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The Internet, Cross-Border Data Flows and International Trade

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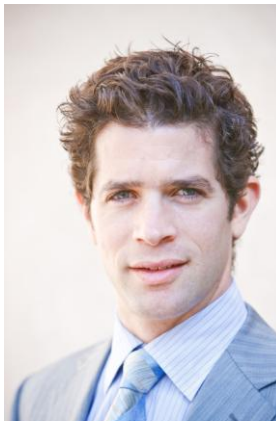

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EXECUTIVE SUMMARY

The Internet is becoming a key platform for commerce that is increasingly happening between buyers and sellers located in different countries, thereby driving international trade. Additionally, as the Internet enables cross-border data flows[1] this is also underpinning global economic integration and international trade. For instance, cross-border data flows are now intrinsic to commerce, from Internet-based communications like email and platforms such as eBay and Facebook that bring buyers and sellers together, from the financial transaction to purchase the product in other countries to the downloading of the goods and services.

Despite the growing significance of the Internet for international trade, governments are restricting the Internet in ways that reduce the ability of businesses and entrepreneurs to use the Internet as a place for international commerce and limits the access of consumers to goods and services. Some of these restrictions are being used to achieve legitimate goals such as preventing cybercrime or restricting access to morally offensive content, but may be applied more broadly than necessary to achieve those objectives. In other cases, Internet restrictions are targeting foreign businesses and the sale of goods and services online in order to benefit local ones. Such Internet restrictions are discriminatory and harm international trade.

This paper discusses the importance of the Internet and cross-border data flows for international trade. It proposes steps that governments should take to apply existing international trade rules and norms and identifies where new trade rules are requires to further support the Internet and cross-border data flows as drivers of international commerce and trade.

[1] This article uses data flows and information flows interchangeably.

The Economic Benefits of the Internet

Over 2.3 billion people have access to the Internet and this figure is expected to grow to five billion by 2020.[2] The Internet's economic power and potential are massive in several respects. First, the Internet allows for the aggregation and globalization of markets, providing new opportunities for business and consumers.[3] Second, the Internet is a key driver of innovation and productivity growth because it reduces transaction costs and enables businesses to better utilize existing resources. In addition, individuals can acquire new skills via the Internet, thus improving human capital.

The Internet has also underpinned the development of some of the most innovative companies in the world and, in some cases, entirely new business models which bring users and information together. Social networking sites such as Facebook and Google+ host user-generated content and promote social and commercial connections. Companies such as Amazon, Apple and eBay have successfully used the Internet to generate e-commerce and mobile application platforms that connect buyers and sellers across the U.S. and globally. And growth in mobile devices such as tablets and smart phones has underpinned growth in mobile software delivered online and mobile web traffic. In fact, mobile data traffic is forecast to grow 18 times between 2011 and 2016.[4]

Traditional manufacturing and services companies are also benefiting from Internet-enabled applications and commerce. For instance, the Internet has enabled entrepreneurs and businesses to access services and customers globally at lower costs. And cloud computing is utilizing the Internet and the ability to move data across-borders to change the way computers are used, reducing costs while providing access to a full range of computer services.

Increasingly, the role of the Internet in the economy is also being understood as a key tool that can help achieve a range of other goals.[5] For instance, by digitizing health records and placing them online, doctors can improve health care delivery and outcomes. The Internet is also allowing students in the developed and developing world to access education online, raising education levels and creating new opportunities. And smart grid technology is giving households real-time information about their energy consumption, creating an incentive to conserve energy to reduce electricity bills while also reducing greenhouse gas emissions. Moreover, the impact of the Internet on economies appears to be at the cusp of another step-change as a combination of growth in broadband access, wireless networks and mobile devices

[2] International Telecommunication Union, "Measuring the Information Society 2012", p. 9
[3] OECD 2008 Ministerial Meeting, "Shaping Policies for the Future of the Internet Economy", p 7
[4] Cisco (2011), Cisco Visual Networking Index: Global Mobile Data Traffic Forecast Update 2011-2016
[5] OECD Internet Economy 2012, p. 244

expands the Internet into homes, cars and appliances, further deepening and expanding the interconnectedness of things.[6]

To date, the United States has been, and remains, the focal point of the Internet and the burgeoning area of Internet policy. The U.S. captures the most value from the Internet, receiving more than 30 percent of global Internet revenues. However, most developed countries have reaped significant benefits from the Internet. A McKinsey Global Institute study estimated that the Internet contributed over 10 percent to GDP growth in the last five years to the world's top ten economies and for every job lost as a result of the Internet, 2.6 jobs have been created.[7]

Providing Internet access to rural communities in developing countries provides important access to new services.

The Internet is also an increasingly significant driver of job creation and economic growth in the developing world. According to a World Bank report, providing Internet access to rural communities in developing countries provides important access to new services such as real time information on the price of agriculture products, giving small businesses greater control over their sales.[8] Indeed, there is evidence that every ten percentage-point increase in the penetration of broadband services leads to a 1.3 percent increase in economic growth.[9] But this contribution of the Internet to GDP is less than for developed countries, suggesting significant scope for growth.[10]

Moreover, a digital divide exists between the developed and developing world.[11] For instance, whereas almost 80 percent of the North American population has Internet access, only 15 percent of Africa is connected to the Internet.[12] Nevertheless, Internet penetration in the developing world is growing and much of this is being achieved via mobile phones.[13] In fact, the strongest growth in mobile data traffic going forward is expected to be in the Middle East and Africa.[14] But there remains scope for further growth of Internet penetration in developing countries by action that reduces the costs of Internet access and of mobile platforms.

