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Costs and benefits of new disciplines on electronic commerce

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DISCUSSION PAPER SERIES NO. 2020-46

Costs and Benefits of New Disciplines on Electronic Commerce

Ramonette B. Serafica, Francis Mark A. Quimba, and Janet S. Cuenca



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Costs and Benefits of New Disciplines
on Electronic Commerce

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PHILIPPINE INSTITUTE FOR DEVELOPMENT STUDIES

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Abstract

In January 2020, the Philippines joined the WTO Joint Statement Initiative on E-commerce which seeks to develop a multilateral agreement on trade-related aspects of e-commerce. This paper explores the costs and benefits of possible trade disciplines, particularly the moratorium on customs duties on electronic transmissions. Based on estimates of digitizable products, the foregone revenue of a moratorium represents about 0.10 percent and 0.65 percent of national government revenues using the average MFN rate and the bound tariff rate, respectively. Estimates based on broader definitions of electronic transmission range from 0.59 to 1.38 percent and from 3.68 to 8.59 percent of national government revenues using the average MFN rate and bound rate, respectively. However, there are practical difficulties and policy constraints which could limit the actual intake from tariffs. Various barriers to cross-border data flows could also adversely affect not only data-intensive industries but the economy more broadly. Thus, the country should support trade rules that facilitate cross-border data flows. At the same time, the government must invest in digital infrastructure necessary for an efficient and effective tax system fit for the digital economy.

Keywords: e-commerce, digital trade, WTO, RTAs, customs duties

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Costs and benefits of new disciplines on electronic commerce

Ramonette B. Serafica, Francis Mark A. Quimba, and Janet S. Cuenca*

1 Introduction

1.1 Background

The promotion of e-commerce has been part of the World Trade Organization (WTO) agenda since 1998 when the Ministerial Declaration on Global Electronic Commerce was adopted calling for the establishment of a comprehensive work programme to examine all trade-related issues relating to global electronic commerce. The lack of a multilateral agreement on e-commerce to date has prompted a group of WTO Members (led by Australia, Japan, and Singapore) to issue a *Joint Statement on Electronic Commerce* in 2017 to initiate exploratory work towards future WTO negotiations on trade-related aspects of e-commerce. A second *Joint Statement on Electronic Commerce* was issued in 2019 to confirm the WTO Members' intention to commence WTO negotiations and achieve a high standard outcome that builds on existing WTO agreements and frameworks with the participation of as many WTO Members as possible while taking into account the unique opportunities and challenges faced by Members, including developing countries and LDCs, as well as MSMEs. In 2020, the Philippines joined the Joint Statement Initiative (JSI) leaving Viet Nam and Cambodia as the remaining non-signatory ASEAN Member State.¹ As of October 2020, the JSI had 86 Members which together account for 90% of the world trade.

With the discussions at the WTO to develop a plurilateral agreement, policymakers will need to understand the trade rules on e-commerce that would work for or against the Philippines. Specifically, this paper will:

- i. Present the e-commerce developments at the multilateral and regional levels;
- ii. Identify the benefits and costs to the Philippines of the proposed new disciplines on e-commerce, specifically the moratorium on customs duties; and
- iii. Provide recommendations on the initiatives the Philippines should advocate in the discussion in the WTO.

To achieve these objectives, the next chapter presents the progress, priorities, and issues in various multilateral and regional fora on e-commerce and digital trade. The potential impacts on the Philippines of trade disciplines on e-commerce are then examined, focusing on customs duties on electronic transmissions. Other factors to consider in relation to rules on cross-border data flows are also discussed. The report then concludes with the recommendations.

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¹ The announcement was made by DTI Secretary Ramon M. Lopez during the Informal Meeting of Ministers on Electronic Commerce last 24 January 2020. Cambodia backed out on the original JSI citing its unreadiness to commence negotiations on e-commerce.

1.2 Overview of national policies on e-commerce

Key national policies and strategies that aim to harness e-commerce and digital trade include: (1) the **Philippine Development Plan 2017-2022** (NEDA 2017) which acknowledges the role of digital trade and e-commerce in developing high-value added, competitive, and sustainable sectors; (2) the **Micro, Small, and Medium Enterprise (MSME) Development Plan 2017-2022** (MSMED Council n.d.) which encourages the use of digital technologies and platforms by various enterprises, regardless of scale or industry promotes the digital and internet economy as one of the cross-cutting strategies, and (3) the **Inclusive, Innovation and Industrialization Strategy** (i3s) which has identified e-commerce as one of the priority sectors (DTI 2017).

The Philippine **E-commerce Roadmap (PECR) 2016-2020** is the main policy initiative of the government to develop e-commerce in the country. It contains 53 action agenda items spanning six strategic areas, which cover infrastructure, investment, innovation, intellectual capital, information flows, and integration. The primary objective of the PECR is for e-commerce to contribute 25% to the country's GDP by 2020, from 10% of GDP in 2015.

Based on the mid-term review of the Roadmap conducted by the E-Commerce Program Office of the Department of Trade and Industry (DTI), 40% of the action agenda items identified in the Roadmap has been achieved to date. See Table 1.

Table 1. Philippine E-commerce Roadmap 2016-2020: Assessment Report Card (as of June 25, 2019)

Status	No. of Agenda Items	Percent completed
Accomplished	21	40%
Ongoing	28	53%
For discussion	4	7%
Total No. of Agenda Items	53	100%

Source: Reodica (2019)

Accomplishments to date include, among others: Updated E-Payment and E-Wallet Guidelines; Updated E-Money Guidelines; Enactment of Payment Systems Act; Implementation of National Retail Payment System; and the Customs Modernization and Tariff Act, which includes the increase in “de minimis value” for exemption from payment of customs duties from Php 10.00 to Php 10,000.00. On-going reforms include, among others: Guidelines for Online Sales Invoice and Official Receipt Issuance; Merchant and Consumer Complaint Online Dispute Resolution Process; and enabling Philippine Postal Corporation as “cash on delivery (COD)” pick-up points. Still for discussion are: Updated Guidelines on the Use of Access Devices for Payment of Fees, Charges, Assessment, and Other Revenues due to the government through e-payment and collection system of government entity and the inclusion of e-commerce subjects in K-12 included in entrepreneurship (Reodica 2019).

An updated Roadmap which will extend up to 2022 is currently being prepared by the government in collaboration with various stakeholders in the private sector. According to the DTI (Pacheco 2019), priority will be given to micro, small and medium enterprises to enable

them gear up for the digital economy. Moreover, it will seek to remove impediments to e-commerce growth and ensure that consumers are adequately protected. While the potential for e-commerce growth exists given the country's rising middle class, its young and tech-savvy population, and robust consumption growth, among others, challenges are also recognized such as the lack of trust and consumer protection in online activities, poor logistics as well as the readiness of MSMEs and government institutions.

The **Electronic Commerce Act of 2000** gave legal recognition to electronic forms of data messages, documents, signatures, transactions and storage of information. Other pillars of the e-commerce regulatory environment include the **Data Privacy Act (DPA) of 2012**, the **Cybercrime Prevention Act of 2012**, and the **Consumer Act**.

Serzo (forthcoming) reviewed Philippine legal frameworks and regulations on e-commerce and digital platforms, which covered regulations on (i) electronic contracting, (ii) payment solutions, (iii) consumer protection, (iv) data protection and data privacy (including cross-border transfer of data), (v) cybercrime and cybersecurity, (vi) access to financing, and (vii) protection of intellectual property rights. The study assessed the regulations through the lens of the national innovation policy as articulated in the Philippine Innovation Act. It also examined whether the policy objectives as well as the actual implementation of the regulations are aligned with certain standards recommended by international organizations, particularly the UNCTAD and OECD. Some of the key findings from the study are as follows:

- In general, the regulations on basic contracting, payments regulations, consumer protection, cross-border data movement and data protection, and intellectual property protection are consistent with the objective of the Philippine Innovation Act.
- The country has the baseline legislation for e-commerce prescribed by UNCTAD, which recommends a whole-of-government approach and an enabling environment for e-commerce, particularly regulations on consumer protection, data protection, intellectual property, and cybercrime.
- In terms of data privacy, the DPA satisfies the basic principles of the OECD guidelines on the protection of privacy and transborder flows of personal data. Moreover, the consent requirements of the DPA, and the accountability structure of the law, is in line with the standards of the General Data Protection Regulation (GDPR) of the European Union. The DPA is also aligned with the GDPR in its rationale which is to protect the privacy rights of the individual while still enabling the free flow of information.
- With respect to cybercrimes, the Cybercrime Prevention Act specifies the obligations for entities and sets higher penalties for offenses committed through the use of ICTs in addition to the offenses listed under the law.
- On digital payments, the sector regulator and the regulatory frameworks have been adaptive to innovations in technology and business models.
- In terms of intellectual property, protection mechanisms under intellectual property regulations are in place to support technology developers and inventors.

- There are also policy areas that hinder greater adoption of digital transactions. Restrictions on contracting may present questions on enforceability of contracts and the analog notarization requirements may also delay the execution of contracts. With respect to access to funding, several laws provide an uncertain regulatory environment for digital platforms looking for foreign investments or foreign partners.

Tax neutrality between online and offline transactions is one of the key principles adopted as government policy for e-commerce promotion and adoption in the Philippines. Neutral tax treatment is underscored in the Implementing Rules and Regulations of the E-commerce Act, which states that “Transactions conducted using electronic commerce should receive neutral tax treatment in comparison to transactions using non-electronic means and taxation of electronic commerce shall be administered in the least burdensome manner.” (Chapter II, Section 3d)

In August 2013, the Bureau of Internal Revenue (BIR) issued Revenue Memorandum Circular (RMC) 55-2013 to reiterate a taxpayer’s obligations in relation to online business transactions. The Circular further affirms that the taxation rules and guidelines on online transactions are similar to non-online transactions. The following are some of the types of online business transactions, classified according to their participating parties:

- i. Business to Consumer (“B2C”): which involves online stores selling goods and services to final consumers;
- ii. Consumer to Consumer (“C2C”); and
- iii. Business to Business (“B2B”): which encompasses job recruitment, online advertising, credit, sales, market research, technical support, procurement and different types of training.

Sec. II of RMC 55-2013 further states that “existing tax laws and revenue issuances on the tax treatment of purchases (local or imported) and sale (local or international) of goods (tangible or intangible) or services shall be equally applied with no distinction on whether or not the marketing channel is the internet/digital media or the typical and customary physical medium.”

