



The **E15** Initiative

## STRENGTHENING THE GLOBAL TRADE AND INVESTMENT SYSTEM FOR SUSTAINABLE DEVELOPMENT



### Addressing Barriers to Digital Trade

Usman Ahmed and Grant Aldonas

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E15 Expert Group on the  
Digital Economy

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**Think Piece**

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7 Chemin de Balexert, 1219 Geneva, Switzerland  
Tel: +41 22 917 8492 – E-mail: [ictsd@ictsd.ch](mailto:ictsd@ictsd.ch) – Website: [www.ictsd.org](http://www.ictsd.org)  
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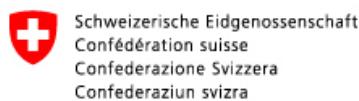
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# ABSTRACT

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Recent estimates suggest that the potential economic growth to be realized from liberalizing barriers to Internet access and digital trade across the G20 could be as much as US\$4.2 trillion, and this potential is even greater for the developing world, where a combination of growing youth-aged populations, rising incomes, and urbanization will reduce the marginal cost of extending access to a wider population in the period immediately ahead. However, realizing this opportunity will depend heavily on removing constraints that inhibit universal Internet access and preventing the emergence of new barriers to digital trade. This paper presents a survey of the mosaic of trade barriers that currently affect the Internet economy. It looks at how traditional trade issues need to be rethought in light of the Internet, suggests two new areas of trade policy that could further liberalise digital trade, and proposes a methodology for further progress in this area.

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# LIST OF ABBREVIATIONS

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Bps	Bits per second
DDA	Doha Development Agenda
EFTA	European Free Trade Association
EU	European Union
FCC	US Federal Communications Commission
GATS	General Agreement on Trade in Services
GATT	General Agreement on Tariffs and Trade
gbps	Gigabits per second
GVC	Global value chain
IADB	Inter-American Development Bank (IADB)
ICT	Information and communication technology
ITA	Information Technology Agreement
mbps	Million bits per second
Mhz	Megahertz
OECD	Organisation for Economic Co-operation and Development
P&G	Procter & Gamble
TISA	Trade in Services Agreement
TPP	Trans-Pacific Partnership
TTIP	Transatlantic Trade and Investment Partnership
UK	United Kingdom
US	United States
VAT	Value-added tax
WTO	World Trade Organization

# INTRODUCTION

The Internet economy has grown exponentially since the first Internet domain was registered in 1985. Globally, e-commerce accounts for roughly US\$8 trillion in goods and services sold.<sup>1</sup> Among G20 countries alone, the Internet contributed an estimated 4.1 percent of GDP, or US\$2.3 trillion, in 2010.<sup>2</sup> Recent estimates suggest that figure will almost double by 2016 to US\$4.2 trillion.<sup>3</sup> At that point, the Internet in the G20 economies will help to employ an additional 32 million people.<sup>4</sup>

Several factors have driven the Internet economy's growth, but the single most powerful remains the accelerating pace of innovation in information and communication technologies. When the first domain was registered in 1985, for example, a state-of-the-art Intel 80386 microprocessor held 275,000 transistors.<sup>5</sup> Less than 30 years later, Intel's Core i7 Sandy Bridge-E processor holds 2.27 billion transistors — nearly 213 times as many as its predecessor.<sup>6</sup>

Technological innovations, like the microprocessor, have contributed to the widespread adoption of the Internet by dropping the cost of access. The revolution in processing power, for example, enabled the development of mobile devices, which, by some estimates, will account for four out of five broadband connections by 2016.<sup>7</sup> The lower cost and widespread availability of smartphones and tablets as a means of access has had a particular impact on Internet adoption and the growth of e-commerce in developing countries.<sup>8</sup>

With widespread availability, the number of Internet users worldwide has risen sharply. In the United States (US), for example, the number of Internet users more than doubled from 2000 to 2012, from 95.4 million to 245.2 million or roughly 78.1 percent of the US population.<sup>9</sup> Similarly, in China, an estimated 40.1 percent of the population had access to the Internet by 2012, compared with only 1.8 percent of China's population in 2000.<sup>10</sup> Globally, there are now more than 3 billion people connected to the Internet.<sup>11</sup>

Internet access speeds have increased sharply, magnifying the Internet economy's potential. Milestones in the Internet's development from its earliest days reflect an exponential increase in Internet data transmission rates.<sup>12</sup> Moreover, as broadband speed has improved, prices have fallen.<sup>13</sup> More widespread adoption of broadband has dramatically improved the Internet's use as a vehicle for e-commerce, as well as the user's experience.<sup>14</sup>

Wider network coverage, expanding data transfer capacity, and the increasing affordability of devices and broadband connections have created opportunities for new business concepts geared directly to the Internet. One of the leading

- 1 Péllié du Rausas, M., J. Manyika, E. Hazan, J. Bughin, M. Chui, and R. Said. "Internet Matters: The Net's Sweeping Impact on Jobs, Growth and Prosperity." McKinsey & Company, 2011.
- 2 Dean, D., S. DiGrande, D. Field, A. Lundmark, J. O'Day, J. Pineda, and P. Zwilberg. "The Internet Economy in the G-20: The \$4.2 Trillion Growth Opportunity." Boston Consulting Group, 2012. The Group of 20 major economies comprises Argentina, Australia, Brazil, Canada, China, the European Union (EU), France, Germany, India, Indonesia, Italy, Japan, Mexico, Russia, Saudi Arabia, South Africa, South Korea, Turkey, the United Kingdom (UK), and the US.
- 3 Ibid.
- 4 Ibid.
- 5 Ibid.
- 6 Ibid.
- 7 Ibid. According to the OECD, the number of mobile phone subscriptions worldwide "has more than doubled since 2005 and tripled in non-OECD countries." Organisation for Economic Co-operation and Development (OECD). "Internet Economy Outlook 2012 – Highlights," 2012. ("OECD Highlights").
- 8 See ITC, Part 1 at I-12 - I-13. According to Gfk, a German market research firm, emerging markets will overtake the developed industrialized countries in smartphone purchases in 2015. Davidson, L. "Emerging markets will lead smartphone growth next year." *The Telegraph*, 2014. Gfk explained the reason for "emerging market dominance of smartphone growth" in terms of the price of devices "reaching the sweet spot of \$30 to \$50," which "brings a major population segment (earning \$2,000 to \$4,000) into the market." Ibid. Devices like Nokia's 220, available for roughly \$40, and Mozilla's ZTE Open C, available for \$20, hit that sweet spot. See Mireya Almazan, M., and E. Sitbon. "Smartphones & Mobile Money – The Next Generation of Digital Financial Inclusion." GSMA. 2014. ("Smartphones & Mobile Money").
- 9 The number of US Internet users, for example, more than doubled from 2000 to 2012, from 95.4 million to 245.2 million or roughly 78.1 percent of the US population. United States International Trade Commission. "Digital Trade in the U.S. and Global Economies, Part 1." Investigation No. 332-531, 2013
- 10 Nearly one in four (22.4 percent) of the world's Internet users are Chinese. Ibid.
- 11 Internet Matters at 1.
- 12 When ARPANET was first demonstrated in 1965, it relied on 1,200 bits per second (bps) phone circuits. ITC, Part 1 at I-8. By 1991, when the entire US Internet backbone was connected, it used lines supporting a data transmission rate of 45 million bits per second (mbps). Ibid. In March 2011, Verizon Communications began the process of upgrading its Internet backbone lines to 100 gigabits per second (gbps). Ibid. In 2012, Google Fiber introduced a broadband network in Kansas City using fiber optic communication directly to homes with up to 100 gbps connection speeds. Ibid.
- 13 OECD Highlights ("Advertised speeds of DSL and cable broadband "increased annually by 32% and 31% respectively in OECD countries over 2008-11, while prices declined by 3% and 4% respectively").
- 14 See OECD Highlights. In its third International Broadband Data Report, published in 2012, the US Federal Communications Commission (FCC) highlighted the deployment "new, faster, and more spectrally-efficient" 4G LTE mobile broadband technologies as "a driving force in customer take-up." United States Federal Communications Commission "International Comparison Requirements Pursuant to the Broadband Data Improvement Act" – Third Report," 2012. ("International Broadband Data Report") Based on analyst's estimates of US\$25-53 billion in US investment in 4G networks over the ensuing four-year period (2012-2016), the FCC suggested the trend in consumer uptake globally would continue unabated, with LTE subscribership reaching at least 400 million by 2016. Ibid.