The Internet and the Cross-Border Flow of Data

Accompanying the growth of the Internet has been the ability for people, businesses and governments to change the way data is collected, shared and used. In

[6] OECD Internet Economy 2012, p. 23
[7] Ibid.
[8] World Bank Report, "Information and Communications for Development 2009: Extending Research and Increasing Impact"
[9] Ibid
[10] McKinsey & Company, "Online and upcoming: The Internet's impact on aspiring countries" January 2012, p. 29
[11] International Telecommunication Union, "Measuring the Information Society 2012", p. 32
[12] OECD Internet Economy Outlook 2012
[13] McKinsey & Company, "Online and upcoming: The Internet's impact on aspiring countries" January 2012, p. 24
[14] Cisco (2011), Cisco Visual Networking Index: Global Mobile Data Traffic Forecast Update 2011-2016

particular, the Internet has enabled cross-border data flows to happen in a networked, dynamic fashion and in real-time.[15] Indeed, data can cross many borders without the knowledge of the sender or the recipient.[16] The utilization of cross-border data flows has, in turn, increased economic efficiency and productivity, raising welfare and standards of living.[17] In fact, the growth of the Internet and the ability to move data rapidly and globally has been a key building block of the global economic order. For instance, cross-border data flows have allowed business to communicate customer orders in real-time, make quick decisions about manufacturing loads and rapidly tweak designs in response to shifts in consumer desires. This has enabled the disaggregation by businesses of their supply chains across countries.[18]

The flow of information across borders also supports R&D efforts as researchers around the world are able to share data, design experiments and analyze the results in a more collaborative and real time experience. Cross-border data flows have also revolutionized the finance industry. Consumers can access their accountants globally and businesses around the world can access market-leading financial services from New York, London and Hong Kong. Innovative companies are also taking advantage of the ability to move data globally and increasing the access to capital for start-ups. For instance, a company called Microplace sources investors for projects around the world that aim to alleviate poverty. Another business called 33needs connects investors with small-scale entrepreneurs in developing countries. The ability to move data seamless across-borders has also enabled the development of data intensive applications such as video and TV streaming, health and education outcomes and virtual conferencing.[19]

The development of cloud computing promises a further step-change in how data is used. As Paul Schwartz explains, "different parties in the cloud can contribute inputs, outputs, analytics, and execute other kinds of actions. The result of this distributed computing environment is to permit dramatic flexibility in processing decisions – on a global basis."[20] Cloud computing allows users to locate software and infrastructure like servers and storage in the cloud, benefiting all businesses by reducing costs while providing access to cutting edge computer services. Exports of cloud computing services were estimated to be worth approximately $1.5bn in 2010 (and this is likely a conservative figure) and the market for cloud computing services is anticipated to grow by up to 600 percent by 2015.[21]

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[15] Paul M. Schwartz, "Managing Global Data Privacy" A Report from Privacy Projects 2009, p. 10

[16] Christopher Kuner, "Regulation of Transborder Data Flows under Data Protection and Privacy Law; Past, Present and Future", OECD Digital Economy Paper No. 187, 2011, p. 10

[17] OECD Internet Economy 2012, p. 143

[18] Samuel Palmisano, "The Globally Integrated Enterprise", Foreign Affairs (May/June 2006), p. 127

[19] OECD 2008, "Shaping Policies for the Future of the Internet Economy", p. 6

[20] Paul M. Schwartz, "Managing Global Data Privacy" A Report from Privacy Projects 2009, p. 18

[21] Renee Berry and Matthew Reisman, "Policy Challenges of Cross-Border Computing" 4:2 Journal of International Commerce and Economics, November 2012, pp 9-10

Restricting Access to the Internet and Information Flows – the how and the why

The Internet has provided an opportunity for people to connect and share ideas in a space and time essentially free of transaction costs. Significantly, it has been the open nature of the Internet – the freedom to connect, share information and exchange ideas - that has underpinned the innovation which has created new businesses such as those based on social networking and crowd-funding.

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The original and essentially libertarian nature of the Internet is increasingly being challenged by assertions by government of jurisdiction over the Internet or the development of rules that restrict the ability of individuals and companies to access the Internet and move data across borders.

In some cases, the motivation for government interference in the Internet is to regulate – for understandable reasons – the types of physical world harms that are replicable online.[22] For instance, theft, child pornography and intellectual property (IP) infringement, acts that are subject to regulation in the physical world, exist in cyberspace and the interconnected nature of the web magnifies their potential reach and harm. Moreover, as the Internet has become a platform for business, rule of law issues such as the enforcement of contracts and access to dispute settlement mechanisms – functions that only governments provide –increasingly overlay the digital space.[23]

Some governments are also restricting the Internet and information flows for a range of other, arguably less legitimate or controversial, reasons. For instance, government rules and restrictions are being used to cause commercial harm to foreign businesses while promoting local companies. Governments from China to Iran to Burma are increasingly filtering and blocking access to media and blogs that advocate political views that the government disagrees with.[24]

The tools available for restricting access to the Internet and cross-border data flows are also becoming increasingly complex. They include blocking the backbone or access points of the web into the country and the filtering of domain names, Internet protocols or URLs. Governments also indirectly restrict access of their citizens to the

[22] Jonathan Zittrain and John Palfrey, Internet Filtering: The Politics and Mechanisms of Control", in Access Denied (eds R. Diebert, J. Palfrey, R Rohozinski, J Ziottrain) The MIT Press 2008; see also Jack Goldsmith and Tim Wu, "Who Control the Internet? Illusions of a Borderless World", Oxford University Press 2006

[23] Jack Goldsmith and Tim Wu, "Who Control the Internet? Illusions of a Borderless World", Oxford University Press 2006, p. 140

[24] Jack Goldsmith and Tim Wu, "Who Control the Internet? Illusions of a Borderless World", Oxford University Press 2006, p. 89

Internet by regulating search engines, for example by conditioning operating licenses on not posting particular material combined with stiff penalties for non-compliance.[25]

The following provides a more detailed overview of the types of government regulation and restrictions on the Internet.