For purposes of the Circular, the most common types of online business transactions in the Philippines were described as online shopping or online retailing, online intermediary service, online advertisement/classified ads, and online auction. For these different types of online transactions, the regulation sets out the Obligations and Duties / Basic Compliance of Parties (online intermediary, online merchant, buyer/customer, payment gateway, freight forwarders and online website administrator) depending on whether payment is through credit card, bank, or cash on delivery/for pick up.

As follow-up to RMC 55-2013, the BIR issued RMC 60-2020 “to give due notice to all persons doing business and earning income in any manner or form, specifically those who are into digital transactions through the use of any electronic platforms and media, and other digital means, to ensure that their businesses are registered pursuant to the provisions of Section 236 of the Tax Code, as amended, and that they are tax compliant. The latest RMC specifies the coverage of the issuance to include not only partner sellers/merchants, but also other

stakeholders involved such as the payment gateways, delivery channels, internet service providers, and other facilitators.

One of the reforms introduced under the Tax Reform for Acceleration and Inclusion (TRAIN) or RA 10963 which took effect on January 1, 2018 is related to tax administration. It requires the issuance of electronic receipts or electronic sales/commercial invoices in lieu of manual receipts and sales/commercial invoices for taxpayers engaged in the export of goods and services, e-commerce and Large Taxpayers within 5 years from the effectivity of the law and upon establishment of a system capable of storing and processing the required data.

1.3 *E-commerce provisions in Philippine FTAs/RTAs*

E-commerce provisions in most of the Philippines' engagements in FTAs/RTAs are focused on cooperation and contain general language on its promotion. An example is the ASEAN-Australia-New Zealand Free Trade Area (AANZFTA) Chapter on Electronic Commerce (Chapter 10). Under Chapter 7 (Cooperation in the Field of ICT) of the Philippines-Japan Economic Partnership Agreement (PJEPA) Implementing Agreement, e-commerce was identified as one of the fields covered by the Cooperation Chapter of the EPA.

For the Philippines-European Free Trade Association Free Trade Agreement (PH-EFTA) FTA which entered into force on 1 June 2018, there is no specific chapter on e-commerce. The FTA includes provisions under Annex VI (Trade Facilitation – Article 4 on Simplification of International Trade Procedures) related to electronic documents and payments.

In addition, there have been new developments on e-commerce in the region, particularly the finalization of the ASEAN Agreement on Electronic Commerce and the inclusion of an Electronic Commerce Chapter in the Regional Comprehensive Economic Partnership (RCEP) which was signed in November 2020. In the ASEAN Agreement on Electronic Commerce, cross-border e-commerce is encouraged to maximize the benefits of regional economic integration through (1) trade facilitation with the implementation of paperless trading, and electronic authentication and signatures, and (2) financial services with the implementation of electronic payment and settlement. Particular emphasis is also placed on online consumer protection, online personal information protection, and cybersecurity that act as safeguards for users of e-commerce.

2 E-commerce in the trade agenda

2.1 *Discussions at the multilateral level*

2.1.1 *Relevant WTO trade regulations*

There is no single WTO agreement that sufficiently covers the regulation of digital trade and e-commerce. López-González and Ferencz (2018) provide an overview of the various WTO agreements that may be relevant. As depicted in Figure 1, there are three different layers of governance that must be covered, namely: the network infrastructure layer, the technical layer (codes that operate the network) and the content layer. For infrastructure related aspect of digital trade, trade rules related to telecommunication services, ICT goods, technical

regulations, and standards are applicable. In terms of the technical layer, technical standards across networks can help ensure seamless communication and IPRs are relevant for computer software and domain names. With respect to the content layer, a broader range of rules may be relevant depending on the content traded. For example, protection and enforcement of IPR for media content offered online would be covered by TRIPS while the TFA is applicable in case of cross-border goods trade enabled by digital networks.

Figure 1. WTO rules and digital trade (e-commerce)

	Layer component	Relevant WTO trade regulation
Content	Goods	GATT TFA ITA
	Entertainment Books, films, music, games, television	TRIPS
	Telecommunications Access to networks, email, VoIP, etc.	GATS Annex on Telecommunications and Agreement on Basic Telecommunications
	Retail and supply chain management Online platforms, websites	GATT TFA
	Financial services Payments and other financial transactions	GATS Annex on Financial Services
	Other Social media, data storage and processing, cloud computing, etc.	TRIPS GATT TFA ITA
Technical	Domain names	TRIPS TBT
	IP addresses	
	Software	
	Internet Protocols (TCP/IP)	
Infrastructure	Undersea and terrestrial cables	GATT ITA GATS Annex on Telecommunications and Agreement on Basic Telecommunications
	Satellite and wireless networks	
	Internet exchange points	TRIPS GATT TFA ITA
	Devices (computers, smartphones, etc.)	

Source: López-González and Ferencz (2018)

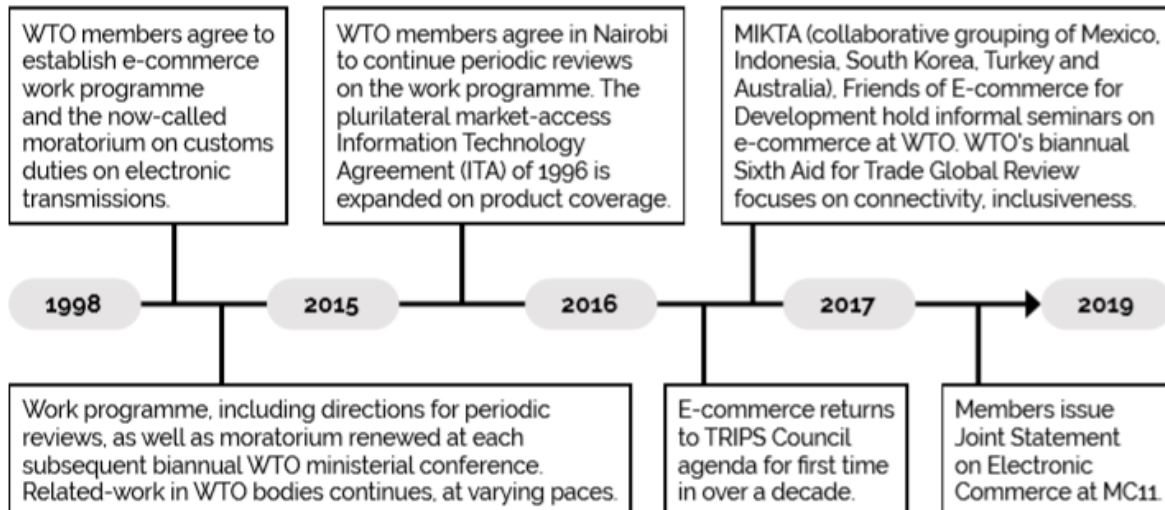
When it comes to data flows, both the General Agreement on Trade in Services (GATS) and the General Agreement on Tariffs and Trade (GATT) are relevant since data measures may impact digitally enabled services as well as goods with embodied or embedded services (López-González and Ferencz 2018, Casalini and López-González 2019). However, assessing whether a particular measure (e.g. data localization) is compliant with trade commitments can be complicated. Under GATT rules, national treatment is automatically extended while in the GATS, national treatment is a negotiated commitment which differs across country and sector.

Thus, the legality of a particular measure might depend on the sectoral classification of the affected product (Casalini and López-González 2019).

2.1.2 From work programme to a plurilateral agreement

Figure 2 presents the key milestones in the WTO discussion on e-commerce.

Figure 2. Timeline of action at the WTO on e-commerce



Source: ICTSD (2018) as presented in Ismail (2020)

On 20 May 1998 at the second session of its ministerial conference, WTO members issued the **Declaration on Global Electronic Commerce (WT/MIN(98)/DEC/2)** which sought to establish a comprehensive work programme examining “all trade-related issues relating to global electronic commerce, including those issues identified by Members”. Notably, it also asserted that “Without prejudice to the outcome of the work programme or the rights and obligations of Members under the WTO Agreements, we also declare that Members will continue their current practice of not imposing customs duties on electronic transmissions”. On September 25 of the same year, WTO formally adopted the **Work Programme on Electronic Commerce (WT/L/274)** which utilizes a working definition for the term e-commerce as “production, distribution, marketing, sale or delivery of goods and services by electronic means” (Sec.1.3). However, this working definition was established with a caveat that it shall be exclusive for the purposes of the work programme. Evidently the definition appears to be broad in scope so as to include transactions where some parts (such as payment or delivery) are not facilitated by electronic means (see Darsinouei 2017).

The Work Programme involves the General Council and subsidiary bodies comprising of a committee for trade and development along with three specific councils for trade in services, trade in goods, and trade-related aspects of intellectual property rights (TRIPS). Overall, it is the **General Council** that is responsible for the continued review of the progress attained by the work programme with a special consideration to any trade-related issue of a cross cutting nature such as the imposition of customs duties. The subsidiary bodies are tasked to report to the general council with respect to their examinations of their particular areas of concerns while

the council will then report to the ministerial conference. Other elements of the Work Programme include (WT/L/274):

- The **Council for Trade in Services** would examine the treatment of ecommerce in the General Agreement on Trade in Services (GATS) legal framework. Specifically, scope (including modes of supply) (Article I); MFN (Article II); transparency (Article III); increasing participation of developing countries (Article IV); domestic regulation, standards, and recognition (Articles VI and VII); competition (Articles VIII and IX); protection of privacy and public morals and the prevention of fraud (Article XIV); market-access commitments on electronic supply of services (including commitments on basic and value-added telecommunications services and on distribution services) (Article XVI); national treatment (Article XVII); access to and use of public telecommunications transport networks and services (Annex on Telecommunications); customs duties; classification issues.
- Under the **Council for Trade in Goods**, the focus shall be the aspects of e-commerce relevant to the provisions of General Agreement on Tariffs and Trade (GATT) 1994, the multilateral trade agreements covered under Annex 1A of the WTO Agreement, and the approved work programme. In particular, these are the issues of market access for and access to products related to e-commerce; valuation issues arising from the application of the Agreement on Implementation of Article VII of the GATT 1994; issues arising from the application of the Agreement on Import Licensing Procedures; customs duties and other duties and charges as defined under Article II of GATT 1994; standards in relation to e-commerce; rules of origin issues; classification issues.
- With regard to intellectual property rights, the **Council of Trade-Related Aspects of Intellectual Property Rights (TRIPS)** shall examine protection and enforcement of copyright and related rights; protection and enforcement of trademarks; new technologies and access to technology issues arising from the electronic commerce industry.
- To address the economic, financial, and development needs of developing countries, the **Committee on Trade and Development** shall investigate on the implication that e-commerce has on development. Notably, the effects of e-commerce on the trade and economic prospects of developing countries, especially of their small and medium-sized enterprises (SMEs), and means of maximizing possible benefits accruing to them; challenges and ways of enhancing the participation of developing countries in e-commerce more so as exporters of electronically delivered products: role of improved access to infrastructure and transfer of technology, and of movement of natural persons; use of information technology in the integration of developing countries in the multilateral trading system; implications for developing countries of the possible impact of e-commerce on the traditional means of distribution of physical goods; and financial implications of electronic commerce for developing countries.