examples involves the dramatic growth of mobile banking, particularly in Africa, where developers in Kenya are targeting M-PESA customers with money management apps that help business customers keep track of transactions and generate monthly statements.<sup>15</sup> The growth in the Internet economy has driven similar developments in a variety of other business sectors from alternative methods of sourcing investment capital by crowd funding firms, like Kickstarter and CrowdFunder, to cloud computing services that supplant the need for individually owned business infrastructure, like Amazon, Rackspace, and Salesforce.<sup>16</sup>

While new business models are undoubtedly redrawing the business landscape globally, traditional industries, according to McKinsey Global Institute, account for 75 percent or more of the value created by the Internet.<sup>17</sup> That reflects the fact that businesses were among the earliest adopters of the technology. OECD statistics indicate more than 95 percent of all companies in the majority of OECD countries are now connected to the Internet and make use of it as an integral part of their business.<sup>18</sup>

Moreover, businesses are incorporating the Internet into their operations at far deeper levels than simply using it as a means of sourcing or marketing. One particularly indicative example is Procter & Gamble's (P&G) use of crowdsourcing as a means of developing new product concepts. P&G has created an "open innovation" Web platform that allows it to collaborate with small and medium-sized enterprises, universities, and other research institutions on a global basis to drive its own innovation.<sup>19</sup> Through its platform, P&G coordinates with scientists and engineers globally to create and commercialize innovations that benefit P&G, its partners, and consumers.<sup>20</sup>

In other words, rather than being a novelty act, the Internet has become the main attraction. It is central to how markets and enterprises are organized today, and that affect will be amplified as access expands in the future.<sup>21</sup> The continuing growth of the trade in both ICT goods and services, despite the presence of significant barriers to trade, reflects a recognition by businesses and consumers that access to the Internet and its content is an essential part of remaining connected and competitive in today's global economy.<sup>22</sup>

For all that, the Internet economy remains in its infancy. The Internet's contribution to GDP remains below 4 percent even among G20 countries, although it represents upwards of 6 percent of GDP in Internet-intensive economies, like Sweden and the UK.<sup>23</sup> That leaves enormous room for growth, particularly among developing countries where adoption lags the G20.

Based on experience to date, the world welfare gain from deeper integration of the Internet into the sinews of the global economy could be enormous. The US International Trade Commission estimates that removing foreign barriers to exports by "digitally intensive industries" in the US would increase US GDP from US\$16.7 billion to US\$41.4 billion

and add measurably to US employment.<sup>24</sup> Estimates of the potential from liberalising barriers to Internet access and digital trade across the G20 suggest the opportunity it creates may be as high as US\$4.2 trillion.<sup>25</sup> Given what we know of demographics, those estimates are likely to be on the low side by a wide margin, given that most of the growth in the global economy and, as a consequence, in the Internet economy is likely to flow from the developing world, owing to a combination of growing youth-aged populations, rising incomes, and urbanization, which itself will reduce the marginal cost of extending access to a wider population.

Seizing that opportunity, however, depends heavily on removing the existing constraints inhibiting universal Internet access, while, at the same time, preventing the growth of a new generation of barriers to digital trade.

The varying nature of the constraints in different markets creates a mosaic of barriers that do not lend themselves to either easy quantification or reduction, at least in ways that marry well with conventional approaches to trade liberalization. There is no easy reference point, like tariff rates or algorithm-like gravity equations, to measure the full impact of the barriers to realizing the Internet economy's potential.

There is a need to explore new approaches both to measurement and the methodology for liberalizing the

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15 | Smartphones & Mobile Money at 7.

16 | United States International Trade Commission. "Digital Trade in the U.S. and Global Economies, Part 2," 2014. ("ITC, Part 2").

17 | Internet Matters at 1.

18 | OECD Highlights.

19 | ITC, Part 2 at 110.

20 | Ibid.

21 | A study by Oxford Economics suggests that the Internet in all its aspects – mobility, cloud computing, business intelligence, social media, etc. – has "set in motion a third wave of capitalism that will transform many aspects of the global marketplace—from consumer behavior to new business models." Oxford Economics. "The New Digital Economy – How it Will Transform Business," 2011. The study emphasizes the extent to which the shift is global, "taking place in both developed and developing economies." Ibid.

22 | The OECD's Digital Economy Outlook 2015 indicates that world exports of manufactured ICT goods grew by 6 percent per year between 2001 and 2013, reaching \$1.6 trillion at the end of that period. Organization for Economic Cooperation and Development. "OECD Digital Economy Outlook 2015," 2015. Due largely to increasing access to the Internet economy, trade in ICT services grew even faster – roughly 30 percent per year from 2001 to 2013. Ibid. Over that period, trade in ICT service increased four times to almost \$400 billion, with the share of computer and information services nearly doubling from 3.4 percent to 5.8 percent of world exports of services. Ibid.

23 | Internet Matters at 2.

24 | ITC, Part 2.

25 | Boston Consulting Group, The Internet Economy in the G-20, The \$4.2 Trillion Growth Opportunity, March 2012. <https://www.bcg.com/documents/file100409.pdf>

remaining barriers. The primary means by which the Internet affects the markets it touches is through its impact on transactions costs (i.e., the costs of participating in market-based transactions). By reducing the cost of access, search, payment, and distribution, the Internet reduces the "friction" that all market participants face in their efforts to benefit from specialisation and exchange.<sup>26</sup>

What that suggests is an alternative way of measuring progress toward the liberalisation of digital trade. The real measure – and, indeed, the target – of any effort to liberalise digital trade ought to be its effect on the friction that inhibits access.<sup>27</sup> That will require further work along the lines already under way in organisations like the World Trade Organization (WTO), the OECD, the International Telecommunications Union, and others on measuring barriers to trade.

Beyond the conventional barriers to trade in goods and services that prevent nations, particularly developing countries, from taking full advantage of the Internet and e-commerce, there are a range of novel impediments to digital trade that have arisen as the Internet has grown. Those include forced localisation barriers, inconsistent approaches to data privacy and protection, shortcomings in achieving a balanced intellectual property regime for the digital environment, legacy financial services regulations, and increasing instances of online censorship.<sup>28</sup>

This paper is a survey of the wide variety of trade barriers that currently affect the Internet economy. The paper is divided into four sections. Part 1 looks at how traditional trade issues need to be rethought in light of the Internet, dividing traditional trade issues into goods and services. Part 2 suggests two new areas of trade policy that ought to be considered in order to further liberalise digital trade. Part 3 provides a methodology for liberalising digital trade. Part 4 concludes.

## TRADITIONAL ISSUES

The growth of the Internet economy has, in many respects, blurred the lines on which the conventional dichotomy between trade in goods and trade in services was based. That divide, nonetheless, remains an important feature of the architecture of WTO agreements and all current regional and bilateral free trade arrangements, including those currently under negotiations in Asia and the Pacific and between the US and the EU. For that reason, the following discussion adopts the conventional divide between goods and services trade as a starting point for examining how traditional trade barriers inhibit the growth of the Internet economy.

## TRADE IN GOODS

Traditional barriers to trade in goods remain a significant obstacle to the progress of the Internet economy. Tariffs on devices that afford Internet access, for example, remain stubbornly high even among many G20 countries. As of 2012, for example, Mexico still maintained a 35 percent average bound tariff on information technology products, while Brazil's was 32 percent.<sup>29</sup>

Participation in the Information Technology Agreement (ITA), which represents the primary vehicle for multilateral liberalisation, remains limited. Although the original signatories accounted for the vast majority (roughly 83 percent) of trade in goods covered by the ITA, the group basically consisted of the world's then-leading economies and the "Asian Tigers."<sup>30</sup> Since then, a number of countries have joined, often as a part of the broader package of concessions they made at the time of their accession to the WTO. Of those, the most significant addition was China.