Privacy and Data Protection

Ensuring adequate protection of personal electronic data across borders is a key concern of governments, which has implications for the ability to transmit and send information across borders. One issue is that countries take different approaches to protecting privacy and to exporting consumer data. For instance, Australia allows data to be exported to jurisdictions with substantially similar levels of data privacy protection.[26] In the United States, the Federal Trade Commission has developed a privacy framework which companies that collect and use data are expected to follow, combined with enforcement action for companies that fail to comply.[27]

In the EU, data protection laws prevent the export of data to countries with lower data privacy laws.[28] This law was introduced to address the different levels of data protection within the EU but also applies to the transfer of personal data to third countries.[29] Such regulations restrict the ability of third countries that the EU assesses do not have comparable levels of data protection, to provide services exports such as accounting or advertising that require the collection of personal data from EU customers.[30]

Privacy laws and their impact on international trade are now being addressed in international economic bodies. For instance, in 2005 the Asia-Pacific Economic Cooperation (APEC) adopted the APEC Privacy Framework which includes nine principles to guide the development of privacy laws in APEC economies. The APEC Privacy Framework explicitly seeks to balance between protecting private information without unduly burdening the cross-border transfer of information. This is partly achieved by focusing on whether cross-border data transfers should occur

[25]Jonathan Zittrain and John Palfrey, Internet Filtering: The Politics and Mechanisms of Control", in Access Denied (eds R. Diebert, J. Palfrey, R Rohozinski, J Ziottrain) The MIT Press 2008, p. 33

[26] The Australian Government, The Office of the Privacy Commissioner (www.privacy.gov.au/business/index.html)

[27] Federal Trade Commission Report, "Protection Consumer Privacy in an Era of Rapid Change", March 2012

[28] Directive (EC) 95/46/EC of the European Parliament and of the Council of 24 October 1995 on the Protection of individuals with regard to the processing of personal data and on the free movement of such data

[29] Directive (EC) 95/46/EC of the European Parliament and of the Council of 24 October 1995 on the Protection of individuals with regard to the processing of personal data and on the free movement of such data, Article 25

[30] Carlo Gamberale and Aaditya Mattoo, "Domestic Regulation and the Liberalization of Trade in Services," in *Development Trade and the WTO*, edited by Bernard Hoekman, Aaditya Mattoo, and Philip English, (Washington: The World Bank, 2002), p. 290.

based on the recipient's ability to protect the information rather than the adequacy of the legal system within the recipient country.[31]

Government access to personal data as part of criminal investigations or for national security reasons (see below) is another issue that affects the willingness of people to provide data online that may be necessary for commercial transactions and international trade to occur. Government access to such data is regulated differently across countries. For instance, U.S. government access to personal data is regulated by a combination of federal and state Constitutional rights to privacy and in various statutes.[32] In contrast, statutory limits on the ability of European governments to access personal data are arguably stricter than in the United States.[33]

National Security

As the Internet becomes increasingly embedded into economic life, countries are at a growing risk of cyber attacks, whether by individuals, organized criminal networks, or governments. U.S. Defense Secretary Panetta has observed that "the Internet is open. It's highly accessible, as it should be. But that also presents a new terrain for warfare. It is a battlefield of the future".[34] A 2012 attack on the Saudi Arabian State Oil Company Aramco that infected and destroyed over 30,000 computers has highlighted the threats posed by cybersecurity to a nation's critical infrastructure. Action to address these threats may require securing critical networks, identifying and addressing potential cyber threats, all of which could impact on the willingness of countries to permit certain flows of information across borders.

Political Restrictions

The Internet has also become a tool for challenging political power. For instance, popular uprisings in Tunisia, Burma, Iran, Egypt and Ukraine were facilitated by the interconnectivity made possible by the web.[35] Whether it has been videos of police brutality posted onto YouTube or digital organization through Facebook, the Internet has played a role in motivating and organizing political action.

This has led to politically motivated Internet restrictions that include blocking access to media reporting on sensitive political issues or using the Internet as a site to express political views considered harmful by the government. Such restrictions can

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[31] See Martin Abrams. "The Strategic Front: Why Should We Care About APEC Implementation" Privacy and Data Security L.J. (May 2007).

[32] See Daniel J. Solove & Paul M. Schwartz, "Privacy Law Fundamentals" (IAPP 2011)

[33] Fracesac Bignami, "European Versus American Liberty: A Comparative Privacy Analysis of Antiterrorism Data Mining", 48 Boston College Law Review 609 at 635.

[34] Remarks by Secretary Panetta on Cybersecurity to the Business Executives for National Security, New York City, October 2012

[35] Bruce Etling, Robert Faris and John Palfrey, "Political Change in the Digital Age: The Fragility of Online Organizing" SAIS Review, Sumer-Fall 2010, at 37

The challenge is how to balance twin critical objectives: the need to protect IP rights while permitting creativity, innovation and expression to flourish online.

also be applied in the name of national security, highlighting the scope for national security to justify a broad range of Internet restrictions.

Morality-based Internet Restrictions

There is a range of content on the Internet that countries find morally objectionable and attempt to block, ranging from forms of pornography to the sale of Nazi memorabilia online. Morality-based Internet restrictions can also extend to filtering all content considered inconsistent with social norms, such as gay rights, religious views and gambling. Similar to the national security exception, references to morality and social norms can be used to justify restrictions on a wide range of Internet content.