At the end of 2017 during the Buenos Aires Ministerial Conference, a **Joint Statement on Electronic Commerce (WT/MIN(17)/60)** was issued to initiate exploratory work towards future WTO negotiations on trade-related aspects of e-commerce with a particular focus on the challenges experienced by developing countries especially the least developed countries and the micro, small, and medium-sized enterprises.

The initial common topics found among the submissions of WTO members include 1) bridging the digital divide and knowledge gaps arising from e-commerce; 2) trade facilitation and provisions thereof; 3) e-commerce facilitation and/or facilitation of paperless trading; 4) market access/market opening in e-commerce related sectors of trade in goods and services; 5) protection of privacy/personal data; 6) protection of intellectual property; 7) unsolicited electronic communications (SPAM); and lastly, 8) moratorium on the imposition of customs duties on electronic transmissions.

Given the common elements across the submissions of member countries in 2018, a suggestion by several delegations was raised that shifting to a thematic discussion to examine the common trade-related issues of e-commerce could be the most efficient manner to successfully move forward the initiative. The thematic framework would set out the elements to facilitate the exploratory work on e-commerce/digital trade. In each thematic session, topics and issues could be effectively broken down to develop the framework for negotiation on e-commerce.

At the start of 2019, in an informal WTO Ministerial Gathering held in Davos, ministers expressed their intention to start negotiations on trade-related aspects of e-commerce by releasing another **Joint Statement on Electronic Commerce (WT/L/1056)**. Here, the concern is extended to those issues faced by all members but with a special attention still to developing countries, LDCs, and MSMEs in relation to e-commerce.

The framework, themes, and topics are subject to adjustment as exploratory work progresses. The meetings were initially conducted through an informal medium of open-ended discussions that allow WTO members to share openly their respective practice and experience. The four themes on which members shared views are on:

1. enabling digital trade (customs, digital trade facilitation and logistics),
2. openness and digital trade (market access),
3. trust and digital trade (business trust), and
4. cross-cutting issues, including development, transparency and cooperation.

These themes were discussed in five “negotiation rounds” or meetings, where the latter two meetings focused already on the streamlined working texts. Streamlined working texts is a working document prepared by the facilitators of each focus group based on the text proposals submitted by members where elements of similar effect are merged or given a common heading. In case member countries have a stark approach for a particular subject, alternatives are provided in the said document.

Six negotiation rounds were held in 2019 on the months of May, June, July, September, October, and November. For the first 3 negotiation rounds, discussions were held on a) facilitating electronic transactions; b) non-discrimination and liability; c) consumer protection; and d) transparency. There was an additional discussion on competition-related issues for the second and third negotiation rounds on telecommunications and market access, respectively. See Table 2.

Table 2. Focus groups and issues

6 Focus Groups	issues covered (sub-issues in the negotiating brief)
Enabling e-commerce	Facilitating e-transactions; digital trade facilitation and logistics; customs duties
Openness and e-commerce	Non-discrimination (of digital products) and liability; flow of information/data- access to internet and data (government data – platforms and competition issues)
Trust and e-commerce	Consumer protection; Personal information protection and privacy; Business Trust
Cross-cutting issues	Transparency, Domestic Regulation and Cooperation; Cybersecurity; Capacity building - legal issues
Telecommunications	Telecommunications reference paper and e-commerce related network equipment and products
Market access	Services and goods market access

Source: Ismail (2020)

An organizational meeting was held in December 2019 where the 2020 timetable of meetings was agreed - 7th negotiating round: 11-14 February; 8th negotiating round: 17-20 March; and 9th negotiating round: 28 April-1 May. However, these were postponed due to the Covid19-pandemic. A preparatory meeting ahead of the 12th WTO Ministerial Conference was also scheduled. Due to the pandemic however, the Ministerial Conference which was supposed to be held in Kazakhstan in June did not push through.²

In terms of membership, Benin, Saudi Arabia, Kenya, Cote d'Ivoire, Cameroon, Indonesia, and the Philippines joined the JSI at the informal meeting in January 2020 held in Davos. As of October 2020, the JSI had 86 Members.

2.1.3 Prospects of a multilateral agreement

According to Hufbauer and Lu (2019), there are areas where WTO members can find a common ground, which should be the basis of a multilateral agreement. Less controversial issues which members could agree on include banning unsolicited commercial electronic messages, ensuring the validity of electronic contracts, protecting online consumers from fraudulent or deceptive commercial practices, and recognizing electronic authorization and electronic signatures. There are other issues which will be more challenging to resolve as key members, namely the US, the EU, and China have opposing views on these matters (See Table 3). Therefore, it will be less likely that members will be able to agree on a set of trade disciplines for these issues. They argue that if an agreement is to be reached, either its scope

² https://www.wto.org/english/thewto_e/minist_e/mc12_e/mc12_e.htm

must be sharply narrowed to exclude most of the contentious issues, or the number of participating countries must be sharply reduced. A WTO accord, even of low ambition, would have value if only to establish basic digital norms on matters such as banning unsolicited commercial messages, ensuring the validity of electronic contracts, and protecting online consumers from fraudulent practices. A more ambitious accord, covering controversial questions such as server location (i.e., data localization), free access to the internet, and the sanctity of source code, should be the subject of bilateral and/ or plurilateral/regional pacts, rather than multilateral WTO negotiations (Hufbauer and Lu 2019).

Table 3. US, EU, and Chinese positions on contentious e-commerce issues

Issue	United States	European Union	China
Data flows	Free data flows with exceptions	Free data flows with exceptions	Skeptical about free data flows
Data localization	Ban data localization	Ban data localization	Skeptical about prohibition of data localization
Privacy	Restrictions should only be necessary and proportionate to privacy risks presented	Restrictive measures could be applied to protect privacy	Restrictive measures could be applied to protect privacy and ensure security
Source code	Ban forced transfer of source code with exceptions	Ban forced transfer of source code with exceptions	Not addressed in proposal, but is not expected to make commitments
Customs duties	Promote zero customs duties	Promote zero customs duties	Promote zero customs duties until the next WTO ministerial conference
Internet taxes	Opposes internet taxes	Advocates internet taxes	Position unknown
Open internet access	Favored with exceptions	Favored with exceptions	Strong state control

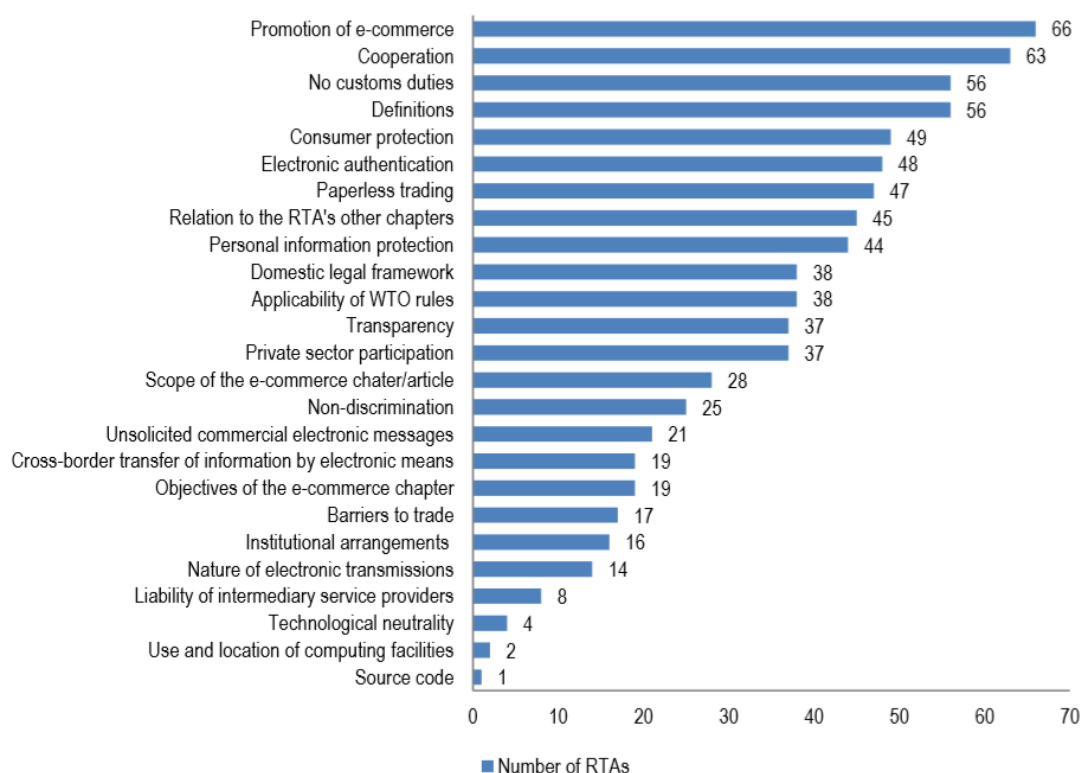
Source: Hufbauer and Lu (2019)

2.2 Trends in Regional Trade Agreements

E-commerce provisions have increasingly been incorporated into Regional Trade Agreements (RTAs). According to Monteiro and Teh (2017), as of May 2017, 75 RTAs which account for more than a quarter of all RTAs notified to the WTO, include at least one provision that explicitly mentions e-commerce. As shown in Figure 3, the most common types of e-commerce provisions refer to the promotion of e-commerce, cooperation, and the moratorium on customs duties. Promoting of paperless trade, electronic authentication and e-signature, and provisions on consumer protection are also prevalent.

A recent study conducted by CUTS International found that as of June 2019, 84 regional trade agreements (RTAs) included e-commerce provisions either as standalone chapters or as dedicated articles and 60 per cent of those RTAs entered into force between the years 2014 and 2016 (Gaitan, forthcoming as cited in Ismail 2020).

