.'s previous approach was unnecessary and redundant, and created a dangerous loophole that could've been misused for protectionist purposes by other countries, such as China, India, and Russia (even though it could still be misused given it remains a part of the CPTPP). USTR has used USMCA to address these concerns over a loophole for financial data localization, and in doing so, shown how legitimate issues raised by cross-border data flows can be addressed while allowing the free flow of data as the default and predominant policy approach.

It's important to note that the USMCA still treats financial services data differently, as the provisions that prohibit data localization and data flow provisions do not apply to financial services. In an ideal world, the United States would not exempt financial data from the broad prohibitions on data transfer restrictions in

future trade agreements. However, given the position of financial regulators (namely the U.S. Department of Treasury and the U.S. Federal Reserve), USTR appears to find middle ground: it sets out specific steps to facilitate government access to data for regulatory purposes, and in doing so makes 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.

The opening section on location of computing facilities for financial services (article 17.20.1) focuses on the underlying issue that financial regulators are worried about—access to data, not the location of data storage. USMCA parties agreed to recognize that "that immediate, direct, complete, and ongoing access by a Party's financial regulatory authorities to information of covered persons, including information underlying the transactions and operations of such persons, is critical to financial regulation and supervision, and recognize the need to eliminate any potential limitations on such access." Modern cloud computing, which allows transfers of data with the click of a button, enables firms to provide such access, while still allowing firms to move financial data freely in order to provide secure, innovative, and global services.

The USMCA's central focus on the goal of ensuring access for legitimate financial oversight objectives is made clear (through partial repetition) with the subsequent balancing provision that prohibits parties from requiring financial firms from using local computing facilities as a condition of doing business "so long as the country's financial regulatory authorities have immediate, direct, complete, and ongoing access to information processed or stored on computing facilities that the covered person uses or locates outside the Party's territory." This extends to third-party suppliers of cloud storage or other related services. Each country also agreed to provide financial firms with a reasonable opportunity to make changes to their IT systems (i.e., shifting data storage from one jurisdiction or another) if they find that they're not able to provide regulators with immediate and ongoing access to data. Such a commitment makes sense if firms realize that they're not able to assure access as part of prudential reporting requirements, such as in "living wills" (where firms have to detail how they manage their IT systems and data) which systemically important financial institutions in the United States need to prepare under the Dodd-Frank Act. 16 Finally, highlighting (again) the central focus on access to data, the USMCA details that even in the final resort whereby a financial regulatory requires a firm to change where it stores data, it does not necessarily mean shifting it to computing facilities in the United States (for example), but to another third-country jurisdiction where U.S. regulators know they would have access.

The end result is that these provisions will make a tangible improvement for U.S. financial firms in Canada, which has data localization requirements for financial accounting records.

For example, the Canadian Bank Act:

• Sections 239(1) - The records described in section 238 shall be kept at the head office of the bank or at such other place in Canada as the directors think fit.

 Section 597(2) - The records described in subsection (1) shall be kept at the principal office of the authorized foreign bank or at any other place in Canada that its principal officer thinks fit.¹⁷

This Bank Act requirement has been interpreted by Canada's Office of the Superintendent of Financial Institutions (OSFI) to mean that the specified records must be maintained (or at least backed up) on computer facilities located in Canada, meaning that U.S. firms have been allowed to "mirror" datasets in systems in Canada and backup in their primary IT systems, which may be in the United States or elsewhere. OSFI has enacted regulations under the Bank Act which require firms to conduct periodic examinations of where and how firms store financial records. These requirements have resulted in expensive, redundant, and duplicative facilities and processes for U.S. financial institutions with a presence in Canada. Indicative of the need for changes stemming from USMCA, on September 18, 2018, OSFI announced a review and revision to these regulations, which will also likely require a legislative change to the Bank Act at some stage once USMCA comes into force.

Overall, the USMCA's financial data provisions will support the data flows that are central to the global operations of the U.S. financial services sector. It sends the clear signal that the United States government is committed to establishing rules that govern digital trade in such a way as to ensure data flows are the norm, and that rules that prevent data flows are the rare exception. This is critical for the financial services sector, which is among the most data-intensive of any industry. Financial firms rely on the free flow of digital information to support customers and operations in virtually every sector of the economy for countries all around the world. For example, Citibank's global banking operations show the importance of the global free flow of data. More than 60 percent of Citibank's customers—it has over 200 million customer accounts—conduct their banking online. These processes are facilitated through 20 regional data centers, which are purpose-built using servers, storage, and networks that are environmentally controlled and highly secured to provide the highest-possible resilience for the bank's services and customer support operations.¹⁹

The USMCA sends a clear signal that the United States will oppose the growing range of countries, such as Brazil, China, India, and Russia, who are considering or have enacted data localization requirements for financial data. For the United States, allowing other nations to dictate how networks are designed and built would be harmful to its domestic economy and to its international trade competitiveness. Any trend toward the localization of data and servers will move business activity away from the United States to other nations and will raise costs for U.S. financial services firms, who will pass these costs on to the many consumers, corporations, and governments who use financial services on a daily basis, creating an inefficiency that detracts from economic growth. These additional costs also make the U.S. financial services sector less competitive in foreign markets, especially against local financial firms that do not compete outside their home markets and therefore do not face the additional costs caused by having to deal with multiple forced localization measures.

Protecting Internet-Based Services/Apps That Provide Communication and Other Services

In a first for a U.S. trade agreement, USMCA includes provisions that aim to create new digital trade rules to ensure that countries don't use behind-the-border regulations to discriminate against U.S. tech firms involved in providing a range of increasingly popular communication and media services around the world. While not in the digital trade chapter, these provisions are key examples of how the United States has worked to improve upon the TPP/CPTPP outcome in USMCA. While Canada and Mexico do not have any offending regulations, the rules would have a major impact if used in future U.S. trade agreements, as a growing number of countries are enacting discriminatory and trade-distorting rules that affect the many leading U.S. firms that use Internet-based market platforms and intermediary services as a central part of their business model.

Technological innovations have changed consumer behavior in media and telecommunications markets. This is especially the case in developing countries that have deployed mobile-phone services before (or instead of) traditional phone services, thereby leapfrogging costly fixed-line infrastructure. It also contributes to the development of a vibrant app and digital economy as people are using smart phones. Firms and individuals can use new platforms and digital services as intermediary services and as final consumer goods, such as services for communications (e.g., Skype, Viber). For messaging, "over-the-top" (OTT) service providers (such as WhatsApp, WeChat, Skype, and Facebook) provide instant-messaging services as an alternative to text-messaging services provided by traditional mobile telephone and telecommunication companies. In broadcasting, so-called over-the-top service providers (such as Netflix, Hulu, and HBO Go) deliver audio, video, and other media over the Internet instead of being packaged with cable TV subscriptions.