Intellectual Property Protection

The Internet has facilitated access to a vast range of content that would otherwise be inaccessible. Whether it is books that are no longer under copyright protection or in print or rare musical recording, or access to information and data consistent with IP rights, the Internet has undoubtedly increased access to content which in turn has stimulated innovation and creativity.

The Internet has also facilitated IP piracy and illegal copying of IP protected content such as music, videos and software. For instance, IP infringement in China alone is estimated to have cost US firms over $US50 billion in losses in 2009.[36] Additionally, cyber attacks targeting the trade secrets of businesses may also lead to restrictions on cross-border data flows.[37]

The challenge is how to balance twin critical objectives: the need to protect IP rights, which has become more challenging in the digital age, while permitting creativity, innovation and expression to flourish online.[38]

Commercial Restrictions

Restrictions on information flows can also be commercial in nature. Such restrictions reduce the ability of buyers and sellers to transact and companies to operate across-borders. In many cases, these restrictions are driven by the very success of foreign Internet-based companies as governments seek to replicate their successes by adopting a digital version of infant industry industrial policy by

[36] United States International Trade Commission, "China: Effects of Intellectual Property Infringement and Indigenous Innovation Policies on the U.S. Economy", Investigation No. 332-519, May 2011

[37] Administration Strategy on Mitigating the Theft of U.S. Trade Secrets, February 2013, Office of the President of the United States.

[38] In the United States, this balance is reflected in the 1998 Digital Millennium Copyright Act, which creates a safe harbor for ISPs that are unaware of hosting IP infringing content and requires its removal upon receipt of a takedown notice.The OECD has also examined the challenges of promoting effective IP enforcement and establishing appropriate limits on the liability of intermediaries - www.oecd.org/internet/innovation/48289796.pdf

protecting domestic internet enterprises from foreign competition. These commercial Internet restrictions include routing traffic to domestically-owned companies, blocking particular sites, or degrading Internet access enough that users turn to alternative and usually domestic websites.

These Internet restrictions are also frequently vague, not easily understood and are administered in an arbitrary and non-transparent manner. For instance, the foreign company may not be aware that access to its website has been blocked.[39] Foreign ISPs also are usually unaware of the criteria used by governments to determine whether to block a website. This creates risk that particular websites or Internet servers that are available one day may not be available the next, making it difficult to run an online business as sporadic or slow access to a site deters consumers, leading them to use other (often domestic) online businesses. These restrictions negatively affect sales, advertising revenues, and the scope and size of international trade.

Governments are also increasingly requiring businesses to locate data facilities within their territory. In many cases, this raises the costs of supplying services that rely on data flows such as cloud computing. Additionally, government access to locally stored data can reduce the willingness of consumers and businesses to provide personal data and use cloud computing services. In some cases this could lead the providers of data services to exit the market, leaving domestic business with access to less efficient and effective services that can reduce their ability to compete domestically and in overseas markets.[40]

Policies to Address Internet Restrictions

There are two main reasons for opposing Internet restrictions and in support of the cross-border flow of information. One is that access to information is an international human right. The second reason is that Internet access and cross-border data flows comprise and enable international trade and are therefore subject to international trade laws and norms, the main ones being non-discrimination and transparency.

Internet Access as a Human Right

Various scholars are of the view that Internet access is a human right. For example, Anupam Chander has observed that "human rights law requires that nations not only provide their citizens with free speech rights within their nation, but

[39] See US request to China for information under paragraph 4 of Article III of the WTO General Agreement on Trade in Services.

[40] Bernard Hoekman and Aaditya Mattoo, "Services Trade and Growth" World Bank Policy Research Working Paper 4461, January 2008, p 3

also the right to impart information "regardless of frontiers"".[41] Moreover, a recent survey across 13 different countries reveals that a strong majority (over 70 percent) view Internet access as a fundamental right, especially in developing countries such as South Africa and India.[42] This understanding of Internet access as a human right supports the conclusion that "comprehensive Internet filtering amounts to a violation of the broadly conceived right to freedom of expression."[43]

Governments are also beginning to adopt a similar view of Internet access as a human right. According to the OECD, "the Internet allows people to give voice to their democratic aspirations, and any policy making associated with it must promote openness and be grounded in respect for human rights and the rule of law."[44] In the US for example, President Obama's 2011 International Strategy for Cyberspace identifies includes three core principles: 1) ensuring fundamental freedoms such as freedom of expression; 2) privacy; and 3) the free flow of information.[45] Promoting Internet access as a human right has also been taken up by the US Administration. Secretary of State Hilary Clinton has stated that the ability of people to express their views on the Internet, via email, blogs or social networks is an international human right and that Internet restrictions "contravene the Universal Declaration on Human Rights, which tells us that all people have the right "to seek, receive and impart information and ideas through any media and regardless of frontiers."[46] Clinton has also described Internet restrictions as being inconsistent with the right to freedom of religion[47] - as the Internet brings people of faith together – and the freedom of assembly, where the Internet enables connections to be made in cyberspace.[48]

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[41] Anupam Chander, "International Trade and Internet Freedom" 102 Am. Soc'y Int'l Proc. 37 (2009); see also Fredrik Erixon and Hosuk Lee-Makiyama, "Digital Authoritarianism: Human Rights, Geopolitics and Commerce", ECIPE Occasional Paper No. 5/2011

[42] Soumitra Dutta, William H. Dutton and Ginette Law, "The New Internet World, A Global Perspective on Freedom of Expression, Privacy, Trust and Security Online", in The Global Information Technology Report 2010-2011, p. 9