That said, even with its current membership (more than 70 members), the ITA still represents substantially less than half of the WTO membership. More significantly, the vast majority of the WTO members that do not currently participate in the ITA are developing countries, which would benefit most from

26 One powerful demonstration of that effect is the fact that trade costs matter an estimated 60 percent less for transactions on eBay than they do for offline trade. See Sidley Austin LLP, in cooperation with Prof. Marcelo Olarreaga. "Enabling Traders to Enter and Grow on the Global Stage – Story of an Online Marketplace: Opportunities also for Small Traders and Developing Countries." eBay Inc. 2012.

27 As a recent McKinsey study highlights, the "power of digitization comes especially from its marginal cost economics that reduce costs associated with access, discovery, and distribution of goods and services to nearly zero. As a result, the cost of participating in flows is lowered for individuals, small firms, and entrepreneurs." Manyika, J., J. Bughin, S. Lund, O. Nottebohm, D. Poulter, S. Jauch, and S. Ramaswamy. "Global flows in a digital age: How trade, finance, people, and data connect the world economy." McKinsey Global Institute. 2014. ("Global Flows"). Given that fact, policymakers would do well to measure the impact of their actions in terms most relevant to how the Internet economy operates (i.e., lowering transaction costs and "remov[ing] barriers to participating in global flows" and "broade[r] opportunities." Ibid.

28 ITC, Part 1.

29 World Trade Organization. "15 Years of the Information Technology Agreement: Trade, Innovation and Global Production Networks," 2012. (15 Years of the ITA).

30 The ITA's original signatories included Australia, Canada, Chinese Taipei, the European Communities, Hong Kong, China, Iceland, Indonesia, Japan, Korea, Norway, Singapore, Switzerland (including Liechtenstein), Turkey, and the US. Ministerial Declaration on Trade in Information Technology Products (Singapore, 13 December 1996) ("ITA Declaration"). The sole developing country signatory in the original group was Indonesia. The original group was supplemented by others by the time of its entry into force, including the Czech Republic, Costa Rica, Estonia, India, Israel, Macau, China, Malaysia, New Zealand, Romania, the Slovak Republic, and Thailand. Ibid. An additional four countries – El Salvador, Panama, the Philippines, and Poland – attempted to join at the time of the agreement's entry into force, but their schedules were not approved in time. Ibid. They subsequently joined within a year of the other countries. Ibid.

removing tariffs that limit access to the technology that would allow broader participation in the Internet economy and in the global economy as a whole.<sup>31</sup>

In a world in which trade increasingly takes place within global value chains, market access is defined by a firm's capacity to communicate with other links in the production process, add value through its contributions, and, increasingly, innovate in collaboration with other participants in the value chain.<sup>32</sup> Access to the Internet is fundamental to that process. Raising the cost of access (e.g., through high tariffs on essential information technology products) necessarily limits the ability of a country's firm to participate effectively in global value chains in which cost-conscious firms, rather than governments, are the gatekeepers.<sup>33</sup>

In a world dominated by global value chains, moreover, the cost of protection to the country imposing the barrier is significantly higher.<sup>34</sup> In the absence of full duty drawback, for example, which is often the case, particularly in the developing world, tariffs are cumulated when intermediate inputs cross borders multiple times.<sup>35</sup> The net effect is that a nation's tariff policy may well raise the barriers to its firms' participation far above the nominal tariff rates on imports of products covered by the ITA, thereby foreclosing any prospect of participating in the value chains that produce those goods with all that implies for a country's ability to attract investment in those areas.

Wholly apart from the relatively limited participation in the agreement, the ITA's product coverage limits its utility even for those countries that do participate. Negotiators concluded the original ITA in 1996 at the WTO ministerial in Singapore.<sup>36</sup> The first staged reduction in tariffs occurred six months later in July, 1997. Although the agreement contemplated a regular review to update the list of products covered and the first review was launched shortly after the initial tariff cuts went into effect, there has been no expansion of the product coverage in the nearly 20 years since the ITA went into effect.

What that means, as a practical matter, is that the ITA does not currently cover many of the innovations that now represent the primary means of accessing the Internet, virtually all of which were created since the original ITA went into effect.<sup>37</sup> Tellingly, ITA member countries disagree about the extent to which multifunctional products, such as cell phones that include MP3 players and GPS controllers, are covered, even when the original device that provides the platform for other functions was covered under the original ITA.<sup>38</sup>

That will change if ITA members implement changes in the ITA's coverage tentatively agreed to in July, 2015.<sup>39</sup> The proposed changes would add roughly 200 products to the scope of the agreement, including important items like new generation semiconductors and GPS navigation equipment, which represent an estimated US\$1 trillion in annual trade.

Success in the effort to expand the ITA's coverage will undoubtedly benefit the agreement's current participants.

For the remaining 90-plus WTO members, however, that success will mean they are falling behind faster in terms of participating in the Internet economy.

A joint study produced by the OECD, the WTO, and the United Nations Conference on Trade and Development (UNCTAD) for the G20 summit in St. Petersburg put it succinctly:

With the emergence of [global value chains]GVCs, the mercantilist approach that views exports as good and imports as bad, and that views market access as a concession to be granted in exchange for access to a partner's market, is even more clearly counterproductive. Domestic firms depend on reliable access to imports of world-class goods and services inputs in order to improve their productivity and their competitiveness. ...

"First movers" in liberalisation can also be the first to gain from specialisation and improve their position on international markets in downstream industries.<sup>40</sup>

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31 Ezell, S. "The Benefits of ITA Expansion for Developing Countries." Information Technology and Innovation Foundation, 2012. ("Ezell") (noting that participation in an expanded ITA would benefit developing countries in five principal ways: (1) facilitating diffusion and adoption of information and communication technology (ICT) products and services by lowering their cost, which raises productivity and economic growth; (2) attracting investment in ICT software and services industries by lowering the price of key inputs; (3) expanding exports of ICT products and services; (4) contributing to the competitiveness of developing countries manufacturers; and (5) promoting innovation in developing countries' ICT sectors).

32 Aldonas, G. "Trade Policy in a Global Age." International Centre for Trade and Sustainable Development and Inter-American Development Bank, 2013. ("Aldonas").

33 Ibid; see also Ezell at 7 ("Tariffs are particularly pernicious when applied to ICTs, hurting the nations that impose them by raising the cost of ICT goods and services, thus causing businesses (and individuals) to invest less in ICT, which lowers their productivity").

34 Organization for Economic Cooperation and Development, World Trade Organization, and the United Nations Conference on Trade and Development. "Implications of Global Value Chains for Trade, Investment, Development and Jobs – Prepared for the G-20 Leaders Summit Saint Petersburg (Russian Federation), 2013. ("OECD/WTO/UNCTAD Study").

35 Ibid.

36 ITA Declaration. The main product categories currently covered by the ITA include computers, semiconductors, semiconductor manufacturing equipment, telecommunication apparatus, data-storage media and software, and parts and accessories.

37 Ezell at 2; see also Monahan, K. 2011. "Expanding the Information Technology Agreement: New Products, New Countries." Bloomberg Government Briefing.

38 Ibid.

39 World Trade Organization. "WTO members move close to deal on ITA expansion." Press Release, July, 18 2015.

40 OECD/WTO/UNCTAD Study.

What that necessarily implies, of course, is that the "last movers" will likely find their opportunity to benefit from the Internet economy foreclosed or, at a minimum, sharply diminished. For them, progress will, presumably, depend on movement as part of a comprehensive multilateral round. That avenue, of course, remains blocked, along with the rest of the Doha Development Agenda.<sup>41</sup>

For that reason, in the absence of unilateral liberalisation, progress for most of the developing world outside the ITA is likely to be achieved through regional or bilateral agreements, if at all. There is certainly scope and precedent for that approach.

For example, as noted above, Mexico maintains a high weighted average tariff on goods otherwise covered by the ITA, but it benefits significantly from its free trade agreements with the US, Japan, the EU, and the European Free Trade Association (EFTA), among others. Under those arrangements, Mexico has removed its tariffs on goods otherwise covered by the ITA, making it a potential target of investment in those sectors despite the ostensibly high tariff it maintains vis-à-vis other WTO members. Mexico's participation in the proposed Trans-Pacific Partnership would amplify that effect further.