Many countries categorize and regulate these services as over-the-top services because they utilize broadband Internet networks that can manage voice, data, and multimedia traffic to provide services, often (though not always) without the direct involvement of the ISPs, which are often traditional telecommunications and cable TV operators. While there is no universal consensus on how best to differentiate and classify the various kinds of platforms and services—whether as OTTs, but often mixed in with concepts such as the platform economy, sharing economy, peer-to-peer economy, and others—it's clear their role as direct and indirect agents of digital trade is important, so rules and regulations that impede their ability to play this role deserve attention.

The problem is that U.S. tech firms providing these new, innovative services face a growing range of barriers as countries use legacy regulatory frameworks for traditional telecommunications and broadcasters to enact discriminatory and restrictive regulations. While motivations vary, and often involve legitimate public policy concerns (such as taxation), a common refrain is that restrictions are needed to "level the playing field" with traditional telecommunications and broadcasting companies. In many cases, these measures serve to protect incumbent and traditional telecommunications and broadcasting providers, impede trade in online services, and make it substantially more difficult for U.S. platforms and Internet-based services to access and compete in local markets.

However, just because an OTT service like Netflix or YouTube provides video does not mean it is equivalent to an over-the-air TV broadcaster, or that Skype or other voice-over Internet protocol (VoIP) services are like circuit-switched telephony. The fundamental point to understand about these newer IP-based services is that they are more like email than television or telephony. In other words, these new services simply transport digital bits, just like email, web surfing, and other applications. In some cases, the bits are displayed as text on a screen, in other cases as sound coming out of a computer's speakers, and in still other cases as video on a computer or smartphone screen. As such, they are not the same functionally as services that use dedicated, single-purpose technology to deliver specific services (e.g., telephony).

Moreover, the relationship between OTT platforms and traditional telecom firms is not win-lose, but one of interdependence. For telecommunications firms, the declining demand for traditional voice and text messaging services from OTT services is counterbalanced by increasing demand not only for data but for connectivity itself, which is partly driven by OTTs. OTTs need a reliable high-speed network, and telecommunication firms need Internet-based applications to stimulate demand for data traffic.

There is considerable uncertainty about whether current international trade rules apply to these Internet-based services. For example, a basic question is whether OTT services are covered by existing trade services classifications. Are OTT voice and messaging services a form of mobile telephone services or a form of data and message transmission services? The answer is the latter. What about the online distribution of audiovisual content?²¹ Is it a form of traditional television distribution or an Internet service? Once again, it is the latter. Along similar lines, do commitments countries took on at the WTO with regard to telecom services cover OTTs?²² Countries are able to exploit the lack of agreement on technical issues to enact measures that cut off or restrict market access.

Vietnam and Indonesia are two clear examples of countries using legacy frameworks alongside other new policy concerns, such as how to address the dissemination of false information and to ensure tax arrangements work in today's digital economy, as a cover for digital trade protectionism. ²³ For instance, Vietnam enacted new regulations that require OTT firms to locate servers in Vietnam. The regulation also restricts how foreign OTT services operate in Vietnam by forcing them to form a joint venture with Vietnamese telecommunications companies. Meanwhile, it promulgates differentiated regulations for free- and fee-based OTT services, as the latter need to get a license from the government, while the former do not. ²⁴ Media reports also state that Vietnam's prime minister ordered the Ministry of Information and Communications to restrict free OTT apps, such as Viber and Zalo (a local app), due to the impact these apps were having on traditional mobile carriers. As a Zalo representative rightly pointed out, free email services took over from postal services, but no one banned these services, yet the government seems intent on trying to do this with OTT services. Similarly, Indonesia used restrictive policies to force U.S. media firms to setup joint ventures with local firms as a condition of market entry. In April, 2017, the Indonesian state-owned telecommunication company Telkom signed a strategic partnership with Netflix, after earlier blocking

Netflix. Netflix CEO Reed Hastings told CNBC that Telkom is the only Internet service provider (ISP) in Asia that bans the company's service.²⁵

USMCA takes a step in the right direction in addressing this digital trade issue by including provisions in the telecommunications chapter on value-added services that address regulatory process issues for telecommunication services, and potentially, audiovisual and other sectors. The exact sectors covered by this provision depend upon the regulatory framework in each country and whether their respective agencies are responsible for other services beyond telecommunications, such as broadcasting. As a comparison, the TPP/CPTPP did not define these value-added services, nor have any specific provisions related to them. Within the context of telecommunication services, USMCA defines (article 18.1) value-added services as those "telecommunications services employing computer processing applications that: (a) act on the format, content, code, protocol or similar aspects of a customer's transmitted information; (b) provide a customer with additional, different or restructured information; or (c) involve customer interaction with stored information."

The central point of USMCA value-added services provisions (article 18.14) is that countries should not have their telecommunication regulators use legacy regulatory frameworks or new restrictions to unduly and unnecessarily burden new (largely Internet-based) value-added communication services in order to "level the playing field" (often code for protectionism) with traditional telecommunication providers (and potentially those in other service areas the regulator is responsible for). USMCA requires countries to justify any regulations by considering whether (or not) they help achieve a legitimate public policy objective, along with technical feasibility assessments to ensure that any regulations are actually possible (given some measures that may be possible with traditional providers may not work for Internet-based providers). Furthermore, USMCA requires that any licensing, permit, registration, or notification procedures that relate to value-added telecommunication services are transparent and non-discriminatory. Also, USMCA (article 18.14(b)) prohibits a number of specific ways that countries can use non-tariff measures to unfairly discriminate against foreign firms, such as by stipulating service coverage, mandating or justifying cost structures, and forcing firms to use particular telecommunication networks or technical standards. This is indicative of the many possible non-tariff tools that countries can use to discriminate against U.S. tech firms given they provide a similar, but different, service to incumbent traditional telecommunication/broadcasting firms, many of which are struggling to compete with new providers.

THE USMCA STRENGTHENS IMPORTANT INTELLECTUAL PROPERTY PROTECTIONS

The USMCA recognizes that the continent's economic output is increasingly knowledge- and intellectual-property based. For instance, IP-intensive industries contribute over \$6 trillion dollars, or 38 percent, of U.S. GDP.²⁶ They also support 58 million jobs, or over 40 percent of the U.S. workforce, and jobs in these industries pay a 46 percent wage premium compared to jobs in non-IP intensive industries. And despite what Jim Balsille, the former CEO of Canada's Research in Motion (the maker of the Blackberry), once said that, "Canada doesn't have valuable IP to sell to the world," the reality is that 51 percent of Canada's economy is

represented by knowledge-based industries, and at least one-third of intangible wealth in Canada is IP-based. Moreover, IP-intensive industries support 2 million Canadian jobs. Also, in Mexico, the contribution the country's knowledge-based industries contribute to Mexico's GDP has doubled over the past 10 years. Trade agreements like the USMCA should appropriately include robust intellectual property provisions, for these create the conditions supporting robust levels of innovation in nations.