[43] Mary Rundle and Malcolm Birdling, "Filtering and the International System: A Question of Commitment", in Access Denied (eds. R. Deibert, J. Palfrey, R. Rohozinski, J. Zittrain) The MIT Press 2008, p. 87

[44] OECD Council Recommendation on Principles for Internet Policy Making, 13 December 2011

[45] The White House, "International Strategy for Cyberspace: Prosperity, Security, and Openness in a Networked World", May 2011

[46] Speech by Secretary of State Hillary Rodham Clinton – Remarks on Internet Freedom – at The Newseum, Washington DC on January 21, 2010

[47] Speech by Secretary of State Hillary Rodham Clinton – Remarks on Internet Freedom – at The Newseum, Washington DC on January 21, 2010

[48] Speech by Secretary of State Hillary Rodham Clinton – Remarks on Internet Freedom – at The Newseum, Washington DC on January 21, 2010

Internet Access as an International Trade Issue

As discussed, the cross-border free flow of information enables international trade which can lead to increased innovation, productivity and economic growth. The United States supports the free flow of information across-borders as a means of stimulating economic growth and has expressed concern about the use by other governments of arbitrary Internet restrictions that discriminate against foreign businesses for the benefit of local businesses.[49] The President's International Strategy for Cyberspace also encourages companies to respect international standards of technology development and the protection of intellectual property rights.[50] The United States most recent FTA with Korea (discussed below) also reveals that addressing restrictions on cross-border data flows is part of U.S. trade policy.

The following outlines current trade policy and law as applied to Internet restrictions and cross-border data flows, identifies the limits and proposes reforms that would build on existing trade rules to effectively support the Internet and cross-border data flows as platforms for international trade.

International Trade Policy for the Internet Economy

The role of the Internet in international trade is usefully thought of in three stages.[51] In the first stage, access to Internet sites such as eBay, browsing online retailers like Amazon or using search engines like Google, bring together buyers and sellers. In the second stage the good or service is ordered online and in the third stage, the good or service can be physically delivered or in case of a service, provided in person or consumed online. All of these stages rely on the cross-border flow of data.

As these three stages demonstrate, the Internet allows for international trade in electronic goods and services and cross-border data flows also have important indirect effects on international trade. For instance, advertising on search engines such as Google and Bing bring together overseas buyers and sellers and is often how consumers learn of the goods and services available in other countries. Advertising is therefore often a necessary precursor to the online transaction that leads to international trade. The ability for researchers in different countries to share data and collaborate can determine whether an international services trade occurs. The Internet and cross-border flow of data is also crucial for other services that support and enable international trade, such as VoIP - internet based communications through sites such

[49] The White House, "International Strategy for Cyberspace: Prosperity, Security, and Openness in a Networked World", May 2011, p. 5

[50] The White House, "International Strategy for Cyberspace: Prosperity, Security, and Openness in a Networked World", May 2011, p. 17

[51] M. Bacchetta, P. Low, A. Mattoo, L. Schuknecht, H.W.M Wehrens, "Electronic Commerce and the Role of the WTO" World Trade Organization Special Studies 2, 1998, p. 1

as Skype and email. Cross-border data flows are also necessary for the financial transfer to complete the transaction.

Improving Internet access and cross-border data flows can be particularly important for growing developing countries' exports.[52] According to a World Bank report, access to the Internet can reduce the affect on developing countries of geographical isolation from major exports markets by 65 percent by reducing the costs of finding customers and accessing overseas markets.[53] The Internet is also an increasingly important means of overcoming a range of local barriers to international trade. For instance, the Internet is providing businesses in developing countries with access to cheaper and more reliable communications than those provided by local telecommunication services.[54] And developing country entrepreneurs are using the Internet to overcome underdeveloped banking sectors by using mobile banking services to manage their international transactions.[55] Additionally, governments can also use the Internet to address local constraints on trade. For example, placing online customs data and forms reduces the costs and delays commonly associated with moving goods through customs.[56]

The cross-border movement of data increasingly faces a range of government policies that may include Internet restrictions.

However and as outlined above, the cross-border movement of data increasingly faces a range of government policies that may include Internet restrictions. The range of reasons for government intervention, the contested nature of some of these goals and their potential impact on international trade points to the need for countries to develop international rules in this area.[57]

Making progress would require international trade rules to address two issues. The first is determining the objectives that would justify Internet restrictions. For instance, the legitimacy of actions to address child pornography or cyber crime is unlikely to be contested. In contrast, Internet restrictions applied only to foreign business are discriminatory and unjustifiable.

The second issue will be the extent that Internet restrictions are required to achieve these legitimate goals. For example, while data privacy is a common goal

[52] George R.G. Clarke and Scott J. Wallsten, "Has the Internet Increased Trade? Developed and Developing Country Evidence", 44:3 Economic Inquiry, July 2006, p. 466

[53] Andreas Lendle, Marcelo Olarreaga, Simon Schropp and Pierre-Louis Vezina, "There Goes Gravity: How eBay Reduces Trade Costs", World Bank Policy Research Paper No. 6253, October 2012, p. 3

[54] George R.G. Clarke and Scott J. Wallsten, "Has the Internet Increased Trade? Developed and Developing Country Evidence", 44:3 Economic Inquiry, July 2006, p. 466

[55] McKinsey & Company, "Online and upcoming: The Internet's impact on aspiring countries" January 2012, p. 13

[56] Ben Shepherd and John S Wilson, "Trade facilitation in ASEAN members countries: Measuring progress and assessing priorities", Journal of Asian Economics 1 (2009) p. 378