Figure 3. Main types of e-commerce provisions in RTAs



Source: Monteiro and Teh (2017) based on the WTO RTA database as cited in López-González and Ferencz (2018)

There has also been a sharp increase in the number of RTAs with specific provisions on digital trade. In a review by López-González and Ferencz (2018), from 2014 to 2016 alone, close to two-thirds of RTAs notified included such provisions. Specific provisions that are relevant to digital trade can also be found in other parts of RTAs such as annexes, side documents, and joint statements. Most RTAs contain a workable taxonomy and definitions for digital products and electronic transmissions. The applicability of trade rules to e-commerce, particularly with respect to cross-border services, financial services and investment is another common provision. There are national treatment and MFN obligations on digital products in most RTAs and many agreements adopt a customs duties moratorium on electronic transmissions. Moreover, non-discrimination on grounds of technology, minimization of regulatory burdens, and alignment of domestic regulations with international model laws on e-commerce are also included in the RTAs. However, there is a strong variance across issues covered in different agreements and many provisions continue to be 'best endeavors' and/or not subject to dispute settlement (López-González and Ferencz 2018).

Box 1 provides a brief discussion on the e-commerce provisions in the ASEAN-Australia and New Zealand FTA (AANZFTA)

Box 1. ASEAN-Australia and New Zealand FTA (AANZFTA)

The negotiations for the establishment of the AANZFTA concluded in August 2008 in Singapore. The agreement was signed during the ASEAN Summit in Thailand in February 2009. It entered into force on 1 January 2010 following notification of completion of internal requirements including ratification from initial eight (8) Parties; all 12 Parties were on board by 2012.

AANZFTA's membership covers over 600 million people and an estimated combined GDP of \$3.1 trillion. AANZFTA is considered to be one of the most comprehensive trade agreements to date, with the agreement covering provisions such as trade in goods, services, investments, temporary movement of business people, economic cooperation, electronic commerce, and intellectual property among others. The Agreement has a total of 18 chapters.

AANZFTA Chapter on E-commerce

AANZFTA covers new areas that ASEAN had previously never negotiated on, such as electronic commerce (Chapter 10), intellectual property (Chapter 13), and competition policy (Chapter 14). The chapter on e-commerce sets the framework for cooperation and coordination among the Parties on E-Commerce. Parties have agreed to maintain or adopt domestic regulatory frameworks for e-commerce in line with international standards, taking into account the UNCITRAL Model Law on Electronic Commerce 1996. Parties are obliged to publish regulatory measures relating to e-commerce and respond to requests for information about such measures promptly. The Chapter also involves provisions on electronic authentication and digital certificates, online consumer protection, online data protection, and paperless trading. The Parties are to encourage cooperation in research and training activities that will enhance the development of e-commerce; for instance, by assisting small and medium-sized enterprises to overcome obstacles in e-commerce and by sharing information and experiences and identifying best practices.

Recognizing that some ASEAN member-states are still developing their regulatory regimes in this area, Parties are permitted to delay the application of some obligations, pending implementation of relevant domestic laws. The Chapter is not subject to AANZFTA's consultations and dispute settlement chapter.

Source: DTI-BITR (2017, pp 22-23)

2.3 Specific issues and challenges

2.3.1 The regulation of data

Issues related to cross-border data flows are increasingly included in RTAs. According to Casalini & López-González (2019), relevant provisions are generally in the digital trade or e-commerce chapters of the agreements although they could also be found in the context of sectoral commitments.

In the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP), a relatively complete set of provisions on **data movement** is included. In Article 14.10, "Parties recognise that each Party may have its own regulatory requirements concerning the transfer of information by electronic means". However, "each party shall allow the cross-border transfer of information by electronic means, including personal information, when this activity is for the conduct of the business of a covered person". The Article also foresees measures inconsistent with this provision, but only "to achieve legitimate public policy objective[s],

provided that the measure: is not applied in a manner which would constitute a means of arbitrary or unjustifiable discrimination or a disguised restriction on trade; and... [when it] does not impose restrictions on transfers of information greater than are required to achieve the objective”. On **local storage**, Article 14.13 of the CPTPP stipulates that “No party shall require a covered person to use or locate computing facilities in that Party’s territory as a condition for conducting business in that territory”. However, inconsistent measures are allowed in pursuit of legitimate public policy objectives as long as they are not “a disguised restriction on trade” or “impose restrictions on the use or location of computing facilities greater than are required to achieve the objective”.

In the United States-Mexico-Canada Agreement (USMCA), “No Party shall prohibit or restrict the cross-border transfer of information” (Article 19.11). The USMCA also contains references to the **protection of personal information**. Article 19.8 states that “The parties recognize the economic and social benefits of protecting the personal information of users of digital trade and the contributions that this makes to enhancing consumer confidence in digital trade”. Moreover, “each Party shall adopt or maintain a legal framework that provides for the protection of personal information of the users of digital trade”. The USMCA references approaches such as the APEC Privacy Framework and the OECD Privacy Guidelines. Parties are also urged to “recognize the importance of ensuring compliance with measures to protect personal information and ensuring that any restrictions on cross-border flows of personal information are necessary and proportionate to the risks presented”.

Casalini & López-González (2019) further explain that the European Union (EU) has adopted a new **horizontal approach on cross-border data flows and personal data protection** in trade agreements that it is pursuing in all its trade negotiations. Different forms of data localization and data storage measures are prohibited. At the same time, privacy and data protection are considered as fundamental rights, and the EU clause provides that “each party may adopt and maintain the safeguards that it deems appropriate for the protection of personal data and privacy”. The cross-border flow of personal data is also not included in the European Union-Japan Economic Partnership Agreement signed in 2018. However, the parties agreed to allow free flow of personal data through “mutual adequacy” of their respective data protection systems.

2.3.2 Customs duties on electronic transmissions

The WTO Members have periodically extended the moratorium on customs duties on electronic transmissions ever since it was first agreed in 1998. However, with technological advancements and the growth of digital trade, concerns on the effects of the moratorium on government revenues have increased as well (Darsinouei 2017; Banga 2019a). The moratorium on customs duties for electronic transmissions is a key issue dividing exporters and importers. The first point of contention is whether electronic transmissions refer to the device or the content (GDI 2019). The US, the EU, and other developed members who are net exporters of digital products and services, interpret the term “electronic transmissions” as referring to the content of digital trade. Thus, they understand the tariff ban to apply to digital content. In contrast, countries who are net importers of digital products and services understand the term

as referring to electronic carriers (e.g. CDs, electronic bits) which means they are permitted to impose customs duties on digital content. Secondly, while net exporters which are typically developed countries propose a permanent ban on e-commerce tariffs in order to provide greater certainty to consumers and business, net importers like India and South Africa worry that they will suffer greater revenue losses. Thirdly, developing countries are concerned that a permanent moratorium would limit their options in terms of protecting domestic products and services traded online. Fourthly, the moratorium has provoked a debate on creating a level playing field between domestic and foreign suppliers of digital products and services. In light of the issues, members are urged not to rush the decision of making the moratorium permanent and consider extending it for (at least) another two years at the 12th Ministerial Conference (MC12) and use this time to prepare a fully-fledged agreement which could be called the Agreement on Digital Products and Other Services (ADPOS) (GDI 2019).

Apart from economic cost and benefits, deeper questions for policy makers include individual privacy and national security concerns. Ismail (2020) adds that definitional issues, scope, legal architecture of the outcome, digital divide, and the implications of regulation for developing countries and MSMEs are among the challenges on the road to MC12.

2.3.2.1 Rationale behind the moratorium

Adopted on May 20, 1998, the Global Declaration on E-Commerce recognized the growing importance of global electronic commerce in creating new opportunities for trade. In this regard, the Ministers declared that “without prejudice to the outcome of the work programme or the rights and obligations of Members under WTO Agreement, ... members will continue their current practice of not imposing customs duties on electronic transmissions.” However, such moratorium is not permanent and so member countries extend it at the biennial WTO Ministerial Conference.

Based on a primer for business released by the International Chamber of Commerce (ICC 2019), the moratorium has facilitated exponential growth in the use of the Internet and burgeoning digital economy. More specifically, the digital economy has been growing significantly because the parties to the WTO have agreed not to impose tariffs on cross-border data flows. The moratorium protected the Internet from distortions induced by levies at national borders (Denton 2019).

In the same vein, it has helped the development of digital trade as a mechanism for global growth. Ambassador Shea mentioned in his statement during the WTO General Council Meeting in December 2019 that “there is a growing body of research that demonstrates the significant economic benefits of the moratorium for developed and developing countries alike.”³ In this light, WTO members should agree to a permanent moratorium on customs duties on digital transmissions (Shea 2019).

³ <https://geneva.usmission.gov/2019/12/10/ambassador-shea-electronic-commerce-and-moratorium-on-the-implication-of-customs-duties-on-electronic-transmissions/>

Nevertheless, some WTO members (e.g., India, South Africa, Indonesia, and Sri Lanka) have begun to express their concern on customs revenue losses due to the moratorium (Burchell 2019, Denton 2019, ICC 2019, and Sen 2020). In a statement submitted to the WTO in March 2020,⁴ India and South Africa argued that the moratorium is like giving the digitally advanced countries duty-free access to developing countries' markets. It prevents the imposition of tariff as a trade policy to support infant and even mature industries. Countries that try to catch up with the rapidly and radically changing economy need time to become competitive before full liberalization becomes optimal. The moratorium will leave developing countries with struggling industries as consumers in the digital economy. With zero tariffs, developing countries will tend to depend on imports of digital products from developed countries, thus affecting digital industrialization and trade competitiveness, which in turn will have negative implications for economic growth, jobs, and attainment of the Sustainable Development Goals (SDGs) [WT/GC/W/798].

India and South Africa shared the same view that at the time the moratorium was implemented in 1998, the digital economy was at its inception. It was uncertain then how digital advancements would transform the economy. At present, the rapidly growing digital economy radically changes the concept of trade. The moratorium was implemented at the time when only few products were digitally traded and it has been argued that developing countries are fast losing tariff revenues with the rising product digitalization and the moratorium still in place (Banga 2019a; Kozul-Wright and Banga 2020).