Improve Online IP Enforcement in Canada and Mexico

ITIF has contended that it's important that an updated North American trade agreement condition limited liability for Internet service providers and other digital intermediaries with sufficient responsibilities to help rightsholders enforce IP, such as by removing infringing content once it's brought to their attention. In other words, it's important to ensure that intellectual property rules which exist in the offline world are applied equally robustly in the online world.

An effective digital trade policy requires robust IP protections, as without them producers will be less able to sell their products and services across borders. Weak or non-existent IP protection and enforcement is a modern barrier to trade. If a nation promulgates a weak IP regime and turns a blind eye to rampant and deliberate content piracy, imports of IP-based goods and services paid for with an export of money would by definition decline. For an innovative economy, such as the United States, this matters, as the knowledge and creativity required to create the goods and services exchanged in the 21st century—from smartphones, to biopharmaceutical drugs, to movies and music—is difficult to develop, but often very easy to steal or pay for at less than full-market value. But without fair payment, U.S. and global innovation and creative output decreases.

An important component for a dynamic and innovative digital economy is the need for rights and responsibilities involved in creating "safe harbors" to limit the liability of Internet service providers and other digital intermediaries from users who infringe copyright. For example, liability limitations for ISPs and other digital intermediaries in the United States allowed U.S. digital startups to worry about improving and expanding features and attracting and retaining customers, rather than policing and limiting their services for fear of lawsuits. These laws reduced the legal risks in building platforms for the use of millions. The balancing side of this framework are the rules and norms by which ISPs and other digital intermediaries need to work with rights holders to deal with users who use their services to infringe copyright. The problem that U.S. rights holders often face is that countries do not achieve the appropriate balance between IP protection, enforcement, and exceptions. When this "safe harbor" framework is unbalanced—i.e., when intermediaries are not liable, or when they have limited liability protections, but without corresponding responsibilities and mechanisms to help ensure IP is effectively protected—it undermines the ability of U.S. rights holders to benefit from their IP in today's digital economy. An unbalanced framework can undermine IP, especially online, given the ease, speed, and low-to-no cost of digital piracy.

The issues in both countries are different, but related, in that they concern the legal framework for how digital intermediaries are liable or not for their users who infringe copyright and if/how these intermediaries work with rights holders to remove this material. While the U.S. notice-and-takedown process is not perfect, there are ways to improve its performance as there are clear societal benefits to removing infringing content from the Internet. Widespread piracy has a negative economic impact, seriously harming the artists who create content and the technicians who produce it. Piracy limits the ability of content producers to create legitimate business models for selling digital content. It hurts U.S. competitiveness, as the U.S. economy has a competitive advantage in content industries. And it hurts law-abiding consumers who must pay higher prices for content (or have access to less content or lower-quality content in the marketplace) to compensate for the costs of piracy. And while innovative, legitimate alternatives to piracy have continued to blossom on the Internet in recent years, piracy has also continued to grow.²⁹

Article 20.J.11 of USMCA addresses legal remedies for instances of copyright infringement occurring online and the extent of safe harbors designed to limit the liability of ISPs.³⁰ USMCA's provisions set the parameters of conditions in which ISPs can benefit from safe harbors, requiring service providers to adopt and reasonably implement certain policies and standard technical measures including a "notice-and-takedown" system, in addition to not receiving a direct financial benefit from infringing activities.

Canada: Able to Keep Flawed "Notice-and-Notice" System

Yet the USMCA is disappointing in that Canada did not commit to a high-standard notice-and takedown-system. An annex to the IP chapter clarifies that Canada is exempt from the provision's application based on is current "notice-and-notice" system and other safeguards in Canadian copyright law.³¹ This is problematic, as Canada's framework is unbalanced in that it does not condition the limited liability for ISPs and other intermediaries with sufficient responsibilities to help rights holders enforce IP, such as by removing infringing content once it is brought to their attention (as the U.S. Digital Millennium Copyright Act [DMCA] requires in the United States). Without such conditions, Canada's framework does not create the necessary legal incentives for ISPs and other digital intermediaries to work with copyright holders to remove infringing content. The International Intellectual Property Alliance (IIPA), which represents U.S. copyright holders, reports that the notice-and-notice system has not generated any significant change in consumer behavior with regard to infringement and that some ISPs ignore or only partly follow their obligations to send along notices to users.³² The problem, as the IIPA points out, is that simply sending a notice to a user, without the potential for any meaningful legal consequences, does not always encourage users to stop posting or to remove copyright-infringing content.³³

Overall, Canada's approach leads to weak online IP enforcement, which undermines the ability of U.S. rights holders to protect and use their IP in Canada's digital economy. The IIPA, in a submission to USTR on the issue, highlights the seriousness of the situation: "[T]he consistent absence of any criminal enforcement in Canada against even the most blatant forms of online theft completes the picture of a system that is still not up to the challenge. ... Taken as a whole, these deficiencies in Canada's online liability legal regime still tilt

the field of competition against licensed services, and also continue to send the wrong signals to consumers about whether infringing activities are tolerated."³⁴

Mexico: Will Enact a Safe Harbor Framework, But Considerable Uncertainty About Implementation

Mexico has three years to implement a copyright safe harbor framework, which is progress as U.S. copyright holders reported one of the biggest obstacles to effective online IP enforcement is the fact that Mexico has no laws that directly establish legal liability principles for ISPs and other digital intermediaries with regard to users who infringe copyright.³⁵ However, there is considerable uncertainty about what framework Mexico will end up implementing given the nature of USMCA's language on copyright safe harbors and past precedent in how other U.S. trade partners have not enacted these provisions (such as Colombia), while others (such as Chile) have enacted seriously problematic copyright safe harbors as part of their implementation of their free trade agreements with the United States.

Currently, ISPs in Mexico are only subject to general liability principles in Mexico's Civil and Criminal Codes. Without a clear legal framework, U.S. copyright owners have not had a clear mechanism to identify infringing material and to work with intermediaries to remove infringing content. In this uncertain legal environment, Mexico's procedures to get ISPs and hosting providers to take down infringing material is proving ineffective. Some ISPs are unsure how to handle takedown measures, while others ignore them. The hope was that USMCA would result in a much clearer and predictable legal framework for rightsholders to effectively work with ISPs to fight piracy online.

However, there is considerable uncertainty about how Mexico will actually enact USMCA's safe harbor provisions and what this will mean for U.S. rightsholders. For example, footnote 119 gives rise to concerns about how Mexico will interpret the copyright safe harbor provisions alongside provisions in Mexico's constitution. It's unusual that a trade agreement would need to include an explicit mention that a provision is "consistent with that Party's existing constitutional provisions." It would be assumed that every provision of a trade agreement is consistent with a party's constitution, so the question is why would Mexico want this explicit mention in this particular part of the intellectual property chapter. In including this reference, and in looking to Chile as a model, it raises considerable uncertainty about how Mexico will interpret these provisions alongside constitutional provisions relating to freedom of speech, expression, and due process, each of which relate to the issues tied up in copyright safe harbors.