Moving in the context of regional or bilateral arrangements offers other benefits as well. For all participants, not just developing countries, regional arrangements currently under negotiation offer an opportunity to tackle challenging non-tariff as well as tariff barriers, including regulatory differences, with respect to goods, as well as the chance to adopt complementary liberalisations on services and investment that combine to shape the business environment in ways that can take greatest advantage of the opportunity that the Internet economy offers.

As noted above, to the extent that the goal is to reduce the transaction costs or "friction" associated with participating in the Internet economy, a more integrated approach to creating a business environment that amplifies opportunities for access makes sense. To the extent that regional or bilateral agreements offer the opportunity to move in that direction, they are likely to prove far more attractive than the WTO to developing countries that seek to be among the "first movers" in liberalising their economies in order to participate fully in the opportunity the Internet economy offers.

Digital trade is not merely the transfer of bytes across borders. McKinsey Global Institute describes the concept of a "digital wrapper" in its Global Flows white paper. The digital wrapper attaches to a physical product and enhances its ability to be traded across borders.<sup>42</sup> Moreover, the Internet of Things (affixing physical objects with Internet connectivity) is estimated to be an US\$11 trillion industry.<sup>43</sup> Goods remain the dominant product that is traded across borders, and as these physical products add in a digital component it will be essential to revisit customs policies that were written for an analogue world.

The Internet provides businesses of all sizes instant access to consumers around the world, but that access can be tempered owing to complexities in logistics. E-Commerce Europe conducted a survey of European e-commerce businesses, and 44 percent of respondents reported that logistics and distribution are the most difficult barriers to selling across borders.<sup>44</sup>

Simplifying customs processes by increasing de minimis thresholds – the level below which imports are not subject to customs duties – would ease barriers for businesses of all sizes. De minimis thresholds vary tremendously around the world. They can be as low as US\$ 0.30 and as high as US\$1,000.

These import thresholds affect consumers of cross-border products, because when a product is valued above the threshold, it is the consumers who are responsible for filing out customs paperwork and paying duties. Moreover, these import thresholds affect businesses when they want to offer returns on their products, as returns are often treated as imports and are subject to forms and duties, with duty drawback procedures that are onerous particularly for smaller businesses.

The US Customs Reauthorization Act proposes to raise the US de minimis threshold from US\$200 to US\$800.<sup>45</sup> The US\$800 threshold is a reasonable mark that other countries should use for harmonisation. Creating such a harmonized standard would enhance the ability of smaller firms to trade individual products across borders and would simplify the process greatly for businesses and consumers.

Customs processes can also be made more efficient through increased adoption of technology. Many countries still use antiquated paper forms and physical submission systems. The WTO Trade Facilitation Agreement requires countries to post all customs regulations online.<sup>46</sup> The next step forward would

41 The agreement on trade facilitation reached this past year represented the first material progress on the Doha Development Agenda (DDA) in more than a decade of negotiations. Significantly, the impetus behind that agreement was much like the force that impels the search for mechanisms to reduce barriers to digital trade. Both are driven by the opportunity that removing obstacles and facilitating trade would create. The price of the trade facilitation agreement, however, helps explain why the WTO offers little prospect for a multilateral agreement on digital trade. In the event, India sought a substantial exemption from existing disciplines on agriculture. That further complicates the negotiators' task of reaching an agreement on liberalisation in the agricultural sector generally. Developing countries have demanded progress on agriculture as a condition of concluding the remainder of the Doha agenda. The price paid for the trade facilitation agreement may well make that impossible.

42 McKinsey Global Institute, Global Flows Report, April 2014.

43 McKinsey Global Institute, *Unlocking the Potential of the Internet of Things*, June 2015.

44 Ecommerce News. "Ecommerce Europe wants to improve parcel delivery market," April 23, 2015.

45 Trade Facilitation and Enforcement Act of 2015 Sec 601 (a).

46 World Trade Organization, Agreement on Trade Facilitation WT/L/931 (July 15, 2014)

be to require customs agencies to accept digital submission of customs forms.

Smaller Internet-enabled businesses tend to use postal services to send their physical products across borders as a cost-saving mechanism. Unfortunately, international postal regimes suffer from differences in basic processes as well as technological toolkits. Addressing systems are different, physical forms require divergent pieces of information, and cross-border tracking can be difficult. Simplification and harmonisation of global postal policy regulation, as well as increases in technological investment can greatly enhance cross-border trade by entrepreneurs using the Internet. Harmonisation through the Universal Postal Union is the most effective method for enhancing the efficiency of the global postal system.

Customs and postal issues, while squarely analogue in nature, have tremendous implications for the digital economy. Enhancing and harmonising these policies could have a tremendous positive impact on digital trade. Significantly, while the recent WTO agreement on trade facilitation represents a significant step forward in terms of customs administration as conventionally conceived, it does not address the issues outline above even within the sphere of customs authorities, much less postal administrations.<sup>47</sup> Addressing those issues constructively will require a further step toward liberalisation with the aim of expanding the Internet economy's ability to contribute to the growth in trade as its primary objective.

## TRADE IN SERVICES

The Internet enables a wide variety of services to be transmitted across borders more efficiently. The General Agreement on Trade in Services (GATS) contains national treatment and most-favoured nation obligations for services, but is based on a positive list model, meaning that it binds nations only to those sectors they have positively identified. Simply expanding GATS member's commitments would not address the fact that many of the services that make up the Internet economy simply did not exist at the time the GATS was formulated. Progress on a multilateral front would require a broad expansion of the services covered by the arrangement. The relative novelty of the services that make up the Internet economy, particularly those at its cutting edge that hold great promise in terms of expanding access to the benefits that the Internet economy creates, add complexity to negotiations.

The two areas where services liberalisation would facilitate digital trade most — telecommunications and financial services — illustrate the challenge. The telecommunications portion of the GATS was negotiated at a time when public utilities still provided the backbone of most basic telephony around the world. The focus of the negotiations basically involved a means of ensuring that existing telecommunications firms could bid to provide services in

narrow (but growing) slices where competition with the public monopoly was allowed or could bid on contracts to provide services to the public monopoly, such as long distance carriage, etc. Without deprecating the value of those commitments, which remain relevant today, that accord was plainly focused on those parts of the sector where only existing, very larger firms could play.<sup>48</sup> The structure of the agreement and its focus reflects that. But, that does not offer a paradigm that is at all consistent with the issues associated with broadband telephony.

Widespread availability of high-speed, or broadband, Internet access is a necessary precondition of expanding digital trade.<sup>49</sup> The inability to access adequate spectrum or install fixed lines capable of broadband streaming speeds represents a binding constraint on the growth of digital trade.<sup>50</sup> That implies a need to build the infrastructure to ensure availability and encourage adoption, particularly in the developing world.

For example, Latin America lags other regions in terms of fixed broadband by a significant margin. According to a recent study by the Inter-American Development Bank, while "European countries have an average of 30 installed broadband lines for every 100 people," Latin America and the Caribbean, "have about a third of that."<sup>51</sup> As is true elsewhere, the lack of fixed broadband lines has driven the growth in mobile broadband,

<sup>47</sup> See World Trade Organization, Agreement on Trade Facilitation, Draft Ministerial Decision, Ministerial Conference Ninth Session, Bali, 3-6 December 2013.

<sup>48</sup> According to the WTO, "108 WTO members have made commitments to facilitate trade in telecommunications services" in one form or another, including with respect to the "establishment of new telecoms companies, foreign direct investment in existing companies and cross-border transmission of telecoms services." World Trade Organization. "Services: Sector by Sector – Telecommunications Services, 2015." [https://www.wto.org/english/tratop\\_e/serv\\_e/telecom\\_e/telecom\\_e.htm](https://www.wto.org/english/tratop_e/serv_e/telecom_e/telecom_e.htm). Within that group, "99 members have committed to extend competition in basic telecommunications (e.g. fixed and mobile telephony, real-time data transmission, and the sale of leased-circuit capacity)" and an additional 82 members "have committed to the regulatory principles" that reflect "best practices" in telecommunications regulation. Ibid.