In this light, countries such as India, South Africa, Indonesia, and Sri Lanka have raised valid issues. However, the imposition of customs duties on electronic transmissions is associated with technical challenges (e.g., poor regulatory system, unavailability of applicable duties, and availability of digital and physical infrastructure, among others) as identified by Waris (n.d.). ICC (2019) points out that “no country has been able to explain how it would even be possible to collect customs duties on data flows without causing significant disruption to the digital world.” Likewise, Denton (2019) argues that “no customs authority has been able to demonstrate how a digital tariff system would work in practice.” In the case of video streaming, “it would be prohibitively expensive for customs officials to track these millions of electronic transmissions and determine their origin, and it would be nearly impossible to quantify their value.”⁵

On the other hand, countries (e.g., Australia, Brunei, Canada, Chile, Japan, Korea, Mexico, New Zealand, Peru, Singapore, Chinese Taipei and the United States) favoring the moratorium argue that imposing customs duties on digital products would only hinder trade in these products and thus running contrary to the idea of expanding economic activity in the Internet

⁴ https://docs.wto.org/dol2fe/Pages/FE_Search/FE_S_S009-DP.aspx?language=E&CatalogueIdList=264789%2C264692%2C263985%2C262610%2C262031%2C261632%2C261432%2C261434%2C259951%2C259601&CurrentCatalogueIdIndex=4&FullTextHash=&HasEnglishRecord=True&HasFrenchRecord=True&HasSpanishRecord=True

⁵ <https://www.project-syndicate.org/commentary/wto-moratorium-on-taxing-data-flows-could-lapse-by-john-w-h-denton-2019-12>

(APEC 2016). These countries shared the same view that “after spending years lowering tariffs and duties on physical products, APEC economies should not start to impose new tariffs and duties in the virtual world.” In addition, the moratorium will prevent a barrier to entry for small and medium enterprises (SMEs) (APEC 2016, p.26-1).

2.3.2.2 Global estimates

Banga (2019a) estimates the potential tariff revenue loss due to a moratorium to developing countries at \$10 billion if bound rates are used. Tariff revenue loss to WTO LDCs is estimated at \$1.5 billion while African countries loss is around \$ 2.6 billion. Using average MFN applied rate, the potential tariff revenue loss of a moratorium on electronic transfers is estimated \$5.1 billion for developing countries. WTO high-income countries will experience a tariff revenue loss of \$289 million, less than half of the potential tariff revenue loss to Sub-Saharan African countries. It should be noted that the estimated potential tariff revenue losses do not include the revenue losses accruing from loss of custom surcharges and additional duties. See Table 4 and Annex A.

Table 4. Estimated per annum tariff revenue loss due to a moratorium on electronic transfers

	Physical Imports of Digitizable Products (\$Mn)	Estimated On-Line Imports or ET of Digitizable Products (\$Mn)	Estimated Total Imports of Digitizable Products (\$Mn)	Simple Average of Bound Duties in 2017 (%)	Simple Average of MFN Duties in 2017 (%)	Potential Tariff Revenue Loss using Average Bound Duties (\$Mn)	Potential Tariff Revenue Loss using Average MFN Duties (\$Mn)
WTO Developing members (excluding LDCs)	28 399	51 558	79 957	12.6	6.5	10 075	5 197
WTO High-Income	81 604	62 962	144 566	0.2	0.2	289	289
Sub-Saharan Africa	1195	4474	5669	46.4	10.9	2 630	618
Middle East - North Africa	1 011	4 360	5 371	18.9	8.43	1 015	453
WTO LDC members (31)	191	2 804	2 995	50.3	11.5	1 506	344

Source: Banga (2019a)

Lee-Makiyama and Narayanan (2019) maintain that the estimates of Banga (2019a) are flawed because they do not include the economic and domestic tax losses that may arise if duties are implemented nor were the significant enforcement and compliance costs involved in implementing electronic tariffs considered. Moreover, they questioned some of the assumptions of the study, for example, that virtually all physical media or paper-based products would be digitized and therefore exempt from duties under the moratorium. It also overstates the potential of ‘lost’ tariffs due to digitalization by over-estimating the value of digital trade, as they believe that the price of digitally-delivered items has tended to decline over time.

The narrow focus on potential revenue implications while dismissing the negative impact of tariffs is a major point of criticism that is resolved by Lee-Makiyama and Narayanan through a computable general equilibrium (CGE) analysis. Applying some extensions to the GTAP

Model, Lee-Makiyama and Narayanan (2019) find that the benefits from maintaining the moratorium on the imposition of customs duties (duty-free status for electronic transmissions) are far greater than the potential revenues that could be generated through tariffs. For instance, they find that the imposition of tariffs would lead to a loss 1.8 million jobs in developing countries. Investments would also decline by about \$5.9 Bn. In addition, the study finds that because of the impact on the domestic economy, government revenue from domestic taxes would also decline significantly. They conclude that “imposing tariffs would be fiscally counterproductive (Makiyama and Narayanan 2019, p.2).” Assuming that countries opted out of the moratorium and levied import duties on digital goods and services, results of the estimation suggest negative economic consequences in the form of higher prices and reduced consumption, thus resulting in slow GDP growth and reduced tax revenues (Table 5). Notably, the losses are far greater than the gains in tariffs.

Table 5. Estimates of Makiyama and Narayan (2019)
GDP AND TAX REVENUE LOSSES BASED ON GLOBAL IMPOSITION (SCENARIO 2) OF TARIFFS ON ELECTRONIC TRANSMISSIONS (IN MILLIONS OF US\$)

	Tariff potential (UNCTAD 2017)	Tariff potential (UNCTAD 2019)	GDP loss	Tax losses
India	39	497	-1,930	-2,007
Indonesia	1	54	-164	-23
South Africa	1	36	-25	-12
China	81	492	-606	-244

Source: Makiyama and Narayanan (2019)

The CGE exercise of Lee-Makiyama and Narayanan show that there is value in the critique of the methodology and assumptions used by Banga (2019a). The static nature of the estimates of Banga fail to realize that the effects on prices and on other markets may erode the benefits from the additional revenue. However, there are also limitations to the use of computable general equilibrium models (CGE) in assessing the impact of imposing tariffs on electronic transmissions. Banga (2019b) identified a number of strong assumptions and methodological issues in the CGE analysis conducted by Lee-Makiyama and Narayanan. For instance, Banga (2019b) notes that the GTAP database is built with a product-level data (but rather broad sectors⁶) which prevents it from identifying digitizable products and in turn, making it impossible to simulate the impact of imposing tariffs (i.e. lifting the moratorium).

Another assumption that Banga (2019b) points out to be unrealistic is the assumption of perfect competition in all markets in all countries (i.e. there is no monopoly) which is not true as many studies show that monopolies or duopolies exist in the digital era. Andrenelli and López-

⁶ For instance, Retail and Wholesale trade (trd) is a broad sector which includes retail sales, wholesale trade and commission trade, hotels and restaurants, repairs of motor vehicles and personal and household goods and retail sale of automotive fuel.

González (2019) and Banga (2019b) find that the results of Lee-Makiyama and Narayanan may be driven by a major assumption: “that imports do not substitute for domestic production”. This assumption means that domestic retail and wholesale trade services cannot substitute for imports of retail and wholesale trade services. This is a very strong assumption which Lee-Makiyama and Narayanan (2019) included because no tariff revenues would be generated without this assumption.

Recently, countries including Australia, Canada, Chile, Colombia, Hong Kong, China, Iceland, Republic of Korea, New Zealand, Norway, Singapore, Switzerland, Thailand, and Uruguay made a submission to WTO which called Members’ attention to a publication on electronic transmission and international trade (i.e., Andrenelli and Lopez Gonzales 2019). In the statement (WT/GC/W/799/Rev.1), it was noted that most of the discussions on the moratorium focused on revenue implications without giving attention to the positive effects of digitalization on the economy. Thus, their WTO submission aimed to capture and highlight the important elements of the study they cited.

In sum, Andrenelli and Lopez Gonzales (2019, p.2) argued that “overall, the revenue implications of the Moratorium are likely to be relatively small and that its lapse would come at the expense of wider gains in the economy.” In other words, the overall benefits of the moratorium outweigh the potential foregone revenues associated with duty-free electronic transmissions. The study explained that tariffs are associated with lower output and lower productivity and that it is the domestic consumers, not foreign firms, that usually bear the burden of tariffs. In addition, tariffs can be unstable source of income and that non-discriminatory forms of taxation (e.g., value-added taxes or goods and services taxes) can be alternatives. Andrenelli and Lopez Gonzales (2019, p.7) also enumerated the benefits of conducting trade electronically which often were missing in the Moratorium debate. To wit:

- Being able to digitise goods is tantamount to a reduction in transport costs which can be as high as 20-30% of overall trade costs. Since such costs tend to be highest for developing countries, electronic transmissions have the potential to help level the playing field in this area.
- Any tariff revenue reductions arising from the removal of tariffs on digitizable goods would be offset by increases in consumer welfare, overall giving rise to net welfare gains. Indeed, when tariff reductions on trade in digitizable goods are simulated, consumer welfare increases by USD 940 million, outweighing costs associated with revenue loss by USD 73 million. Additional welfare gains are also likely to arise from reductions in transport costs, although these are more difficult to model.
- The use of foreign business services, which can increasingly be digitally delivered, is found to increase export competitiveness. Access to such business services is found to be most important for lower middle income and lower income countries.
- Firm-level evidence confirms that digital technologies such as webpages or digital delivery allow firms in developing countries, including SMEs, to become exporters giving rise to new opportunities to grow. Duties applied by other countries on electronic transmissions, including content, could affect the ability of domestic SMEs to export.

2.3.2.3 Feasibility of imposing customs duties on electronic transmissions

As mentioned previously, technical issues have been raised with regard to the imposition of customs duties on electronic transmissions. ICC (2019, p.1) stressed that “customs duties and formalities on electronic transmissions are virtually impossible to implement and enforce”. Specific challenges to the feasibility of collecting customs duties were outlined by the ICC (2019) and presented below:

Ad valorem assessments are unworkable

Case: Live streaming performance

Hypothetical 1—Live-streaming a performance

Consider the hypothetical performer—famous Bollywood actress and singer-songwriter “Priyanka”. Priyanka is debuting a song and opts to livestream it to her millions of fans across several channels. The performance is transmitted electronically to her approximately 44 million Priyanka followers in more than 100 countries.

If an “electronic transmission” is considered an intangible good (an unsettled area of trade law and the working assumption of the Government Indonesia in its new Chapter 99 to the Indonesian Customs Tariff Book¹⁰), then there are potentially millions of electronic transmissions of Priyanka’s performance, transmitted to as many as 100 countries.

Assessing the economic value per view in this instance is not possible.

Source: ICC (2019)

Case: Business to business data flows: service optimization

Hypothetical 2—Business to business data flows—service optimization

Consider South African haulage and logistics provider Cyril, who has recently purchased trucks for his business from a prominent European firm. The trucks are equipped with on-board connected devices and sensors that capture data on the truck’s performance, component wear and tear, safety and handling.

This data is then transmitted to a data centre managed by the European vendor, where it is analysed and processed to provide real-time insights back to Cyril in South Africa. This data enables Cyril to optimise the performance of his fleet, avoid unnecessary downtime, reduce fuel waste, and assess and improve driver skill.