This same footnote raises uncertain about the legal and administrative framework and process that governs how rightsholders receive the legal authority to ask ISPs to take down copyright-infringing material—a process that needs to be quick, low-cost, and straightforward for a safe harbor framework to be effective. USMCA raises concerns in that the footnote states that a party (i.e., Mexico) "may establish an appropriate role for the government," which could mean a broad range of mechanisms, only limited by the rest of the footnote's limitations that this government role "does not impair the timeliness of the processand does not

entail advance government review of each individual notice." This raises concerns about what mechanism Mexico has in mind, given that Mexican officials have reportedly looked to Chile as a model.

What this potentially points toward is a system that is different to U.S. Digital Millennium Copyright Act, which USMCA and other U.S. trade agreements are supposed to reflect. In particular, the USMCA and U.S.-Chile FTA omits provisions for a private notice-and-takedown system, under which the liability protections of service providers are contingent on those providers complying with rightsholders formal notices to take down allegedly infringing material. This is a crucial piece of the U.S. Digital Millennium Copyright Act. In a scenario that could happen in Mexico (given the references to the constitution and government role above), the Chilean National Congress rejected several amendments that would have introduced such a private notice-and-takedown system due to concerns over certain constitutional rights. Chile's system instead requires a court order to have infringing content taken down. As the IIPA outlines, this raises the burden for rightsholders and ultimately creates a system that is simply too costly and time consuming, along with being very ineffective. Ultimately, IIPA concludes that Chile's approach is not compliant with the FTA and is not the precedent the United States should allow Chile to set for others to follow. It's this type of result that U.S. rightsholders want to avoid in Mexico, yet given the language included, could well be the end result.³⁶

Copyright

Robust copyright protections protect individual and corporate creators of novel works of art including books, movies, music, and other forms of content. Strong copyright protections enable a healthy production system that includes not only productivity, quality, and innovation, but also national competitiveness. As such, it's important to focus on the impact of copyright regimes on the overall production system, including the ability to produce higher-quality and more-innovative content. Strong copyright enables the production of more-complex, expensive products, particularly for movies, where copyright enables studios to invest tens of millions of dollars in high-tech special effects. As importantly, strong copyright protections help preserve and create jobs—many of them paying higher wages—and economic growth in nations, such as the United States, which specialize in the production of copyrighted content and attempt to sell it around the world. Without strong and long copyright protections, the U.S. economy would lose a valuable source of export revenue, as our global leadership in content industries would be for naught if other nations stopped paying for such content. As such, the USMCA appropriately establishes a copyright term of not less than the life of the author (or artistic creator) plus 70 years after the author's death.³⁷

Biologics and the Life-Sciences Sector

The life-sciences industry is one of America's and the world's most R&D-intensive industries. For instance, America's life-sciences sector invests over 21 percent of its sales in research and development, while accounting for 23 percent of domestic R&D funded by U.S. businesses—more than any other sector.³⁸ And measured by R&D expenditure per employee, the U.S. biopharmaceutical sector leads all other U.S. manufacturing sectors, investing more than 10 times the amount of R&D per employee than the average U.S. manufacturing sector.³⁹ Strong private and public sector investment has made the United States the world's

largest global funder of biomedical R&D investment over the past two decades, a share that some analyses suggested reached as high as 70 to 80 percent. ⁴⁰ America's innovative life-sciences sector competes by developing new-to-the-world medicines, therapies, and treatments, which themselves fundamentally embody and depend upon intellectual property. As such, it's appropriate that the USMCA incorporates robust intellectual property protections for life-sciences industries.

In particular, USMCA commits partner countries to provide 10 years of protection for the clinical trial data used to prove the safety and efficacy of novel biologic drugs. Biologics are large, complex molecules derived from living cells that are manufactured from living organisms. Biologic medicines—which include therapeutic proteins, DNA vaccines, monoclonal antibodies, and fusion proteins—are significantly more complex structurally than traditional "small molecule" pharmaceutical drugs. Because biologics must be manufactured within living tissues, the resulting protein is unique to the cell lines and the specific process used to produce it, and even slight differences in the manufacturing of a biologic can alter its nature. Because regulatory approval for biosimilar drugs does not require identity with the pioneer biologic drug it references, without an extended period of data exclusivity—which protects the actual investment needed to prove the safety and efficacy of a biopharmaceutical product—a competing biosimilar product could elude the innovator's patent while still relying on the innovator's clinical data for regulatory approval, thus creating a "patent protection gap." The protection gap. The protection gap. The protection gap.

Recognizing both the unique nature of biologic therapies and the need to strike a balance between innovators' incentives for investment in expensive and risky novel drug development while at the same time making room for competition by creating a path for biosimilar manufacturers to bring biosimilar products to market, in 2009 Congress passed the bipartisan Biologics Price Competition and Innovation Act (BCIPA), which enshrined 12 years of data exclusivity protection for novel biologic medicines. This protection means that biosimilar manufacturers must independently conduct the comprehensive pre-clinical and clinical trials for their own product, or wait the 12 years required by the Biologics Act before requesting a regulatory shortcut to approval based on the innovator's prior approval and data. 44 While ITIF has advocated for USMCA incorporating 12 years of data exclusivity protection for biologic drugs, and while it's imperative that this remains the standard for the United States, it was at least a constructive step that the USMCA committed Canada and Mexico to raise their length of protection for clinical trail data underpinning novel biologic drugs to 10 years, with Canada raising its level up from 8 years and Mexico from 5 years. 45 Laws in both Canada and Mexico will have to be changed to meet these requirements. USMCA also laudably provided for adjustment to patent terms for delays owing to the patent granting authority (i.e., patent term extension). 46 However, Canada does not currently provide for patent term adjustment for "unreasonable" delays in the issuance of a patent by the Patent Office, and at this time there is no indication of how long the patent term will be extended over such delays.⁴⁷

Prohibiting Forced Technology Transfers: Protecting Encryption and Source Code

Encryption—the technology many companies use to secure high-tech goods and digital services from unauthorized access—is at the forefront of competition in IT goods and services. Encryption plays an important, but often unrecognized, role in the modern economy. Because proprietary security measures that use encryption are intangible software that is embedded in goods or services, enterprises' source code—the lines of computer code at the heart of software—is susceptible to theft and replication, and therefore relies on intellectual property protections. As many of these products involve high-fixed costs for research and development to bring the first copy to market, but low marginal costs in subsequent copies, encrypted products and services represent an attractive target for foreign governments trying to collect and pass along the intellectual property to help local firms.

USMCA includes a number of provisions (that mirror the CPTPP) to protect commercial information and communications technology (ICT) goods that use cryptography, while excluding government use and a number of law enforcement and financial-sector related issues and concerns. The focus is on countries using cryptographic-related requirements as a condition of market entry. First, USMCA prohibits countries from forcing firms to transfer or provide access to any proprietary information relating to cryptography, including by disclosing a particular technology or production process or other information—for example, a private key or other secret parameter, algorithm specification, or other design detail, to the Party or a person in the Party's territory. Second, it prohibits countries from enacting rules that indirectly create a barrier to market entry by forcing them to partner or cooperate with a local firm in the development, manufacture, sale, distribution, import, or use of a commercial ICT good with cryptographic material. Third, it prohibits another technical barrier to trade whereby a country forces a firm to use a particular cryptographic algorithm or cipher, which otherwise makes their proprietary algorithm redundant as well as opening their product up to potential cyber threats given they're forced to use a non-preferred form of encryption.