[57] Tim Wu, "The World Trade Law of Censorship and Internet Filtering", February 2006, downloaded from SSRN http://papers.ssrn.com/sol3/papers.cfm?abstract_id=882459 on 10 February 2013; see also Brian Hindley and Hosuk Lee-Makiyama, "Protectionism Online: Internet Censorship and International Trade Law", ECIPE Working Paper No. 12/2009

amongst countries, difference between how the EU and the United States protect data privacy leads to different views on the extent that restrictions on cross-border data flows are necessary. At the same time it is important to take into account that in some cases achieving legitimate policy goals can strengthen confidence in the Internet as a place to do business, thereby strengthening the Internet as a driver of international trade. For instance, an unwillingness to provide personal data due to concerns about its protection in a third country can undermine the use and effectiveness of the Internet as a commercial platform. In this regard the OECD has observed that, "building and maintaining trust in the Internet and related ICT networks must be a key policy area."[58] Therefore, where enforcement of data protection laws or addressing cybercrime strengthens confidence in online commerce, this can help underpin the Internet as a driver of international trade.[59] Reconciling these views will require developing rules that provide appropriate space for governments to achieve legitimate goals while minimizing the impact on international trade.

International Trade Law, the Internet and Cross-Border Data Flows

Developing appropriate international trade law and norms will underpin the growing links between the Internet, cross-border data flows and international trade. In this respect, the World Trade Organization (WTO) is the key multilateral organization responsible for governing world trade. The WTO includes rules that seek to facilitate online trade. A breach of these rules can be litigated before the WTO's judicial body and a finding of a breach creates an international law obligation on the offending WTO Member to bring its laws into compliance with its WTO commitments or face trade sanctions.

These WTO rules, however, were negotiated in the early 1990s as part of the Uruguay Round trade negotiations when the Internet was in its infancy and its implications for international trade were not yet well understood. As a result, WTO rules were largely designed for a world where international trade was in physical goods and services delivered in person. Moreover, the inability to complete the WTO Doha Round has meant that WTO rules have not been updated to reflect the fast changing nature of Internet-based international trade. Some of the more recent FTAs include more comprehensive ecommerce rules but these are limited by their lack of geographic coverage and the existence of different rules in these FTAs.

Additionally, the broader range of cross-border movements of data that indirectly affect international trade has yet to be a focus of trade policy or law in many countries. Though in some cases, such as the Korea-US FTA, principles on cross-border data flows have been developed and these issues are being discussed in

[58] OECD 2008, "Shaping Policies for the Future of the Internet Economy", p. 22

[59] Patricia Moloney Figliola, "Promoting Global Internet Freedom: Policy and Technology", Congressional Research Service, August 30, 2012.

the Trans Pacific Partnership negotiations – a trade negotiation involving the United States and ten other countries in the Asia Pacific region.

Developing trade law and policy to address the impact of Internet restrictions on international trade has two parts. The first part is to ensure that international trade rules as reflected in the WTO and FTAs address Internet barriers that directly affect international trade in goods and services. The second part concerns how governments regulate cross-border data flows more broadly.

International Trade Law and the Internet

The rules of the WTO govern all trade in goods and services, including international trade over the Internet. The most pertinent WTO Agreements are the GATT, which regulates trade in goods and the GATS, which covers trade in services. Under the GATT, WTO Members have agreed to bind their tariff rates. Additionally, WTO Members have agreed to provide all other WTO Members with Most Favored Nation (MFN) treatment, which requires WTO Member to not treat imports of goods from one WTO Member any less favorably than imports of like goods from another WTO Member. The National Treatment commitment is another central rule that requires WTO Members to not treat imports of goods from a WTO Member any less favorably than like domestic goods.

In terms of the GATT, some of the trade barriers to realizing the potential of the Internet for international trade effects the final stage of the transaction – the importation of the good purchased online. This includes tariffs and inefficient and costly customs procedures. Additionally, as many online transaction are of relatively low value, a low *de minimis* value at which point customs duties are applied increases costs and the time it take for consumers to receive their good. Issues pertaining to the importation of goods purchased online are not the focus of this section.

According to the WTO, services trade is the fastest growing component of world trade, with average growth of 10 percent since the mid 1990s. International trade in services is where the Internet has had the most significant impact, whether it is online music, video or software, access to professional services in health, architecture or consulting, or as a result of outsourcing by companies of back office services such as call centers and payroll processing.

The key role of services in online trade makes the GATS particularly important. Moreover, many FTA services commitments are also based on the GATS. The GATS defines services as the supply of a service: 1) from the territory of one Member into the territory of any other Member; 2) in the territory of one Member to the service consumer of any other Member; 3) by a service supplier of one Member, through commercial presence in the territory of any other Member; and 4) by a service supplier of one Member, through the presence of natural persons of a Member in the territory of any other Member.

The GATS includes two sets of rules. The first set of which the MFN commitment is the most important, applies to all services trade unless subject to reservations. The second set of rules includes the National Treatment commitment and a set of market access commitments that prohibit WTO Members from adopting various quantitative limits on service suppliers such as limits on the number and total value of services. However, these commitments only apply to those services sectors where WTO Members have specifically scheduled in the GATS a commitment to liberalize their services market.

The following outlines the key international trade issues that if addressed would support the Internet as a growing platform for international trade.

- *Expand the market access commitments for online services:* the GATS services commitments by WTO Members were negotiated in the early 1990s before the impact of the Internet on international trade was appreciated. The GATS market access commitments for online services are limited and need to be expanded.

- *Update the classification of services in WTO Members schedules:* the UN Central Product Classification (CPC) system incorporated into the WTO Services Sectoral Classification List[60] and used to classify WTO Members' GATS services commitments needs to be updated.[61] For instance, the current CPC-based GATS commitments do not include categories for new online services industries such as web search engines, mobile applications and cloud computing. This creates significant uncertainty as to the scope of Members current GATS commitments to growing areas of online international services trade.