<sup>49</sup> See, e.g., Organisation for Economic Cooperation and Development. "Summary of the Chair of the Meeting, OECD High Level Meeting, The Internet Economy: Generating Innovation and Growth, 28-29 June 2011." (Observing that "[t]he availability of passive infrastructure (such as towers and cable ducts) is a key element in enabling the expansion of broadband infrastructure, particularly for new entrants" and that "[i]ncreased use of high-speed wireless broadband technologies will help improve access to broadband, but this will only be achieved if appropriate and sufficient spectrum is made available and the prices and terms of use for wireless services are competitive with other technologies".)

<sup>50</sup> Ibid.

<sup>51</sup> Inter-American Development Bank (IADB). "Bridging Gaps, Building Opportunity: Broadband as a Catalyst of economic Growth and Social Progress in Latin America and the Caribbean – A View from Industry," 2012. The averages cited in the IADB's report, in part, mask the actual challenge the region confronts in terms of infrastructure. For example, Barbados, Uruguay, and Trinidad and Tobago have very high fixed line penetration – basically on par with Europe and North America. But, "others like Haiti, Paraguay and Nicaragua rank very low on a global scale, with fewer than one or two lines per 100 inhabitants." Ibid.

where a greater number of market participants have increased competition and driven costs down.<sup>52</sup> Yet, even in mobile markets, the need for investment in infrastructure remains high.

Recognizing that fact, both governments and international institutions have pressed for the development of national broadband plans that establish priorities, particularly with respect to infrastructure development. Perhaps unsurprisingly, the most forward-leaning of those plans come from member countries of the OECD.<sup>53</sup>

But, there are significant examples of innovative approaches outside the OECD as well. Brazil, for example, has adopted a sectoral approach to "enhancing infrastructure, fostering the ICT industry, ensuring availability and affordability for underserved populations and connecting public institutions."<sup>54</sup> Brazil's strategy includes a particular focus on investment in infrastructure, including an ambitious programme designed to expand its fibre network to Brazil's interior, installation of submarine cables, and the construction of a South American optical fibre ring.<sup>55</sup> Four years after the plan's launch, Brazil has made substantial progress in expanding the availability of both fixed and mobile broadband, but the lack of fixed broadband infrastructure and full mobile broadband coverage remains a significant barrier to adoption.

While the lack of infrastructure plainly remains a barrier to digital trade, the question is how trade policy might contribute to a solution. There are, in fact, a number of ways. Some build on core elements of the existing trade regime and others represent more cutting-edge approaches.

In terms of the conventional trade policy approaches, perhaps the most significant would involve expanding participation in existing WTO agreements on government procurement, trade in information technology goods, and competition in telecommunications services.

The WTO Agreement on Government Procurement is designed to ensure that the competition for government contracts is open, fair, and transparent. The agreement builds on the core WTO principles of non-discrimination (i.e., most favoured nation and national treatment obligations) by adding rules that ensure competitive and open bidding on all procurements covered by the participating countries' schedules.

The other challenge that the need for infrastructure investment poses in trade policy terms relates to the definition of "trade policy" itself. Like many other aspects of economic policy, the Internet economy is disruptive in this respect as well. Given that much of what defines adequate "infrastructure" in the context of mobile broadband relates to the availability and the allocation of spectrum, both domestic and international institutions involved in that process necessarily affect what trade policy officials would think of as "market access." Misaligned spectrum policies, even in relatively advanced economies, like the US, may yet prove to be the ultimate constraint on the Internet economy's growth in those markets.

That points to the need to examine the extent to which the objectives of institutions, like the International Telecommunications Union and its World Radiocommunication Conference, as well as the rules governing spectrum allocation domestically, are fully aligned with the goal of expanding access to the Internet economy. It also points to the need to examine those institutions and rules from the perspective of whether they embody and, indeed, amplify the effect of the basic rules of non-discrimination that have proved successful in a conventional trade context.

The same situation hampering telecommunications trade policy prevails in the case of financial services. At the time the Uruguay Round was launched, banking and financial services were mostly conducted on paper by large institutions. There has been considerable liberalisation in financial services in many countries since the 1990s, largely driven by the prolonged developing debt crisis. Yet, the core function of the WTO agreement on financial services has not differed materially from the framework that was on the table at the end of the Uruguay Round itself. To the extent it liberalised trade in financial services, it did so in traditional sectors of the banking business and in highly conventional ways.

The landscape for financial services has been complicated since 1994 by regulation and innovation. Countries have taken a variety of regulatory approaches in an effort to address what were perceived as the sources of the 2008 financial crisis. While there was convergence on certain aspects of the response to the crisis, such as negotiations with the Bank for International Settlements on capital adequacy standards, the regulatory architecture is different in the US and the EU – which remain home to the largest and most

<sup>52</sup> Competition in Latin American mobile broadband markets is far more robust than among fixed line providers. As a consequence, service tariffs have been cut in half in just the last three years. Smartphones & Mobile Money at 4. Competition has driven innovation as well, with the mobile industry investing in 3G and 4G networks and introducing innovative pricing models such as "Sachet" data tariffs that allow prepaid users to consume data on a "pay-as-you-go" basis, which better suits the needs of lower-income consumers. Ibid.

<sup>53</sup> Sweden, for example, has promoted a national digital strategy – "ICT for Everyone – a Digital agenda for Sweden" – that aims to provide 90 percent of Swedish households and businesses with broadband at a minimum speed of 100 mbps by 2020. Organisation for Economic Cooperation and Development. "OECD Digital Economy Outlook 2015," 2015. Similarly, Portugal's 2012 "agenda Portugal Digital" seeks to build broadband infrastructure to provide access for all Portuguese citizens at speeds equal to or more than 30 mbps by 2020. Ibid. Toward that end, the Portuguese government has "launched five public tenders for the deployment of high-speed networks in rural areas, involving 139 municipalities covering more than 1 million people and investments worth Euro 156 million." Ibid. For its part, the US national broadband plan, "Connecting America," sets "an ambitious goal of providing at least 100 million homes with affordable access to actual download speeds of minimum 100 mbps and actual upload speeds of minimum 50 mbps by 2020." Ibid. Significantly, it also recommends that 500 megahertz (mhz) of additional spectrum be made available for broadband use by 2020. Ibid.

<sup>54</sup> Ibid.

<sup>55</sup> Ibid.

advanced financial services markets in the global economy. Moreover, the rise of non-bank financial technology (FinTech) businesses has posed additional complexities. These entities are powering positive innovation in finance in payments, but they are sometimes lumped in with banks from a regulatory perspective, thus hampering their ability to truly revolutionise financial services.

To the extent there has been any movement on services within the WTO in recent years, it has come in the form of US and Australian-led effort to launch a plurilateral negotiation on services that builds, at least in form, on the success of the ITA with respect to goods. Negotiations on a proposed Trade in Services Agreement (TISA) have expanded to 52 participants representing 70 percent of the world's trade in services.<sup>56</sup> Significantly, the TISA negotiations address barriers directly relevant to the Internet, including limits on the movement of data across borders, lack of transparency, and the need for due process of law, and forced local ownership. But, there has been no breakthrough that would suggest that a final agreement is imminent.

The problem with either of those scenarios from the perspective of the Internet economy's growth is demographics. While incredibly important for the future of the Internet economy in terms of the principles they will establish, the participating countries do not represent the economies that represent the future growth of the Internet economy and would, simultaneously, benefit most from expanded access.

Some observers argue that the rapid rise of the Internet economy is the result of limited government interaction and regulatory oversight.<sup>57</sup> This narrative, however, misses the fact that very conscious regulatory choices have been made throughout the rise of the Internet that have led to its ubiquity and success.