The USMCA provides much-needed protections for source code (addressed in the digital trade chapter). Article 19.16 prevents parties from requiring "the transfer of, or access to, source code of software owned by a person of another Party, or to an algorithm expressed in that source code, as a condition for the import, distribution, sale or use of that software, or of products containing that software, in its territory." This is important for data innovation because it reduces the risk of parties imposing mandates for algorithmic transparency on AI systems developed in other countries, thereby exposing them to considerable intellectual property risks. It's easy to imagine how some countries could use algorithmic transparency requirements to force foreign firms to reveal intellectual property that would aid domestic firms. While the agreement would still allow parties to enact algorithmic transparency mandates for all firms, both foreign and domestic, this provision prohibits countries from using algorithmic transparency as a protectionist measure.

THE USMCA STRENGTHENS DISCIPLINES AGAINST INNOVATION MERCANTILISM

ITIF defines innovation mercantilism as the use of unfair trade practices—such as forced intellectual property or technology transfer as a condition of market access, production or export subsidies, standards or currency

manipulation, etc.—designed to help a country's technology-based industries to compete in international markets. Even though Canada and Mexico are not innovation mercantilists, the USMCA appropriately includes a number of disciplines that should become global norms in trying to combat the growing global spread of innovation mercantilism.

For instance, the currency chapter in the USMCA takes a number of important steps, including committing parties to: 1) disclose and publish (with various lags) all data relevant to their activities in foreign exchange markets; 2) consult one another when and if they intervene in currency markets; and 3) affirm that they will "avoid manipulating exchange rates or the international monetary system in order to prevent effective balance of payments adjustment or to gain an unfair competitive advantage." 48

The USMCA laudably includes new disciplines and restrictions on state-owned enterprises. For instance, one provision precludes state-owned enterprises from benefitting from lower tariff levels. ⁴⁹ USMCA also implements broad protections against trade secret theft, including that perpetrated by state-owned enterprises.

Another laudable step USMCA takes is in attempting to forestall partner country trade pacts with non-market economies. Specifically, a USMCA provision states that if a partner country enters a free trade deal with a "non-market" country such as China, the others can quit in six months and form their own bilateral trade pact. ⁵⁰ Further, a USMCA partner must notify the others three months before entering into such negotiations.

USMCA'S DISAPPOINTING OUTCOME ON SMALL PACKAGE TRADE AND DE MINIMIS THRESHOLDS

To facilitate greater cross-border trade in the small packages associated with e-commerce, the USMCA appropriately prevails upon Mexico and Canada to raise their de minimis shipment value levels, but to levels that are not commercially significant. While this issue is still reportedly being debated, this is a disappointing outcome that will affect the growing number of firms, especially small- and medium-sized ones, involved in using e-commerce platforms to engage in international trade.

The de minimis threshold defines the monetary value below which a physical good is exempted from customs duties, taxes, and all but minimal paperwork. A commercially significant de minimis level is crucial for developing a regional e-commerce market which can help the United States maximize its comparative advantage as well as improve competitiveness of the entire North American region. To that end, a higher de minimis threshold is always better.

De minimis is particularly important for the growing number of micro, small, and medium-sized businesses which use e-commerce platforms to access global markets and attain economies of scale. However, since such SME exports tend to be small package trade, the de minimis threshold can shape their business. Trade liberalization has reduced tariffs and quotas, propelling dramatic growth in trade in recent decades, but it's now at a point in many countries that logistics costs for small-package trade are greater deterrents to trade

than remaining tariffs. ⁵¹ These additional costs—in terms of time, complexity, and financial resources—act as a protectionist barrier to small package e-commerce as it can equal a major part of the value of the actual product, thereby making such trade unprofitable. Logistical barriers are also more critical for SMEs than larger firms, as they don't have the scale, resources, or administrative capacity to navigate legal and regulatory issues across multiple jurisdictions. In the face of a low de minimis threshold, some SMEs will choose to optout rather than overcome the paperwork and sometimes tariffs to acquire imported inputs and send exported products abroad. A low de minimis threshold is thus a barrier to modern trade that has not been tackled in past trade agreements.

Addressing these barriers to SME-based small packages trade also holds broader economic significance—SMEs that engage in trade employ more people, pay higher wages, achieve higher sales, and are more productive than SMEs that do not. ⁵² Exporting SMEs also have a higher chance of surviving. Exporting helps SMEs learn, innovate, diversify sources of revenue, improve capacity utilization, and improve overall competitiveness. In addition, helping SMEs diversify their exports drives further firm productivity. ⁵³ An increase in the de minimis threshold also means consumers will have access to a broader array of goods, receive those goods more quickly, and pay less for them overall. With goods being exempted from duties, taxes, and some paperwork, new products are likely to be offered as businesses take advantage of the simplicity of exporting. With fewer compliance procedures to handle, goods can pass across borders more quickly and arrive at their destination in a shorter time. Finally, as the de minimis threshold is raised, more goods will be exempt from duties and taxes, meaning consumers will face lower final prices.

Beyond the impact on SMEs, a higher de minimis threshold supports the investment and job creation driven by e-commerce firms' platforms. As e-commerce grows, platforms including Amazon and Walmart make investments, so they can more effectively respond to customer needs and demands. For example, the rise of services like same-day or two-hour delivery through Amazon Prime or Instacart have fostered investments in warehousing which allow these firms to quickly get products to their customers. Amazon, for instance, is opening a one-million-square-foot storage facility near Mexico City that will create up to 3,000 jobs and is in the planning stages of an additional, similarly sized warehouse in the Mexican state of Queretaro. Similar-scale investments have been made near Canadian cities including Calgary and Ottawa. Investments like these, which are helped by increases in the deminimis threshold, continue to foster the large and growing regional e-commerce market in North America. This directly benefits American producers as well as consumers across the continent.

The goal for USMCA should have been to raise the regional de minimis threshold to a commercially significant level closer to what the United States has: \$800. In USMCA, Canada committed to raise its de minimis level for the first time in decades (it maintains one of the lowest de minimis thresholds in the world), from \$15 to \$30 for taxes and to \$113 for duty-free shipments. Mexico will continue to provide a \$50 threshold for sales tax free and to provide duty-free shipments up to the equivalent level of \$117.56 For both Canada and Mexico, the relevant provision sets these amounts as the floor (meaning they can raise it beyond

this level if they like). In negotiations with the United States in August, Mexico initially agreed to raise the threshold on customs duties and taxes to \$100, but reverted to \$50 for taxes to match what Canada had negotiated.⁵⁷ However, even these modest increases in Canada and Mexico become less meaningful as these de minimis thresholds only apply to packages sent by (more expensive and less-frequently used) express shipment services (such as Fedex or UPS), meaning that (cheaper and more common) national postal delivery services (like Canada Post) are exempt.⁵⁸ So this means that Canadian and Mexican firms will be able to export goods with a much higher value to the United States through whatever postal service they prefer, while U.S. firms will be stuck with much lower limits that differ by delivery service.