Cyril is but one of the European firm’s many customers worldwide. Hundreds of thousands of trucks covering billions of kilometres every year send to and receive data from the European firm. This amounts to billions of bits of data crossing multiple jurisdictions as the basis for this value-added service.

Assessing the value per data point in this business-to-business package service is not feasible.

Source: ICC (2019)

Non-ad valorem assessments would be highly distortive

To undertake a non-ad valorem duty assessment, there must be some metric upon which an assessment can be made. Two methods of non-ad valorem assessment appear theoretically possible (ICC 2019):

1. Number of bits - A possible form of assessment would be to base an applied rate of duty on the number of bytes or bits (series of zeroes and ones). However, this would grossly distort the digital economy and incentivize reducing the file size which will affect many industries from the creative sectors to advanced manufacturing.

2. Units as a whole - When an intangible is transferred electronically to a particular destination, elements of the intangible are often sourced from servers located in multiple jurisdictions.

Case 3 - Online Streaming

Hypothetical 3—Online Streaming

1. Nasra, based in Jakarta, subscribes to a streaming platform headquartered in the United States. She would like to watch a movie on her smartphone.
2. Under current technology, data are sent via packet switching—a process whereby data are divided into small units, called packets, and transmitted independently via the Internet. The size of a typical individual IP packet is anywhere from 1.5 to 64 kilobytes.
3. Browsing through the titles available to her, Nasra's smartphone receives electronic transmissions to the streaming platform's application on her smartphone. Those transmissions are stored on a third party's distributed system in the cloud, and are transmitted to Nasra's smartphone from Singapore, Hong Kong SAR, Mumbai and Sydney.
4. For Nasra's movie, there could be up to 5 million data packets, or electronic transmissions, sent to her smartphone. This number is not predetermined, as it is a function of the speed of her Internet Service Provider at any point in time—the streaming platform having developed sophisticated technology to determine the optimal video quality consistent with Nasra's internet connectivity. The higher the speed, the greater the number of total data packets.
5. When Nasra clicks play, the platform sends a signal to the 10 nearest servers to Nasra, a subset of the thousands of servers that the streaming platform maintains globally. Packets of data are received from Australia, Japan, Guam, New Zealand, South Korea and The Philippines, until the application determines that Singapore provides the more efficient connection.
6. Part-way through Nasra's streaming of the movie, the streaming platform engages in a routine redundancy check, momentarily suspending service through the region, causing the application to automatically receive data packets from a different geographic region, in this case from several countries within the European Union.
7. By the time Nasra has finished watching her movie, she has received millions of electronic transmissions from at least 9 separate jurisdictions.

Source: ICC (2019)

Given the carrier medium, treating the entire movie as an individual electronic transmission is conceptually unsound. A single certificate of origin or customs declaration for the entire movie is not tenable given the underlying ICT infrastructure that supports it. As such, industry stakeholders argue that it would not be possible for business of any size to comply with the customs formalities for every electronic transmission (ICC 2019).

Casalini and Lopez Gonzalez (2019) explain how the internet delivers data and the factors that determine the value of data (Box 2).

Box 2. What is data and how do data transfers take place?

The internet is a worldwide data network composed of devices which has Internet protocol (IP) addresses as an identifier. A file that is sent from a computer in Country A to country B is broken down into multiple packets. Each packet is attached with the sender's IP addresses and codes which travel through different networks and routes. The routers guide these packets at each step to travel through networks in the shortest and least congested path possible. Once the packets arrive at the receiver, the computer re-assembles these packets according to the specified sequences written in the codes attached to them.

The paths of these packets cannot be readily determined a priori, but a posteriori, it is possible to track the pathway they follow from the source to a given destination (e.g. performing "tracert" command) which may elicit "irregular travel patterns". For example, what might be considered a domestic request for information is really a cross-border request. Consider the following examples: when accessing the OECD library from a computer in Paris packets query a server in the United States. Another is when one user accessing a British newspaper from Paris, the packets could take the route involving three countries: France, the United States, and Poland.

Important characteristics of cross-border data flows include: (1) Transferring data from one country to the other, packets take different routes which often involve third countries. (2) There is a technical issue in determining the origin and destination of data flows. For instance, firms can use mirror sites which replicate webpages in different countries to decrease traffic loads for more efficient data transfers. (3) What might appear as a domestic transfer is actually a cross-border data flow.

Data transfers happen to deliver business results (Schwartz, 2009), but converting this into a monetary value is difficult. It depends on the individual, businesses, and economy how the data would be used and valued. For example, an excel file with 100 personal health records and another with 100 personal shopping entries may need the same data storage space but the value depends on the final user, whether it be a store or a health care provider. Additionally, some types of files are larger than others. By 2021, it is estimated that 82% of internet traffic will be coming from video type files (Cisco, 2017). The data value may increase when combined, such as when shopping entries are linked with health records for advertisement firms to target health-conscious shoppers. Having inherent and potential value, data could become valuable in the future considering the changing business dynamics or combined with data available later on. Although data is often described as the "new oil" (The Economist, 2017), this characterization is misleading (Mandel, 2017). Data is different from oil even though both are essential inputs into the economy. Data is not scarce, it is replicable and transferrable at minimal to no cost at all.

Source: Casalini and Lopez Gonzalez (2019)

2.3.2.4 Customs duties in RTAs

Bans on the imposition of customs duties on electronic transmissions are incorporated in various bilateral, regional and mega-regional trade agreements (ICC 2019). For example, fifteen APEC members, have entered into agreements containing a ban since 2008 (See Table 6).

Table 6. Trade agreements containing the moratorium (non-exhaustive)

Regional Trade Agreements	Bilateral Trade Agreements	
Additional Protocol to the Framework Agreement of the Pacific Alliance	Australia-China FTA	Korea-US FTA
Canada-Honduras FTA	Australia-Hong Kong FTA	US-Bahrain FTA
Colombia-Northern Triangle FTA	Canada-Jordan FTA	US-Colombia TPA
EFTA-Central America FTA	Costa Rica-Singapore FTA	US-Morocco FTA
EU-Central America Association Agreement	Chile-Colombia FTA	Singapore-Australia FTA
EU-Colombia-Peru TA	Japan-Switzerland EPA	Sri Lanka-Singapore FTA
EU-Japan EPA	Korea-Singapore FTA	
EU-Singapore FTA		
Gulf Cooperation Council-Singapore FTA		

Source: ICC (2019)

Some agreements contain affirmations of the moratorium as agreed in WTO Ministerial and while others are truly “WTO-plus” obligations, creating permanent bans on the imposition of customs duties on electronic transmissions. Below are examples of the relevant provisions in the CPTPP, USMCA, and CECA.

Mega-regional example: Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP)

Article 14.3: Customs Duties

1. No Party shall impose customs duties on electronic transmissions, including content transmitted electronically, between a person of one Party and a person of another Party.
2. For greater certainty, paragraph 1 shall not preclude a Party from imposing internal taxes, fees or other charges on content transmitted electronically, provided that such taxes, fees or charges are imposed in a manner consistent with this Agreement.

Source: ICC (2019)

Regional example: US-Mexico-Canada Agreement (USMCA)

Article 19.3: Customs Duties

3. No Party shall impose customs duties, fees, or other charges on or in connection with the importation or exportation of digital products transmitted electronically, between a person of one Party and a person of another Party.
4. For greater certainty, paragraph 1 does not preclude a Party from imposing internal taxes, fees, or other charges on a digital product transmitted electronically, provided that those taxes, fees, or charges are imposed in a manner consistent with this Agreement.

Source: ICC (2019)

Article 10.4: Digital Products

5. A Party shall not apply customs duties or other duties, fees or charges on or in connection with the importation or exportation of digital products by electronic transmission.

Note: The obligation in paragraph 1 does not preclude a Party from imposing internal taxes or other internal charges provided that these are imposed in a manner consistent with Article III of GATT 1994 and its interpretative notes as incorporated into this Agreement by Article 2.2

Source: ICC (2019)

In the three examples, the imposition of customs duties is prohibited on electronic transmission but parties to the agreement may still impose internal taxes. Furthermore, in terms of coverage, the agreements have modified or adopted additional qualifiers to the original term “electronic transmissions” used in the Geneva Ministerial Declaration on global electronic commerce (WT/MIN(98)/DEC/2) and instead used the following:

- “on electronic transmissions, including content transmitted electronically”
- “on or in connection with the importation or exportation of digital products transmitted electronically”
- “on or in connection with the importation or exportation of digital products by electronic transmission”.

2.3.2.5 Ways forward: Alternative route⁷

AGB (1999) clarified that a duty-free electronic transmission is not a request for zero tax on e-commerce. It argues that business engaged in e-commerce should comply with the same tax requirements as their counterpart businesses in conventional/traditional commerce. ICC (2019) recommends that instead of lifting the moratorium on customs duties, the governments may adopt a combination of internal taxation and international tax reform to secure national revenue bases in view of the digital economy.

Some APEC member economies proposed the permanent ban on customs duties on electronic transmissions (i.e., including content transmitted electronically). However, they emphasized that the “moratorium shall not preclude an APEC Economy from imposing internal taxes, fees or other charges on content transmitted electronically, provided that such taxes, fees or charges are imposed in a non-discriminatory manner (APEC 2016, 26-2).” Likewise, “a tariff-free zone for electronic transmissions is not a request for no taxes on electronic commerce (AGB 1999, p.3).

The AGB argued that the same direct and consumption tax requirements for businesses in conventional/traditional commerce should apply to businesses engaged in electronic commerce as well. As AGB put it, “electronic commerce, as a new medium of doing business, should not

⁷ Part of Cuenca (forthcoming).

be subjected to new or additional unique taxes” (AGB 1999, p.3). Nevertheless, governments should recognize that electronic commerce brings about new layers of difficulty in taxation and thus, it requires solutions to the issues of no or double taxation on consumption by private consumers.

The digital economy is described by an unparalleled reliance on intangibles, the massive use of data (particularly personal data), and the widespread adoption of multi-sided business models. Because of the increasingly pervasive nature of digitalization, “it would be difficult, if not impossible, to ‘ring-fence’ the digital economy from the rest of the economy for tax purposes (OECD 2018, p.2).” “In the digital domain, products and services are uploaded, downloaded and used without any product or person physically crossing international borders. Significant profits often are generated from sources within countries without establishing a physical presence in those countries. This online environment presents complex and unique taxation challenges” (AICPA 2018, p.2), which relate to the concepts of the right to tax and the allocation of profits between countries.