- *Determine whether online trade is a good or a service:* there is uncertainty as to whether content downloaded over the Internet such as software, music and video and stored on a physical medium such as a disk is a good or a service and is therefore regulated under the GATS or the GATT, or both agreements.[62] This is an issue of technological neutrality – whether the application of the GATT and GATS is determined by how the product is delivered.[63] There are important legal and market access implications from treating online trade as a good or service as the GATT and GATS contain different rules and WTO Members have made different commitments under each agreement. As outlined above,

[60] WTO Services Sectoral Classification List, MTN.GNS/W/120, 10 July 1991
[61] Not all WTO Members use the CPC system. For instance, the US does not use it.
[62] Appellate Body Report, *European Communities – Regime for the Important, Sale and Distribution of Bananas*, WT/DS27/AB/R, 25 September 1997, para 221; Appellate Body Report, *Canada-Certain Measures Concerning Periodicals*, 30 July 1997, WT/DS31/AB/R, DSR 1997:1, 481, p. 17
[63] China- Measures affecting trading rights and distribution services for certain publications and audiovisual entertainment products, 2 December 2009, WT/DS363/AB/R, para 196

most GATS rules only apply to sectors where Members have made liberalizing commitments and there is uncertainty about the application of these commitments to new online services. In contrast, all GATT rules such as the MFN and National Treatment commitments apply to all goods irrespective of their tariff bindings, making it a more comprehensive set of rules for regulating online trade.

- *Clarify the application of the GATS to the delivery of services:* it remains unclear to what extent commitments under Mode 2 consumption abroad cover the electronic delivery of services. For instance, does the supply of web design services in India to consumers in the United States occur in India or the United States? Resolving this issue would clarify the relevance of GATS Mode 2 commitments for the delivery of services over the Internet. This is important because current GATS commitments tend to be more liberal for services consumed abroad.[64]

- *Use a negative list for scheduling services commitments:* the rapidly changing effects of the Internet on international trade presents particular challenges to the so-called positive list of scheduling services commitments such as is used in the GATS. Under a positive list approach, WTO Members have made market liberalizing commitments only in those sectors listed in their GATS Schedules. Under the alternative negative list approach for scheduling services commitments that have been used in various FTAs, all services sectors are covered unless specifically excluded.[65] For a dynamic and fast changing sector like the Internet economy, over time a negative list approach leads to greater trade liberalization as it automatically captures further liberalizing changes to countries laws and regulations, whereas a positive list freezes the level of commitments at the time they were negotiated and updating these rules requires further negotiations, with all the transaction costs this entails.

International Trade Law and the Flow of Information Across Borders

In addition to increasing market access for goods and services delivered over the Internet, trade rules and norms are required to address restrictions on cross-border data flows. As outlined above, there are a range of legitimate policy goals such as protecting personal data and national security that may require governments to restrict cross-border data flows. Balancing rights of market access while giving governments the space to pursue other legitimate policy goals is not a challenge that is exclusive to cross-border data flows. WTO rules already balance rights of market access for goods and services with the need for governments to restrict trade in order

[64] Aaditya Mattoo and Sacha Wunsch, "Pre-empting Protectionism in Services: The WTO and Outsourcing", World Bank Policy Research Working Paper 3237, March 2004, p. 15
[65] See for example the Chile-Australia FTA, Korea-United States FTA and the Canada-Colombia FTA

There is no commercially sound reason for rules on cross-border data flows to not also apply to their movement within a country.

to achieve a range of non-trade goals such as protection of the environment and human health. How the WTO has navigated this issue provides some guidance here.

Governments have already begun to recognize the need to find ways to manage these at times competing policy goals. For instance, the OECD Council Recommendation on Principles for Internet Policy Making 2011 recognizes that supporting the free flow of data needs to be achieved in the context of these other goals, stating that, "while promoting the free flow of information, it is also essential for government to work towards better protection of personal data, children online, intellectual property rights, and to address cyber-security."[66]

The 2011 Korea-US FTA (KORUS) is the first international treaty with binding rules on cross-border data flows.[67] However, this commitment is only hortatory as the parties need only "endeavor to refrain from imposing or maintaining unnecessary barrier to electronic information flows across borders". Moreover, the hortatory nature of this commitment stands in contrast to the right of the parties to adopt Internet restrictions consistent with the agreements legally binding exceptions provision.[68]

Building on these international trade law developments, the following outlines the key challenges that remain and proposes ways trade policy and law could address them:

- *Develop binding commitments with exceptions:* trade rules should establish cross-border data flows as a mandatory legal norm while providing sufficient policy space for governments to restrict data flows where necessary to achieve other legitimate policy goals. Such restrictions should also be designed and applied in a non-discriminatory, least trade restrictive and transparent manner.

- *Intra-Country Data Flows:* commitments on cross-border data flows should include a commitment to also not restrict intra-country data flows. There is no commercially sound reason for rules on cross-border data flows to not also apply to their movement within a country. And once data is allowed across-borders, many of the reasons for government restrictions on intra-country data flows diminish if not entirely disappear.

- *International standards:* global industry standards and interoperability criteria will underpin growth in cross-border data flows, such as the ability of users to access and use digital content across devices.[69] Governments should commit to developing international

[66] OECD Council Recommendation on Principles for Internet Policy Making, 13 December 2011, p. 6
[67] Korea-United States FTA, Article 15.8
[68] KORUS Article 23.1.2
[69] OECD Internet Economy Outlook 2012, p. 166

standards with the aim of underpinning technology development that is consistent with Internet operability.