In the US, for example, a series of deliberate regulatory choices led to the rise of the modern Internet. The National Science Foundation decommissioned its network in 1995, which opened up networking to private competition.<sup>58</sup> The Communications Decency Act of 1996 exempted intermediaries (i.e., Prodigy or eBay) for the speech of their users.<sup>59</sup> The Digital Millennium Copyright Act of 1998 created a safe harbour for intermediaries for copyright violations when they are made aware of the unlawful content of their users and they take it down.<sup>60</sup> Finally, the FCC drafted four principles of an open Internet in 2005 and then adopted "Open Internet Rules" in 2010 and again in 2015, which prohibited network providers from blocking or discriminating against content flowing across the Internet.<sup>61</sup> In other words, regulatory and legislative actors in the US made a series of deliberate policy choices; and these choices have led to the open network that we all enjoy today.

Unfortunately, many of the choices made at the national level have not been replicated at the international level. Some countries seek to maintain regulatory control of the network layer of the Internet.<sup>62</sup> Other countries hold intermediaries

liable for the speech and intellectual property violations of their users.<sup>63</sup> Finally, several countries without net neutrality laws are witnesses to tie-ups between content and network providers in an effort to close out competition.<sup>64</sup>

Trade policy has done little to harmonise national regulations that touch on the Internet ecosystem. The GATS was negotiated before the rise of the modern Internet. The Agreement on Basic Telecommunications Services does contain positive language on competition and interconnection between telecommunications companies, but this language has never been applied in the Internet context.<sup>65</sup> The US has included language on intermediary liability in the intellectual property context as part of several bilateral free trade agreements.<sup>66</sup> The US-Korea Free Trade Agreement includes language on "open access" that mirrors some of the language from the Open Internet Rules.<sup>67</sup>

Much more needs to be done to foster regulatory harmonisation in relation to Internet policy. Trade policymakers need to make careful choices in the regulatory space that recognise the unique benefits of the Internet, while best protecting the rights of citizens. The Internet is a truly global network, and the patchwork of national regulations that govern the Internet threaten to limit the Internet's benefits.

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56 As of July 2015, participants in the TISA include Australia, Canada, Chile, Chinese Taipei (Taiwan), Colombia, Costa Rica, the 28 members of the EU, Hong Kong, China, Iceland, Israel, Japan, Liechtenstein, Mauritius, Mexico, New Zealand, Norway, Pakistan, Panama, Paraguay, Peru, Republic of Korea, Switzerland, Turkey, the US, and Uruguay.

57 Ex. Jeffrey Eisenach, A Good News Story: The Internet, American Enterprise Institute, May 31, 2013.

58 National Science Foundation, A Brief History of NSF and the Internet [https://www.nsf.gov/news/special\\_reports/cyber/internet.jsp](https://www.nsf.gov/news/special_reports/cyber/internet.jsp)

59 Gentry v. eBay Inc., 121 Cal. Rptr. 2d 703 (Cal. Ct. App. 2003)

60 Public Law 105-304 Digital Millennium Copyright Act, Oct. 28, 1998.

61 Open Internet FCC-15-24A1

62 Gallagher, Sean. "A handy cheat sheet for North Korea's private "Internet." *Ars Technica*, July 20, 2015.

63 Scott, Mark. "Estonian News Site Can be Held Liable for Defamatory Comments, Court Rules," *New York Times*, June 17, 2015.; Sommers, Mark and Naresh Kilaru, ECJ Issues L'Oreal v. eBay Ruling: Online Marketplaces Can Be Liable for Counterfeit Goods, *Finnegan*, Sept/Oct 2011.

64 Talbot, David. "Around the World, Net Neutrality Is Not a Reality," *MIT Technology Review*. January 20, 2014.

65 Wu, Tim. The World Trade Law of Censorship and Internet Filtering, 7 *Chi. J. Int'l.* 263, 2006.

66 Ex. US-Korea Free Trade Agreement Chapter 18.10.30, 2007.

67 Id. at 15.7

# NEW TRADE ISSUES

As noted above, in the trade policy arena, the growth of the Internet economy has blurred traditional dividing lines, such as the distinction between trade in goods and services. It has had the same effect beyond the trade arena. It has, in fact, largely erased the distinction between what we have conventionally thought of as the separate realms of domestic and international economic policy.

The rise of a new generation of trade barriers inhibiting the growth of the Internet economy reflects that fact. They have emerged in a number of areas conventionally considered to be the preserve of domestic policy and domestic regulation. The following discussion highlights how “domestic” policy choices in one area — taxation — can, at times unthinkingly, undermine the economic benefits the Internet economy might otherwise deliver.

By the same token, there are other areas of “domestic” policy that can contribute powerfully to the growth of the Internet economy and the liberalisation of trade that its growth implies. The discussion below addresses the role that education and other initiatives designed to encourage uptake among both producers and consumers can play in that effort.

## TAXATION

The power to tax is, unsurprisingly, a sensitive issue in that it represents one of the basic emoluments of state sovereignty. What is more, in the area of taxation, there is no equivalent of the WTO that establishes normative standards of treatment. The closest equivalents are model conventions and principles articulated by the OECD and UNCTAD. But, those conventions and the principles they embody are negotiated on a bilateral basis with significant variations.

The very nature of digital trade complicates the picture further. The delivery of an e-book or the download of streaming music does not fit conveniently with tax concepts regarding the source of income or “home” and “destination” countries in terms of transactions and investment that were designed for the brick and mortar world. Indeed, at a still more basic level, the Internet economy has fundamentally altered the basis of competition in the global economy, which depends as much on the ability to fit within a value chain and collaborate with the other links as it does on price, which raises serious challenges to the application of basic concepts like the arm’s length standard in transfer pricing.<sup>68</sup> For those reasons, sorting out how the rules of taxation should apply to online transactions has proved difficult even within markets like the US with highly elaborate tax systems at both the federal and state level.

Not unlike the situation with respect to trade in services discussed above, the challenges that the Internet economy presents to current tax systems and international tax cooperation has been exacerbated by the response to the 2008 financial crisis. At the same time that tax officials are grappling with how their existing rules should apply to the taxation of digital transactions, finance ministries are vigorously trying to expand their tax base to close budgetary gaps created by deficit spending adopted in response to the crisis. The need for revenue, rather than a calculus of which tax principles would best foster wider access to the Internet economy, is driving the debate.

The best evidence of that fact is the ongoing OECD initiative on “base erosion and profit shifting” (BEPS), which began as an effort to close certain narrow gaps in the international framework as a means of foreclosing tax avoidance but has metastasized into a negotiation over the fundamental rules of international taxation with serious implications for the expansion of the Internet economy.

The problem is that neither tax nor trade policy officials have come to grips with the fundamental problem that the Internet economy — and globalization more generally — poses for the existing international architecture in both fields. What the Internet economy represents economically is a means of increasing specialisation and expanding the gains from trade in the process, all of which contributes to the innovation that drives economic growth. While that is quintessentially what the trading system’s rules are designed to reinforce, they do not yet provide an adequate framework — much less a robust set of principles — that would inhibit encroachment from either a tax or regulatory perspective. The challenges posed by data localisation and other restraints on cross-border data flows reflect that fact.

The urgency of establishing norms in the trading system that contain risks to the Internet economy from outdated tax principles is made more dramatic for one reason. The application of those principles increasingly involves a direct tax on the gains from trade that the trading system is supposed to foster. In fact, a number of basic tax principles already conflict with WTO rules.<sup>69</sup> Recent efforts by WTO member countries

<sup>68</sup> See, Aldonas, *supra*.

<sup>69</sup> One example involves the methods tax officials use to calculate transfer prices for tax purposes, all of which run contrary to the methodology for calculating transfer prices on goods for customs purposes under Article VII of GATT 1994 and the WTO agreement on customs valuation. Another involves the application of varying withholding taxes on income or value added taxes that countries apply as a means of enforcing their tax rules on foreign providers of goods and services that otherwise lack a tax presence that would allow the country to apply its normal tax rules (i.e., the firms lie beyond the reach of both the nation’s prescriptive and enforcement jurisdiction under customary principles of international law). A third example arises when nations use one aspect of their tax laws, such as value-added taxes, to compel a firm to reorganize its operations in ways that would artificially create a tax presence within the country and oblige the firm to pay tax on income that was actually generated by economic activities undertaken abroad, which conflicts with the basic guarantee of national treatment under Article III of GATT 1994, among other WTO rules.

to use tax laws as a means of buffering their economies and their fiscal bases from global competition for capital investment and the expanded trade the Internet economy enables will exacerbate those conflicts.