The rise of digital economy presents a huge challenge to governments, i.e., to devise a taxation regime that generates revenue but does not reduce the benefits from digitalization. E-commerce poses a major challenge to the existing international tax framework, which was developed before the advent of digital economy. The tax issues are complex and thus far, there have been no reasonable and easily administrable scheme to tax e-commerce. E-commerce spawns tax policy and tax administration issues and so formulation of tax rules of e-commerce with practical administrative schemes will be difficult (Spencer 2014).

Policymakers have exerted efforts in finding solution to ensure fair and effective taxation as the digital economy thrives (Kofler, Mayr, and Schlager 2017). These efforts can be traced back to the advent of the electronic commerce in the 1990s. International organizations (e.g., OECD, EU, and UN) have endeavoured to define the challenges and come up with an international consensus on the best strategy to address these challenges (AICPA 2018). Addressing Base Erosion and Profit Sharing (BEPS)⁸ has been a key priority in OECD/G20 (OECD 2013). Digital technology, borderless economy, and outdated tax rules enable business models to escape taxation in jurisdictions where they do business (i.e., countries of consumption or where consumers/users are located; and shift profits to low-tax countries, otherwise known as tax havens (Morinobu 2018).

In 2013, OECD and G20 countries adopted a 15-point Action Plan (AP) to address BEPS. Such Action Plan was envisioned to ensure that profits are taxed where economic activities generating the profits are performed and where value is created (OECD 2014). For instance, the OECD’s BEPS Action Plan recognizes the need for modernization (i.e., moving away from the traditional “brick and mortar” approach in taxation). In 2015, OECD released the 2015 Final Report that contains the BEPS issues and broader tax challenges that BEPS raises as well as some recommendations (OECD 2015). In 2018, OECD released an interim report that

⁸ Refers to tax planning strategies employed by multinational enterprises (MNEs) that exploit gaps and mismatches in tax rules for tax avoidance (OECD 2015)

provides an in-depth analysis of the main features of highly digitalized business models and value creation, as well as potential implications for the existing international tax framework (OECD 2018). In 2020, the OECD/G20 Inclusive Framework (IF) on BEPS issued a statement on the two-pillar approach to address the tax challenges arising from the digitalization of the economy. On Pillar One, IF endorses the Unified Approach that aims to address the issue on nexus and profit allocation. Pillar Two is work in progress which is meant to ensure a minimum level of taxation (OECD 2020).

While OECD/G20 countries recognize that digital economy cannot be separated from the rest of the economy, they are also aware that certain features of the digital economy may intensify the risks of BEPS for tax purposes. Advances in technological capabilities enable the business models of the digital economy (e.g., e-commerce, online advertising, and cloud computing) to leverage BEPS opportunities. Saint-Amans (2017, p.2) pointed out that “the techniques used to achieve BEPS by these businesses however, are generally not different from the ones used in other parts of the economy, and as such, countries agreed that the digital economy does not generate any unique BEPS issues, and that the solutions designed to tackle BEPS practices in the 14 other points of the BEPS Action Plan should suffice to address these concerns.

Aside from the issue of BEPS and tax avoidance, the key features of the digital economy pose more systematic challenges for tax policymakers that can be categorized into “broader tax challenges” such as (i) the difficulty of collecting VAT/GST in the destination country where goods, services and intangibles are acquired by private consumers from suppliers based overseas which may not have any direct or indirect physical presence in the consumer’s jurisdiction; (ii) the ability of some businesses to earn income from sales from a country with a less significant physical presence in the past, thereby calling into question the relevance of existing rules that look at physical presence when determining tax liabilities; and (iii) the ability of some businesses to utilize the contribution of users in their value chain for digital products and services, including through collection and monitoring of data, which raises the issue of how to attribute and value that contribution (Saint-Amans 2017, p2).

As regards VAT/GST collection, the BEPS project elicited international agreement with respect to the recommendations “to allocate the collection of VAT on cross-border B2C supplies to the country where the customer is located.” On the other two broader tax challenges, the technological developments and business models (e.g., the Internet of things, robotics and the “sharing economy,” among others), “may prove influential and disruptive in the near future.” This raises questions “as to whether the existing paradigm used to determine where economic activities are carried out and where value is generated for income tax purposes continues to be appropriate” (Australian Government 2015; Saint-Amans 2017, p3).

Whether these challenges are sufficiently critical in scale and impact is not yet determined so as to justify changes in the current international framework that are beyond what is proposed in the package of measures to address BEPS as of October 2015. Some potential options have been identified and analyzed to address these challenges. They include, among others,

withholding tax on digital sales and defining a new concept of nexus based on having a “significant economic presence” (Saint-Amans 2017, p3).

Nonetheless, there is need to monitor new technological developments and new tax policy responses that governments adopt to tackle tax challenges. It is critical to assess whether policy solutions (or options) are appropriate in addressing these challenges, cognizant of the implications of a fully-digital world for the fundamental assumptions of the international tax system. In particular, the increasing contribution of consumers to value creation by just providing information is not yet captured in rules of international taxation. It is critical to develop “nexus” rules by expanding the definition of permanent establishment to include “digital presence” as determined by the location of consumers or users. In addition, it is important to modify the formulas for allocating taxable income to incorporate the users’ contribution. The BEPS IF is considering these recommendations (Morinobu 2018).

To date, international consensus on the best strategy to address tax issues and challenges in the digital economy has not been attained. Nevertheless, members of BEPS IF are committed to reach an agreement on a consensus-based solution by end of 2020 (OECD 2020). While waiting for the international consensus, individual countries are not precluded from unilaterally proposing their own solutions. A number of countries have proposed/enacted tax rules/measures to generate revenues from the digital economy. Annex B presents AICPA (2018)’s summary of these tax laws/measures. Morinobu (2018) noted that the growing digital economy may prompt a shift toward consumption-based taxation. As mentioned earlier, the growing international consensus is for VAT/GST to be applied to digital products and services imported by consumers (e.g., Japan, Norway, South Africa, South Korea, Switzerland, and EU member countries) [Australian Government 2015].

Nevertheless, Vasal (2018) argued that the absence of effective tax rules for digital transactions leaves tax authorities the option to force-fit existing tax rules, which are designed for non-digital world. As a result, there is asymmetry, double tax burden, and in some cases, excessive profit allocation. Although the OECD Action Plan offered possible options such as nexus-based test (i.e., significant economic presence), withholding tax for digital transactions, and equalization levy, he cautioned countries to adopt these methods in domestic laws provided they are consistent with their international legal commitments (e.g., tax treaties). Furthermore, some country’s digital taxation initiatives like those of EU, UK, and Australia have met retaliation (e.g, US Pres. Trump’s policy responses) and negative repercussions (e.g., Amazon’s geoblocking of Australians, i.e., diverting them to local websites).

In the final analysis, there are remaining issues and challenges that need to be addressed for countries to fully benefit (i.e., through tax revenue generation) from the digital economy. Valente (2018, p. 7) posed seven (7) pending questions that should be addressed to be able to move forward:

1. On what conditions can a jurisdiction tax income where it considers that its economy has effectively contributed to value creation by the taxpayer in the total absence of any

physical presence? Could, for example, the remote programming of a robot constitute a sufficiently connective link?

2. Is the collection of value adding data from a specific jurisdiction a sufficient link for that jurisdiction to claim taxing rights on the value so created? What volume of data should be collected? Is there any difference if the collection of data is agreed to by the consumer?
3. Which jurisdiction has what power to tax the value created from the analysis of data, i.e. (a) the jurisdiction of the entity benefiting from the results extracted from the data analysis; (b) the jurisdiction where the collection and/or analysis of data takes place, regardless of how remote; (c) the jurisdiction(s) of the persons whose data is collected and analysed, taking into account ownership of the data; or (d) the jurisdiction to which the data relates?
4. How should the following be evaluated: (a) raw data; (b) analysed data; (c) the extraction of conclusions; and (d) how should the value arising therefrom be apportioned between and among jurisdictions?
5. How should transactions taking place exclusively between consumers, i.e. C2C transactions, and the income so arising be characterized for the allocation of taxing rights?
6. Should the avoidance of a loss be considered to be taxable profit? Should consumers and/or users be taxed in respect of the deemed benefits derived from the transmission of data owned?
7. Can mere online surfing be considered to be value adding and, therefore, taxable?

3 Assessment of potential impacts of trade disciplines on e-commerce

3.1 Revenue losses from moratorium on customs duties

Estimates of foregone revenues for the Philippines are presented in this section using various measures of what could be considered “electronic transmissions”.

Table 7 shows the estimates of the potential revenue losses for the Philippines based on the methodology of Banga (2019a) described in Annex A. In this scenario, electronic transmissions refer to the 49 products in the Harmonized System which are digitizable: Photographic and Cinematographic Films (5), Printed Matter (20), Sound and Media (12), Software (7), and Video Games (5).

Table 7. Estimates of Potential Revenue Losses for the Philippines

Physical Imports of Digitizable Products (USD 1000) (a)	575,085
Estimated Online Imports or ET using Growth Analysis (USD 1000) (b)	606,486
Total Imports of Digitizable Products (USD 1000) c = a + b	1,181,570

Simple Average of Bound Duties on Imports of Digitizable Products for the Latest Year, % (2017/2016) (d)	27.22
Simple Average of MFN Duties on Imports of Digitizable Products for the Latest Year, % (2017/2016) (e)	4.38
Potential Tariff Revenue Loss using Bound Duties on Physical Imports of Digitizable Products (USD 1000) f = (a) * (d/100)	156,538
Potential Tariff Revenue Generation from Imports via Electronic Transmissions (ET) using Bound Duties (USD 1000) g = (b) * (d/100)	165,085
Total Tariff Revenue Loss from Moratorium using Bound Duties (USD 1000) h = f + g OR h = c * (d/100)	321,623
Total Tariff Revenue Loss from Moratorium using MFN Duties (USD 1000) i = c * (e/100)	51,753

Notes: The Philippines was not included in the published study. According to Banga, there are missing values on imports of ET products for some years, as a result a time series from 1998-2010 could not be prepared to estimate the average annual growth of imports of ET. These estimates are based on the available figures. Source: Personal communication, Rashmi Banga (January 22, 2020)

Kozul-Wright and Banga (2020) propose that the classification of electronic transmissions be limited to those intangible goods which are homogenous, locally storable, and transferrable. This would cover films, music, printed matter, video games and software, as above. Although they do not agree that business services imported under Mode 1 (cross border supply) are under the scope of the moratorium, they provide estimates to help countries better evaluate the impact of an expanded coverage of electronic transmissions. Table 8 shows the estimate for the Philippines using the latest database of WTO TISMOS or Trade in Services Data by Mode of Supply (Wettstein, et al. 2019).