USMCA'S BROADER ECONOMIC IMPACT

As noted, NAFTA delivered positive economic impacts for both the United States and its two North American trade partners. Employment impacts from NAFTA were generally positive, overall. In a 2014 analysis, the Peterson Institute for International Economics found that, by contributing to the development of cross-border supply chains, NAFTA lowered costs, increased productivity, and improved U.S. competitiveness. Peterson's analysis found that, annually since NAFTA went into effect, the U.S. economy lost 203,000 jobs and gained 188,000 jobs as a consequence of the pact, for an average annual job loss of 15,000 workers (which was at most 5 percent of displaced U.S. workers per year from 1994 to 2014). However, Peterson found that each new job gained as a consequence of NAFTA paid 7 to 15 percent more than the average job displaced, and moreover that, on average, per each job lost, the U.S. economy gained roughly \$450,000 in the form of lower prices and increased productivity. Moreover, Peterson found that these lower costs (and greater consumer choices) led to an average greater (effective) annual income for each U.S. household of \$10,000. Further, Peterson's study found that, in the absence of NAFTA, the U.S. economy might have lost more jobs in the two decades from 1994 to 2014, because the agreement made the U.S. and the broader North American economy more competitive in manufacturing compared to China and other Asian nations than would have been the case otherwise.

We can expect these types of economic impacts to continue under the revised NAFTA. To be sure, the processes of employment dislocation—whether driven by technological change, trade agreements like the USMCA, or the broader forces of globalization—will continue in the United States, just as they will elsewhere. If this dynamic of trade facilitating the replacement of lower-paid with higher-paid jobs in the United States is to continue effectively, then the United States is going to need to do a much better job of preparing its workforce for these transitions. Unfortunately, the United States invests just one-sixth the OECD average in active labor market (i.e., workforce retraining) policies, and just one-twelfth the average of leading nations such as Denmark and Sweden. In the absence of serious and effective policies and programs that can help retrain and reskill U.S. workers, then both will their employment outcomes be weaker, but also support for trade and globalization will decrease, as dislocated workers encounter more difficulty in transitioning into new opportunities. Thus, the United States needs to complement trade agreements like USMCA with effective policies for both robust K-12 education systems (so that in those graduating from U.S. high schools, community colleges, and universities America brings into the workforce individuals

equipped with relevant and up-to-date skills) as well as worker retraining systems, so the existing workforce is trained with the up-to-date skills it needs to compete.

CONCLUSION

The USMCA definitely builds upon NAFTA, and in most regards, provides the framework for a more integrated regional economy that is based on innovation, digital technologies, and intellectual property. Some provisions directly addressed issues that exist in Mexico and/or Canada, which thereby removes a barrier to trade for U.S. firms. Even though other provisions address issues that only exist outside of North America, these still provide certainty for the U.S. government and firms that the region will not adopt innovation mercantilist policies that exist outside the region, especially those already in place in China. In this way, the three countries sent a signal to other countries that they're committed to putting in place mutually beneficial modern trade rules for each other and that they're willing to work together to counter the innovation mercantilist policies which threaten the rules-based, multilateral trading system.

ENDNOTES

- 1. James McBride and Mohammed Aly Sergie, "NAFTA's Economic Impact" (Council on Foreign Relations, October 4, 2017), https://www.cfr.org/backgrounder/naftas-economic-impact.
- 2. U.S. Chamber of Commerce, "The Facts on NAFTA: Assessing Two Decades of Gains in Trade, Growth, and Jobs" (U.S. Chamber of Commerce, March 2017), 16-17, https://www.uschamber.com/sites/default/files/the_facts_on_nafta_-_2017.pdf.
- 3. Christopher Wilson, "Working Together: Economic Ties Between the United States and Mexico" (Woodrow Wilson International Center for Scholars, November 2011), https://www.wilsoncenter.org/sites/default/files/Working%20Together%20Full%20Document.pdf.
- 4. Mark Knickrehm, Bruno Berthon, and Paul Daugherty, "Digital Disruption: The Growth Multiplier" (Accenture, January, 2016), https://www.accenture.com/_acnmedia/PDF-4/Accenture-Strategy-Digital-Disruption-Growth-Multiplier.pdf.
- 5. Joshua New, "Here's What the USMCA Does for Data Innovation," Center for Data Innovation, October 5, 2018, https://www.datainnovation.org/2018/10/heres-what-the-usmca-does-for-data-innovation/.
- 6. "Europe's History Explains Why it Will Never Produce a Google," The Economist, October 13, 2018, accessed October 19, 2018, https://www.economist.com/europe/2018/10/13/europes-history-explains-why-it-will-never-produce-a-google.
- 7. Ibid.
- 8. "Direction for Electronic Data Residency," Treasury Board of Canada Secretariat website, accessed December 12, 2018, https://www.canada.ca/en/treasury-board-secretariat/services/information-technology/policy-implementation-notices/direction-electronic-data-residency.html.
- 9. Nigel Cory, "Vietnam's cybersecurity law threatens free trade," Nikkei Asian Review, August 15, 2018, https://itif.org/publications/2018/08/15/vietnams-cybersecurity-law-threatens-free-trade.
- 10. Nigel Cory and Alan McQuinn, "Will the US capitalize on its opportunity to stop data localization?" The Hill, September 9, 2018, accessed October 19, 2018, https://thehill.com/opinion/cybersecurity/405422-will-the-us-capitalize-on-its-opportunity-to-stop-data-localization.
- 11. "Adicionar un Capítulo Terecero al Tíitulo V de la Circular Única," Industria y Comercio Superintendencia, August 10, 2017, accessed October 18, 2018, http://www.sic.gov.co/sites/default/files/normatividad/082017/Circular_Externa_005_de_2017.pdf.
- 12. Michael Geist, "How the USMCA falls short on digital trade, data protection and privacy," Washington Post, October 3, 2018, https://www.washingtonpost.com/news/global-opinions/wp/2018/10/03/how-the-usmca-falls-short-on-digital-trade-data-protection-and-privacy/?noredirect=on&utm_term=.9a09eb7119e3; and James McCloud, "Data localization concerns in USMCA may be overblown," Financial Post, October 4, 2018, https://business.financialpost.com/technology/data-localization-concerns-in-usmca-may-be-overblown.
- 13. "Joint investigation of Ashley Madison by the Privacy Commissioner of Canada and the Australian Privacy Commissioner/Acting Australian Information Commissioner," Office of the Privacy Commissioner of Canada website, accessed December 12, 2018, https://www.priv.gc.ca/en/opc-actions-and-decisions/investigations-into-businesses/2016/pipeda-2016-005/.
- 14. Daniel Castro and Alan McQuinn, "Unlocking Encryption: Information Security and the Rule of Law" (Information Technology and Innovation Foundation, March 2016), http://www2.itif.org/2016-unlocking-encryption.pdf.
- 15. Nigel Cory, "The TPP's Financial Data Carve Out—USTR Closes a Loophole for Digital Protectionists," Innovation Files, July 7, 2016, https://www.innovationfiles.org/the-tpps-financial-data-carve-out-ustr-closes-a-loophole-for-digital-protectionists/; Nigel Cory and Robert Atkinson, "Financial Data Does Not Need or