- *Location of Data Centers:* requiring data center to be located domestically undermines the cost-effectiveness of cloud-based computing services where so-called location independence is important.[70] Under KORUS the parties have addressed this issue for the financial sector by agreeing to allow financial institutions to transfer data across their borders for data processing.[71] Governments should commit to similar rules for all cloud-based computing services.

- *Rules on transparency:* Internet restrictions on cross-border data flows are often implemented in an arbitrary and non-transparent manner. Some FTAs have sophisticated rules requiring transparency and due process, but this is yet the norm. Moreover, Internet restrictions on cross-border data flows raise specific issues that require additional commitments in the following areas:
  - A designated contact point in the government agency responsible for restrictions on cross-border information flows.
  - Provision of advanced notice of any proposed measures affecting cross-border data flows, including the reasons for the proposed restriction.
  - Opportunities for interested parties such as businesses or individuals to present their views on the proposed restriction and a requirement for written and reasoned responses.
  - Opportunities for administrative review of Internet restrictions.

- *Develop Norms on Cross-Border Data Flow:* governments should also prioritize developing norms of conduct amongst governments with respect to the Internet. In addition to the role of binding trade rules here, governments should develop principles governing access to and use of the Internet. For example, the US and Japan have agreed to Internet principles that emphasize the preservation of an open and interoperable Internet and a balanced approach to issues such as privacy and intellectual property rights so as not to impede the cross-border flow of information.[72]

- *Address the digital divide:* For businesses in developing countries, non-tariff costs such as inadequate logistics and transportation services have a significant impact on the costs of

[70] Renee Berry and Matthew Reisman, "Policy Challenges of Cross-Border Computing" 4:2 Journal of International Commerce and Economics, November 2012, p. 18
[71] KORUS Annex 13-B, Section B
[72] US-Japan Policy Cooperation Dialogue on the Internet Economy 2011

exporting.[73] As noted, increasing Internet access in developing countries can reduce costs of exporting by up to 65 percent.[74] Assisting developing countries better integrate into the global trading system should therefore include increasing Internet access and the provision of cheaper mobile devices to access the Internet.

Where to Address These Issues

Many of the issues identified above could be addressed in multilateral, regional and bilateral forum. As noted, the WTO is the key multilateral trade institution and some of these issues are being discussed as part of the Doha Round. While the WTO Doha Round remains moribund, there is momentum towards negotiating a plurilateral services agreement in Geneva amongst countries that include the United States, EU, Canada, Japan, Australia and Singapore. This effort is going to build on the WTO GATS agreement and therefore understanding the current limits to the GATS and how to improve GATS rules on Internet-based trade is important. Moreover, the current list of potential parties to a plurilateral services agreement does not include countries such as China and India where some of the largest growth in Internet-based trade will occur. For these countries, their GATS commitments will continue to be the most effective trade rules for addressing restrictions on Internet-based trade.

There are also a range of FTA negotiations where the role of the Internet on international trade is being addressed, the most significant of these being the Trans-Pacific Partnership negotiations involving the US, Canada, Mexico, Vietnam, Australia, New Zealand, Malaysia, Singapore, Brunei, Peru and Chile. The EU and Japan are commencing FTA negotiations and the upcoming US-EU FTA negotiations would be another important forum to address these issues.

In addition to seeking to negotiate rules in international trade treaties, governments supportive of minimizing restrictions on the Internet and cross-border data flows should also use forums such as APEC and the G20 to discuss these issues. The non-binding nature of these forums encourages freer and more frank discussion about the challenges and issues than might be possible in more formal trade negotiations. Moreover, the more formalized role of the business community in these forums provides an important avenue for learning about the commercial impact of restrictions on the Internet and cross-border data flows on international trade and investment.

[73] Jean-Francois Arvis, Yann Duval, Ben Shepherd and Corthip Utoktham, "Trade Costs in the Developing World 1005-2010", World Bank Policy Research Paper 6309, p. 6

[74] Andreas Lendle, Marcelo Olarreaga, Simon Schropp and Pierre-Louis Vezina, "There Goes Gravity: How eBay Reduces Trade Costs", World Bank Policy Research Paper No. 6253, October 2012, p. 19

Conclusion

The Internet is becoming a critical platform for international trade in the 21st Century. Moreover, as traders increasingly use the Internet to access markets overseas, the Internet has the potential to change how international trade is conducted. For instance, the ability to download purchases over the Internet and the development of new technologies such as additive printers that create three dimensional objects will enable businesses to overcome the transaction costs of selling goods and services overseas.

Significantly, Internet-based international trade has the potential to produce sizeable economic gains for developing country exporters as it helps them overcome some of the domestic impediments to reaching global markets, such as poor infrastructure and inefficient customs procedures.

In addition and as importantly, the cross-border flow of information is increasingly providing a vast range of economic opportunities that if realized will drive innovation, invention and productivity growth. At the same time as the significant economic potential of the Internet is beginning to be more fully realized, governments are increasingly intervening in the operation of the Internet in order to address challenges such as from cybercrime and ensuring data privacy.

Trade policy and law has been alert to the potential for e-commerce since the beginning of the WTO, but it is clear that in the early 1990s when the WTO agreements were being finalized that there was only a limited awareness of the transformative impact the Internet was going to have on international trade. International trade law as reflected in the WTO has also failed to keep up with these developments and some countries are only beginning to address these challenges in their FTAs.

The impact of the Internet and cross-border data flows on international trade calls for a more comprehensive development of trade policy and law that can underpin and support the transformative impact of Internet access and cross-border data flows on international trade while also being sensitive to the need governments might have at times to restrict Internet access where this is necessary to achieve other overriding priorities. The key challenge going forward is going to be maintaining as much as possible of the open nature of the Internet while limiting government intervention to what is necessary to address the harms associated with its use.

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