The time has come to negotiate an updated framework on the taxation of digital trade. The starting point for that negotiation should be a standstill agreement that affirms the principles of non-discrimination that underpin the WTO trading system as a whole and otherwise inhibit the introduction of new or amended tax measures applicable to digital trade in goods and services until rules governing their application can be established through negotiation. Any agreement on taxation should also adopt the principle of technological neutrality and avoid singling out Internet technology for special tax treatment.

Given the lack of progress within the WTO generally, it is far more likely that such an accord would be negotiated as part of a regional or bilateral arrangement. It is not currently part of the Trans-Pacific Partnership (TPP), which is nearing conclusion, but it could be made a part of the Transatlantic Trade and Investment Partnership (TTIP) negotiations, which would cover the vast majority of OECD countries. The OECD could, likewise, provide a platform, given the depth of its experience on tax issues, but its role in the BEPS initiative would complicate its ability to serve as a neutral forum for such a discussion. UNCTAD has often provided a useful viewpoint on a variety of international economic issues from a developing country perspective, but has never proved a particularly useful forum for negotiations of either principles or their practical implementation.

This suggests that the tax area would benefit most from the creation of an ad hoc group that takes the opportunity the Internet economy creates as its intellectual starting point and then begins to articulate principles of taxation grounded in the non-discrimination and technological neutrality principles on which much of the existing trade regime has been built. That may prove the only way governments might be invited to look beyond legacy tax systems and the challenges they present to the expansion of digital trade and think, instead, in terms approaches to taxation that are designed expressly with expanding access to the Internet economy in mind.

## EDUCATION

Diego Comin, Professor of Economics at Dartmouth University, is an expert on the topic of technology diffusion. Comin argues that over the past 200 years, the time lag in technological adoption between developed and developing countries has narrowed; in other words, technology is diffusing to the developing world faster than ever before.<sup>70</sup> Comin also finds, however, that there remains a large gap in the intensity of technology use between developed and developing countries; in other words, developing countries are not using, and benefiting from, technology to the same extent as developed

nations. Comin postulates that educating students and traditional sectors on how they can leverage technologies is key to seeing productivity gains from technology.

Comin's findings about knowledge may not be merely limited to developing countries. For example, the Canadian Chamber of Commerce found in a survey of small businesses that, while 96 percent of these companies had websites used for business purposes, only 27 percent were able to accept online payments.<sup>71</sup> Businesses around the world are largely unaware of the most recent technological tools.

Governments have a role to play in creating an ecosystem that encourages technological education. There are multiple segments of government that can help improve the use of technology in business. Departments of education can help to tie technological learning into not only science, engineering, and math disciplines, but also into social sciences and business, which could greatly help to improve technological adoption throughout industry sectors. Departments of Commerce have a role to play in education for traditional sectors. Finance Departments can help to increase access to capital for entrepreneurs and businesses that are leveraging technology. Finally, trade policymakers can play a role by recognizing the value of technology to trade in trade agreements.

Broad-based knowledge is often generated through a network effect model. The more people that know about something the more knowledge diffuses. Technological tools are essential for modern business. Policymakers must ensure that businesses are made aware of, and are encouraged to use, the most recent technological tools to enhance their businesses.

70 Comin, Diego. The Evolution of Technology Diffusion and the Great Divergence, Brookings Blum Roundtable, Aug 8, 2014.

71 The Canadian Chamber of Commerce, Power up the Network: A Report on Small Businesses Use of E-business solution in Canada, Feb. 2010.

# METHODOLOGY FOR LIBERALISATION

The first and most important question trade policy officials must confront when thinking in terms of a methodology for liberalising digital trade is whether any effort would violate the Hippocratic Oath, which is, first, do no harm. On the one hand, it is abundantly clear that both the expansion of digital trade and access to the Internet economy would be enhanced by liberalisation on a broad front that embraced each of the specific areas and barriers discussed above. On the other hand, the nature of the negotiating process invariably involves a compromise, and the interests represented at the negotiating table are often those that seek to retard the process of liberalisation, rather than enhance it.

As is true of trade policy generally, what trade policy officials confront with respect to digital trade and expanding access to the Internet economy is a collective action problem. Those interests that have organized themselves around specific benefits they derive from existing trade rules (e.g., permissive rules with respect to agricultural quotas and subsidies) invariably resist any change, while those who would benefit most from change are too diffuse and the costs of organizing too high to offset the opposition to change posed by entrenched interests.

Significantly, technology itself has altered the equation that has long governed such collective action problems. By dramatically dropping the cost of organizing, technology has reduced one of the factors inhibiting those who would benefit from change from challenging the status quo. But, thus far, the ability to use technology in that manner has been wielded mainly to prevent certain actions (the Stop Online Piracy Act confrontation in the US Congress is a prime example). Technology has yet to be used to galvanize any group in support of further liberalisation across a broad front, such as an agreement on digital trade and access to the Internet economy would require.

Given that circumstance, trade policy officials have to consider whether they can create a coalition of interests sufficiently vested in liberalisation to offset the resistance that a broad liberalising agreement will inevitably face. Entering into a negotiation without that coalition would likely yield an arrangement designed to protect existing entrenched interests, rather than foster liberalisation and access to the Internet economy.

In a number of respects, the tortured progress toward an agreement on trade facilitation serves as a warning as well as a useful proxy for the likely difficulty of negotiating multilateral liberalisation on barriers inhibiting Internet access

and expanded e-commerce. Given the nature of the emerging global economy, the benefits of trade facilitation were clearly identified. Not unlike the case of digital trade, there was widespread recognition of the benefit of reducing the friction that transactions costs introduce.

Yet, in the event, the negotiations were impeded by a variety of factors and interests that used the opportunity that possible progress on an agreement on trade facilitation represented to vindicate their own interests on issues that were entirely unrelated to trade facilitation. That certainly was the case for most of the decade during which lack of progress on the DDA as a whole inhibited progress toward an agreement on trade facilitation, the core elements of which were actually agreed to in advance of the ministerial that launched the Doha Round.

But, still more poignantly, at the final hour, India objected to what was otherwise a consensus of all other WTO members to proceed in order to exempt itself from the already loose rules regarding agricultural trade. In the end, the price of liberalisation on trade facilitation, despite its obvious value and manifest benefits, was a significant expansion in trade restrictive measures elsewhere.

If trade policy officials are convinced that a positivist approach to liberalising barriers to the growth of digital trade is worth the investment of time and energy and would not result in backsliding elsewhere, they will then have to confront a choice of forum. The natural candidate for the broadest possible liberalisation of the barriers to digital trade on a multilateral basis is, of course, the WTO, which is also the institution seemingly least capable of producing an agreement liberalising trade without paying a significant price in terms of concessions to entrenched interests opposed to both liberalisation and the competition that technological change has wrought.

The practical problem with the WTO, as opposed to the political problem, lies in the focus of its current agenda. Despite the successes of the intervening 70 years, the trading system and the WTO, in particular, remains focused on removing barriers to trade that were introduced in the inter-war period of the first half of the 20th century. The bulk of the DDA, for example, focuses on removing the remaining tariff peaks that inhibit trade in goods and introducing real commitments on the liberalisation of agricultural trade for the first time in the organisation's history dating back to the creation of the General Agreement on Tariffs and Trade (GATT) in 1948.

While the Uruguay Round did mark a significant advance in the scope of the trade rules to services, intellectual property rights, and (tangentially) investment, the commitments in those areas are, as the discussion above reflects, limited both in terms of the countries involved and the depth of liberalisation. Regional and bilateral agreements have gone further; yet, even there, they do not add up to agreements that advance the interests of the Internet economy as a whole.

Perhaps the best indicator of that fact is the agreements' lack of any broad treatment of competition policy, which is what the liberalisation of the Internet economy should entail. Liberalising digital trade should start with a rule regarding non-discrimination that extends beyond the norms of Article III of GATT 1994, for example, and builds, instead, from the broader conception of openness represented by the Commerce Clause of the US Constitution or Article 85 of the Treaty of Rome, which forms the foundation on which the single European market is built.<sup>72</sup> Using that as a starting point, the aspiration should be to create a "common commercial environment" for the Internet economy that is designed to facilitate access. As in the case of trade rules generally, the aim should, in every instance, be to enhance consumer welfare, which is what openness, competition, and innovation do.