- Deserve Special Treatment in Trade Agreements" (Information Technology and Innovation Foundation, April, 2016), http://www2.itif.org/2016-financial-data-trade-deals.pdf.
- 16. Cory and Atkinson, "Financial Data Does Not Need or Deserve Special Treatment in Trade Agreements."
- 17. "Canada Bank Act, PART XII.1," Canadian Department of Justice website, accessed December 12, 2018, https://laws-lois.justice.gc.ca/eng/acts/b-1.01/page-107.html#h-141.
- 18. Dawn Jetten and Maria Nasr, "USMCA to Remove "in Canada" Record-Keeping Requirements for Financial Institution Sectors," Blakes website, accessed December 12, 2018, https://www.blakesbusinessclass.com/usmca-remove-canada-record-keeping-requirements-financial-institution-sectors/?utm_source=Mondaq&utm_medium=syndication&utm_campaign=View-Original.
- 19. Michael Corbat, "CEO Michael Corbat's Keynote at the Mobile Word Congress," (speech presented at Mobile World Congress, Barcelona, 2014), www.citigroup.com/citi/news/executive/140225Ea.htm; Charles Johnston, "Investigation Number 332-531, Digital Trade in the U.S. and Global Economies, Part 1" (submission by Citi to a United States International Trade Commission investigation, March 14, 2013), http://www.uscib.org/docs/Citi_TC_030713.pdf.
- 20. Nigel Cory, "The RBI's misguided digital protectionism," LiveMint, August 23, 2018, https://itif.org/publications/2018/08/23/reserve-bank-indias-misguided-digital-protectionism; Robert Atkinson and Nigel Cory, "ITIF Filing to the Central Bank of Brazil on Cybersecurity and Data Processing Requirements" (Information Technology and Innovation Foundation, November 14, 2017), https://itif.org/publications/2017/11/14/itif-filing-central-bank-brazil-cybersecurity-and-data-processing.
- 21. United Nations Department of Economic Affairs and Social Affairs Statistics Division, "New issues requiring guidance in the Central Product Classification" (New York: United Nations, May 2015), https://unstats.un.org/unsd/class/intercop/expertgroup/2015/AC289-20.PDF.
- 22. Shin-yi Peng, "GATS and the Over-the-Top Services: A Legal Outlook," Journal of World Trade 50, no. 1 (2016): 21-46, https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2822564.
- 23. Nigel Cory, "Testimony Before the United States International Trade Commission on Global Digital Trade" (The Information Technology and Innovation Foundation, March 29, 2018), https://itif.org/publications/2018/03/29/testimony-united-states-international-trade-commission-global-digital-trade.
- 24. Van Ly, "Ministry Protects OTT Services," The Saigon Times Daily, October 25, 2016, https://www.vietnambreakingnews.com/2016/10/ministry-protects-ott-services/.
- 25. Anisa Menur A. Maulani, "Indonesian state-owned telco Telkom to cancel Netflix ban, following new partnership," e27, April 12, 2017, https://e27.co/indonesian-state-owned-telco-telkom-cancels-netflix-ban-20170412/.
- 26. Justin Antonipillai and Michelle K. Lee "Intellectual Property and the U.S. Economy: 2016 Update" (Economics & Statistics Administration and United States Patent and Trademark Office, 2016), https://www.uspto.gov/sites/default/files/documents/IPandtheUSEconomySept2016.pdf.
- 27. Anupam Chander, "Internet Intermediaries as Platforms for Expression and Innovation" (CIGI and Chatham House, November 2016), https://www.cigionline.org/sites/default/files/documents/GCIG%20no.42.pdf.
- 28. Robert Atkinson, Daniel Castro, and Alan McQuinn, "Section 512 Study: Notice and Request for Public Comment" (Information Technology and Innovation Foundation, March 21, 2016), http://www2.itif.org/2016-section-512-comments.pdf.
- 29. Robert Steele, "If You Think Piracy Is Decreasing, You Haven't Looked at the Data...," Digital Music News, July 16, 2015, http://www.digitalmusicnews.com/2015/07/16/if-you-think-piracy-is-decreasing-you-haventlooked-at-the-data- 2/; David Price, "Sizing the Piracy Universe," NetNames, September 2013, http://www.netnames.com//sites/default/files/netnames-sizing_piracy_universe-FULLreport-sept2013.pdf.

- 30. Nathaniel Lipkus and Jaymie Maddox, "A Need-to-Know Guide on IP in the U.S.-Mexico-Canada Agreement," October 2, 2018, https://www.osler.com/en/resources/cross-border/2018/a-need-to-know-guide-on-ip-in-the-u-s-mexico-canada-agreement.
- 31. Ibid.
- 32. International Intellectual Property Alliance, "Canada: 2017 Special 301 report on Copyright Protection and Enforcement," accessed June 8, 2017, http://www.iipawebsite.com/rbc/2017/2017SPEC301CANADA.PDF.
- 33. Ibid. International Intellectual Property Alliance, Canada: 2017 Special 301 report.
- 34. Ibid.
- 35. International Intellectual Property Alliance, "Mexico: 2017 Special 301 report on Copyright Protection and Enforcement," accessed June 8, 2017, http://www.iipawebsite.com/rbc/2017/2017SPEC301MEXICO.PDF.
- 36. International Intellectual Property Alliance, "2018 Special 301 report on Copyright Protection and Enforcement," accessed December 12, 2018, https://iipa.org/files/uploads/2018/02/2018_SPECIAL_301.pdf.
- 37. Michelle Wein, "Why America Gets Copyright Correct and (Some) Libertarians Do Not," The Innovation Files, October 3, 2013, https://www.innovationfiles.org/why-america-gets-copyright-correct-and-some-libertarians-do-not/.
- 38. International Federation of Pharmaceutical Manufacturers & Associations (IFPMA), The Pharmaceutical Industry and Global Health: Facts and Figures 2014 (IFPMA, 2014), 13, http://www.ifpma.org/fileadmin/content/Publication/2014/IFPMA_-_Facts_And_Figures_2014.pdf; PhRMA, "Economic Impact."
- 39. PhRMA, "Chart Pack: Biopharmaceuticals in Perspective," Version 2.0, (Washington, DC: PhRMA, Spring 2012).
- 40. Justin Chakma et al., "Asia's Ascent—Global Trends in Biomedical R&D Expenditures" New England Journal of Medicine 370, no. 1 (January 2014); ER Dorsey et al., "Funding of US biomedical research, 2003-2008" New England Journal of Medicine 303 (2010): 137-43, http://www.ncbi.nlm.nih.gov/pubmed/20068207.
- 41. Stephen Ezell, "Ensuring the Trans-Pacific Partnership Becomes a Gold-Standard Trade Agreement" ITIF, August 2012, http://www.itif.org/publications/ensuring-trans-pacific-partnership-becomes-gold-standard-trade-agreement.
- 42. Hearing on Biologics and Biosimilars: Balancing Incentives for Innovation, Before the House Comm. on the Judiciary and Subcomm. on Courts and Competition Policy, 111th Cong. (July 14, 2009) (statement of Congresswoman Anna G. Eshoo), http://judiciary.house.gov/hearings/pdf/Eshoo090714.pdf.
- 43. Lybecker, "Protecting Data Exclusivity, Protecting the Future of Medicine."
- Dr. Kristina Lybecker, "Protecting Data Exclusivity, Protecting the Future of Medicine" IPWatchdog, November 10, 2013, http://www.ipwatchdog.com/2013/11/10/protecting-data-exclusivity-protecting-the-future-of-medicine/id=46136/.
- 45. Stephen Ezell, "The Imperative of Protecting Life Sciences Innovation in the TPP" (Information Technology and Innovation Foundation, March 2015), http://www2.itif.org/2015-life-science-tpp.pdf?_ga=2.25563837.189834759.1540824096-719207280.1528225744.
- 46. Jennifer L. Wilkie, Jenny Thistle, Justin Smith, and John Norman, "The USMCA: What Does It Mean For Patents and the Pharmaceutical Industry?" Lexology, October 5, 2018, https://www.lexology.com/library/detail.aspx?g=cd859f53-9c3b-4f15-8801-94ab95f54f28.
- 47. United States-Mexico-Canada Agreement (USMCA), Article 20.F.9, https://ustr.gov/trade-agreements/free-trade-agreements/united-states-mexico-canada-agreement/united-states-mexicot. Under the USMCA, unreasonable delays are defined as more than five years from the date of filing of the application or three years after a request for examination of the application has been made, whichever is later.

- 48. C. Fred Bergsten, "A Positive Step in the USMCA: Countering Currency Manipulation," (Peterson Institute for International Economics, October 4, 2018), https://piie.com/blogs/trade-investment-policy-watch/positive-step-usmca-countering-currency-manipulation.
- 49. Alan Rappeport and Keith Bradsher, "Trump Embarks on Bilateral Trade Talks to Pressure China," The New York Times, October 17, 2018, https://www.nytimes.com/2018/10/17/us/politics/china-trump-trade-talks.html.
- 50. David Lawder, "Trade Pact Clause Seen Deterring China Trade Deal With Canada, Mexico," Reuters, October 2, 2018, https://www.reuters.com/article/us-trade-nafta-china/trade-pact-clause-seen-deterring-china-trade-deal-with-canada-mexico-idUSKCN1MC305.
- David Hummels, "Time as a Trade Barrier," Center for Global Trade Analysis (GTAP Working Paper 1152), 2001, David Hummels, "Transportation Costs and International Trade in the Second Era of Globalization," Journal of Economic Perspectives, 2007, 21, 3: 131–54; Daniel Ikenson, "While Doha Sleeps: Securing Economic Growth through Trade Facilitation" (CATO Trade Policy Analysis no. 37, June 2008).
- 52. Reena B. Gordon and Kati Suominen, "Going Global: Promoting the Internationalization of Small and Midsize Enterprises in Latin America and the Caribbean" (Inter-American Development Bank, Integration and Trade Sector, 2014)
 https://publications.iadb.org/bitstream/handle/11319/6793/Going%20Global.pdf.
- 53. Robert Feenstra and H. L. Kee, "On the Measurement of Product Variety in Trade" (Policy Research Working Paper Series 3213, The World Bank, 2004).
- Daina Beth Solomon, "Amazon plans mega-warehouse for Mexico growth spurt," Reuters, September 13, 2017, www.reuters.com/article/us-amazon-mexico-exclusive/exclusive-amazon-plans-mega-warehouse-for-mexico-growth-spurt-idUSKCN1BO1RD; Daina Beth Solomon, "Amazon zooms in on central Mexico for large new warehouse," Reuters, October 17, 2018, www.reuters.com/article/us-mexico-amazon-com-exclusive/exclusive-amazon-zooms-in-on-central-mexico-for-large-new-warehouse-idUSKCN1MR2OM.
- Tricia lo, "Nearly finished Amazon warehouse to bring 1,000 jobs to Calgary region," CBC News, June 12, 2018, www.cbc.ca/news/canada/calgary/amazon-balzac-warehouse-update-2018-1.4702692; Joanne Laucius, "Amazon breaks ground on massive east-end warehouse," Ottawa Citizen, August 21, 2018, ottawacitizen.com/news/local-news/amazon-breaks-ground-on-massive-east-end-warehouse.
- Office of the United States Trade Representative, "United States-Mexico-Canada Trade Fact Sheet Modernizing NAFTA into a 21st Century Trade Agreement," (USTR, October 2018), https://ustr.gov/about-us/policy-offices/press-office/fact-sheets/2018/october/united-states%E2%80%93mexico%E2%80%93canada-trade-fa-1#.
- 57. Sharay Angula, "Final tweaks in North American trade deal keep lid on e-commerce," Reuters, October 5, 2018, https://www.reuters.com/article/us-trade-nafta-ecommerce/final-tweaks-in-north-american-trade-deal-keep-lid-on-e-commerce-idUSKCN1MF2NO?utm_source=applenews.
- 58. Alex Ballingall, "Online shopping savings under USMCA won't apply to Canada Post, Ottawa says," The Star, October 1, 2018, https://www.thestar.com/news/canada/2018/10/01/online-shopping-savings-under-usmca-wont-apply-to-canada-post-ottawa-says.html.
- 59. Gary Clyde Hufbauer, Cathleen Cimino, and Tyler Moran, "NAFTA at 20: Misleading Charges and Positive Achievements" (Peterson Institute for International Economics, May 2014), https://piie.com/publications/pb/pb14-13.pdf.
- 60. Ibid.

- 61. Robert D. Atkinson, "How to Reform Worker-Training and Adjustment Policies for an Era of Technological Change" (Information Technology and Innovation Foundation, February 2018), https://itif.org/publications/2018/02/20/technological-innovation-employment-and-workforce-adjustment-policies.
- 62. OECD, "Public Expenditure and Participant Stocks on LMP" (data extracted January 17, 2018 from OECD.Stat0, http://stats.oecd.org/viewhtml.aspx?datasetcode=LMPEXP&lang=en.