Unfortunately, the prospect of pursuing such an agreement within the WTO is non-existent. As the discussion above suggests, the best venues for terms of trade negotiations are the regional or bilateral alternatives that universally lie outside the structure of the WTO. At least superficially, the advance of the TPP negotiations, the explosive growth of bilateral free trade agreements, and the launch of the TTIP negotiations suggest that the regional or bilateral approach offers the opportunity for progress that the WTO does not.

Wholly apart from the greater prospect of progress, the value of the regional or bilateral approach lies is the possibility of achieving a more integrated approach to liberalising trade in goods, services, investment, and ideas in ways that would enhance the Internet economy. Such agreements often serve as laboratories from which new approaches to trade policy challenges emerge.

Negotiations to date, however, including the TPP and the TTIP, fail to do that in the context of the Internet economy. At most, they have been forced to confront emerging issues, like privacy and security, but have treated those issues on a "one-off" basis, rather than adopting a more integrated approach to moving on a broad front to open access to the Internet economy.

One model that takes place within an existing regional free-trade agreement offers an outline of what a broader initiative might entail. That involves the EU's Digital Single Market Strategy, proposed in May, 2015. The strategy builds on three solid pillars that would serve as a foundation for a broader global initiative: (1) providing better access for consumers and businesses to digital goods and services; (2) creating the right conditions and a level playing field for digital networks and innovative services to flourish; (3) maximizing the growth potential of the digital economy. In addition, the areas that the European strategy targets for action include many of those that should be a part of any broader initiative designed to liberalise digital trade.

Without necessarily acceding to the uniquely European perspective that informs the Commission's approach to the individual items on its action list, any initiative should examine the areas it identifies, such as:

- Facilitating the adoption and integration of new technologies;
- Ensuring the interoperability of technologies (largely a standards issue) among the participating countries;
- Guaranteeing the free flow of data to ensure that the Internet economy is not hampered by restrictions on where data is located or on data access;
- Establishing common rules for data protection and privacy to reinforce the guarantee of data access;
- Building out the needed infrastructure and ensuring coordination of spectrum allocation to maximize the potential of wireless access;
- Creating incentives for investment in high-speed broadband;
- Partnering with industry on the development of technologies and solutions to ensure cybersecurity;
- Facilitating cross-border e-commerce, especially for small and medium-sized enterprises, by harmonising consumer and contract rules and ensuring more efficient and affordable parcel delivery; and, ultimately,
- Ensuring a level playing field for all market participants, both traditional industries and new market entrants.

In addition, the EU initiative fills out other areas of what could become a strategy of Internet inclusion globally. These include the promotion of investment in research and development of technologies that would expand access to the Internet economy, as well as the uptake of broadband and digital literacy and skills that ensure inclusion.

Significantly, the EU initiative even addresses tax issues in a useful way. It proposes reducing the administrative burden businesses face from different value-added tax (VAT) regimes by creating a single electronic registration and payment portal

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Article 85 is not, of course, the whole of European Union competition policy and a number of the other aspects of EU law, particularly the Article 86 rules regarding abuse of dominant position, raise troubling questions regarding their relevance and value to the Internet economy. In part, that could be remedied by a more explicitly focus on consumer welfare as the point of liberalization, since it would serve as a barrier to the use of competition policy as a means to protect entrenched interests against the competition that both technology and the Internet economy that is its product necessarily implies for those entrenched interests. In other areas, such as Article 90 on public enterprises and Articles 92-94 on state aids, EU law helpfully identifies subjects that a broad agreement on the Internet economy should address, if not always embodying the specific principles that would best foster access to the Internet economy and enhance consumer welfare.

and agreeing on a common threshold for the application of VATs to help smaller start-ups that sell online. The EU initiative is not perfect by any means. There remain areas of the Strategy that require further clarification. On issues of trust and security, copyright reform, and platform regulation careful consideration is needed before considering rules.

The obvious value of the EU Strategy lies in its comprehensive approach. It represents a useful model that could be extended to a group of governments that were already like-minded in terms of their approach and convinced of the value of enhancing access to their individual economies. By extension, a broader agreement along those lines among like-minded governments could establish a global “best practice” for other such arrangements to which other governments could accede. Alternatively, that best practice could be incorporated in a plurilateral arrangement within the WTO as part of the architecture of other regional arrangements such as the North American Free Trade Agreement or the TPP or even on a bilateral basis.

In the absence of such a comprehensive approach, trade policy officials will almost necessarily be obliged to fall back on a more tiered approach that filters liberalisation of the Internet economy into agreements in specific areas. That would entail a change in perspective, rather than venue. It would involve approaching the negotiation of liberalisation of financial services with the perspective of what would best serve the prospects of the Internet economy, not simply the liberalisation of traditional areas of commercial or investment banking or the harmonisation of regulations concerning those traditional areas of financial services.

The same sort of approach would apply to telecommunications services. As noted above, there is still a long way to go before there is anything resembling an open, global market in basic telecommunication services, much less the value added of on-line communications and cloud computing. But, even in the context of negotiating, the liberalisation of basic telecommunications services ought to be informed by the ultimate goal of expanding Internet access.

Liberalisation in the face of current political constraints may also lead trade policy officials to think in novel terms about the nature of the agreements they might negotiate to secure the liberalisation of digital trade. While lowering barriers to trade in devices that allow access to the Internet might still be negotiated on the basis of tariff concessions in either multilateral or bilateral settings, trade policy officials may have to think creatively about the best means of securing liberalisation on a broader front. That may involve less formal arrangements, like those that succeeded in Asia and the Pacific in reducing customs formalities well in advance of the WTO agreement on trade facilitation.

That may lead negotiators to borrow innovative concepts from the technology sector itself where stranded contracts (i.e., those that combine legally enforceable obligations with more aspirational commitments subject to agreed benchmarks,

particularly in areas like joint research and development) are increasingly common. Liberalisation may actually require a different, more collaborative form of interaction among policymakers of different countries to ensure that the full benefits of the Internet economy are realised.

That is likely to prove particularly important in the effort to expand Internet access in emerging markets in the developing world. Given the powerful developmental benefits and the social inclusion the Internet economy fosters, liberalisation that was paralleled by an “aid for trade” initiative in terms of bolstering infrastructure – both physical and institutional – would complement the overall effort in powerful ways. In that context, legally binding commitments are not the norm, but there are a number of variants that include aspirational commitments that parallel the undertakings in stranded contracts.

## CONCLUSION

As the discussion above suggests, digital trade presents a tremendous opportunity for the global economy. The largest benefactors of the digital trade revolution may well be smaller businesses in developing countries. If these benefits are to be realized, however, a series of deliberate policy choices need to be made. These policy choices run the gamut of issues and include enhancing logistics processes, revising services trade commitments, investing in infrastructure, revising and harmonising regulation, revisiting taxation rules, and educating traditional businesses on the use of Internet services.

We hope that this piece provides a useful overview of some of the key trade policy issues surrounding the Internet; and we acknowledge that deeper dives are necessary in each of these areas. But, we would note that trade policy is an ideal candidate for improving the policy ecosystem surrounding the Internet. The Internet is a global network and requires global policy solutions. The key, however, is to get those policy choices right as they affect more than 3 billion people around the world.

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One example involves Japan's free trade agreement with Vietnam, which includes commitments on economic development and regularly scheduled meetings among trade policy officials to focus on practical problems that could be solved, in part, by development assistance, such as customs modernisation. Another involves the “compacts” negotiated by the US Millennium Challenge Corporation, through which eligible countries gain access to significantly higher amounts of assistance (much of which focuses on infrastructure needs) based on commitments concerning trade liberalisation, reinforcing basic property rights and other aspects of the rule of law, and reducing opportunities for corruption. In both instances, there are elements of “hard” international law commitments, mixed with “soft” law aspirations analogous to the stranded contracts prevalent in the technology sector.



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