Table 8. Estimates of Potential Revenue Loss from Imports of services (Mode 1) for the Philippines

Simple Average of Bound Tariffs on Digitizable Products (%)	Imports of all Services under Mode 1 (USD Mn)	Potential Tariff Revenue Loss if ET are Digital Deliveries (as per OECD 2019) using Simple Average Bound Duties on Digitizable Products (USD Mn)
27.22	15,629	4,254

Source: Personal communication, Rashmi Banga (February 5, 2020).

As indicated in Table 9 however, Mode 1 includes transport services which cannot be delivered digitally so the estimated losses presented above are overstated. In addition, distribution services should also not be included.⁹ Thus, the coverage of Mode 1 for purposes of determining the scope of “electronic transmissions” should be further reduced.

⁹ Distribution services are supplied by firms in the wholesale and retail trade industry. The estimate for distribution services in Table 9 includes the commissions of intermediaries who do not own the goods they buy (e.g. dealers, merchants, commodity traders, etc.) and the margins of wholesalers and retailers who buy the goods before re-selling them (Wettstein, et al. (2019, pp. 16-17).

Table 9. Philippine services Imports (\$M), Mode 1(2017)

EBOPS DESCRIPTION	MODE 1
Manufacturing services on physical inputs owned by others	
Maintenance and repair services not included elsewhere	
Transport	4,470.01
Tourism and business travel	
Health services	91.55
Education services	0
Construction	
Insurance and financial services	2,007.63
Charges for the use of intellectual property n.i.e.	751.39
Telecommunications, computer, information and audiovisual services	799.97
Other business services (excluding trade-related)	3,053.72
Heritage and recreational services	0
Other personal services	0
Distribution	4,455.09
Total Services	15,629.35
Total Services minus Transport and Distribution	6,704.26

Notes: Distribution services is not an EBOPS 2010 standard item. It was added for the purpose of TiSMoS.
Source: https://www.wto.org/english/res_e/statis_e/trade_datasets_e.htm accessed on October 6, 2019

Table 10 below shows the new estimates without transport and distribution services using bound and MFN duties.

Table 10. Estimates of Potential Revenue Loss from Imports of services (Mode 1) excluding Transport services for the Philippines

	Bound Tariffs	MFN Tariffs
Simple Average Tariff of Digitizable Products (%)	27.22	4.38
Imports of all Services under Mode 1 excluding transport and distribution services (USD Mn)	6,704	6,704
Potential Tariff Revenue Loss (USD Mn)	1824.90	293.65

Source: Authors' computation

Another approach could be to use UNCTAD's own concept of "digitally-deliverable" services.¹⁰ Applying the methodology above, the results for the Philippines are presented in Table 11.

¹⁰ Digitally-deliverable services are based on the concept of potentially ICT-enabled services as developed by UNCTAD (2015). ICT-enabled services (ITES) conceptually include "activities that can be specified, performed, delivered, evaluated and consumed electronically" and it has been proposed that ITES be defined as "services products delivered remotely over ICT networks (i.e. over voice or data networks, including the Internet)" (Ibid, page 9). Although the various ITES products could be delivered remotely, there is no information to confirm whether they were actually delivered digitally.

Table 11. Estimates of Potential Revenue Loss from Imports of Digitally-deliverable Services for the Philippines (2017)

	Bound Tariffs	MFN Tariffs
Simple Average Tariff of Digitizable Products (%)	27.22	4.38
Imports of Digitally deliverable services (USD Mn)	8,660.42	8,660.42
Potential Tariff Revenue Loss (USD Mn)	2,357.37	379.33

Source: Authors' computation

The summary table below (Table 12) presents the estimated revenue losses using the different measures of “electronic transmissions”.

Table 12. Summary of Potential Tariff Revenue Losses (USD Mn) (2017)

Electronic transmissions	Bound Tariffs	MFN Tariffs
Digitizable Products (Physical Imports of Digitizable Products and Estimated Online Imports using Growth Analysis)*	321.62	51.75
Mode 1 services imports**	4,254.31	684.57
Mode 1 services imports except transport & distribution services**	1,824.90	293.65
Digitally deliverable services imports**	2,357.37	379.33

Sources: *Personal communication, Rashmi Banga (January 22, 2020), **Authors' computations

Andrenelli and Lopez Gonzales (2019) note that the potential foregone revenue of the moratorium as a share of total revenue is relatively small, amounting to an average 0.08%-0.23% reduction in government revenue for developing countries. The Philippine case appears to be consistent with their observation as can be gleaned from Table 13. Based on estimates of digitizable products and the average MFN rate, the foregone revenue is about 0.10 percent of national government revenues which comprise of tax and non-tax revenues as well as grants. Using the bound tariff rate, which Kozul-Wright and Banga (2020) argue is the more appropriate duty for estimation purposes, the potential revenue losses represent 0.65 percent of national government revenues. These scenarios are based on different interpretations of “electronic transmissions” that are available. Of all the definitions of electronic transmissions, the biggest revenue loss would be in the case of Mode 1 services imports. As explained earlier however, Mode 1 services do not entirely represent services that could be electronically transmitted.

Table 13. Potential losses in perspective (2017)

2017	Foregone revenues USD Mn	National Government Revenues	National Tax Revenues	Indirect taxes	Import duties and taxes
USD Mn		49,539	45,083	23,996	9,178
Digitizable Products (Physical Imports of Digitizable Products and Estimated Online Imports using Growth Analysis)					
Bound Tariffs	321.62	0.65%	0.71%	1.34%	3.50%

MFN Tariffs	51.75	0.10%	0.11%	0.22%	0.56%
Mode 1 services imports					
Bound Tariffs	4,254.31	8.59%	9.44%	17.73%	46.35%
MFN Tariffs	684.57	1.38%	1.52%	2.85%	7.46%
Mode 1 services imports except transport & distribution services					
Bound Tariffs	1,824.90	3.68%	4.05%	7.60%	19.88%
MFN Tariffs	293.65	0.59%	0.65%	1.22%	3.20%
Digitally deliverable services imports					
Bound Tariffs	2,357.37	4.76%	5.23%	9.82%	25.69%
MFN Tariffs	379.33	0.77%	0.84%	1.58%	4.13%

Note: 2017 end of period exchange rate USD 1 = PhP 49.92

(http://www.bsp.gov.ph/statistics/statistics_exchrates.asp)

Source of various government revenues: <https://www.dof.gov.ph/data/statistics-bulletin/>

Supposing the moratorium is lifted, there are existing laws and international commitments of the Philippines that would limit the application of customs duties, thus affecting the potential revenues that could be collected. These include:

CMTA De minimis

The Customs Modernization and Tariff Act (CMTA) or RA No. 10863 increased the **de minimis value** from P10 to P10,000. De minimis is the value of goods for which no duty or tax is collected. Specifically, Section 423 of the CMTA, provides that "no duties and taxes shall be collected on goods with freight onboard (FOB) or free carrier (FCA) value of P10,000.00 or below." Certain products are not covered under the new de minimis rule, such as prohibited and restricted importations. For example, importations of tobacco goods, wines, and spirits within the de minimis value shall still be subject to payment of excise tax, as provided by the National Internal Revenue Code (NIRC). Customs Administrative Order (CAO) No. 2-2016 sets out the implementing rules for the application of the new de minimis value. The CAO also gives the Secretary of Finance the power to adjust the de minimis value every 3 years for inflation using the Consumer Price Index provided by the Philippine Statistics Authority.

The law applies to goods.¹¹ If extended to cover electronic transmissions such as digitizable products delivered electronically, duties and taxes will also not be collected on imports with a value of P10,000.00 or below.

Information Technology Agreement

The Philippines is a signatory to the Information Technology Agreement (ITA), which is a plurilateral agreement that requires participants to eliminate and bind customs duties at zero for all products specified in the Agreement (WTO 2017). Incorporating ITA concessions into the WTO schedule extends the benefits from trade liberalization to all WTO members through the application of MFN principle and ensures greater predictability since the obligations are

¹¹ Under Sec 102(x), "goods refer to articles, wares, merchandise and any other items which are subject of importation or exportation."

legally binding and enforceable under the dispute settlement mechanism of the WTO (Ibid, p. 47).

The ITA covers the following products (WTO 2017):

- ITA 1 (1996) - 203 products including computers, telecommunication equipment, semiconductors, semiconductor manufacturing and testing equipment, data storage media and software provided on physical media, scientific instruments, as well as most of the parts and accessories of these products.
- ITA 2 (expansion) (2015) - additional 201 products including a wide range of IT-related products such as electronic devices, video games and consoles, audiovisual/multimedia (GPS, DVD players, smart cards, optical media), machinery for machinery for production of IT goods and semiconductors and others.

The ITA expansion requires its participants to bind and reduce tariffs to zero over a transitional period starting on 1 July 2016 and concluding on 1 July 2019. The Philippine commitments in the ITA 2 are now contained in Executive Order 21 s.2017.

Florence Agreement

The Philippines is a signatory to the Agreement on the Importation of Educational, Scientific and Cultural Materials.¹² Under the Florence Agreement,¹³ contracting states undertake not to apply customs duties or other charges on, or in connection with, the importation of:

(a) Books, publications and documents as listed in Annex A of the Agreement;

(b) Educational, scientific and cultural materials listed in Annex B (Works of art and collectors' pieces of an educational, scientific or cultural character), Annex C (Visual and auditory materials of an educational, scientific or cultural character), Annex D (Scientific instruments or apparatus, intended exclusively for educational purposes or pure scientific research) and Annex E (Articles for the blind), subject to the conditions set out in those Annexes.

Given the country's obligations under the UNESCO treaty, it could be argued that exemptions should also apply to the digitized products.

Commitments in Trade in Services Agreements

If services are include in the definition of electronic transmissions these would be governed by the General Agreement on Trade in Services (GATS). Under GATS, imposing a customs duty would violate National Treatment obligations where commitments have been made since duties

¹² The Philippines submitted its instrument of ratification on August 30, 1952 (See [Conventions \(unesco.org\)](https://www.unesco.org/conventions/signatories) for a list of the signatories.)

¹³ See Agreement on the Importation of Educational, Scientific and Cultural Materials, with Annexes A to E and Protocol annexed (unesco.org). Also, <https://www.officialgazette.gov.ph/books-and-taxes/>

are, by definition, discriminatory (WTO 1998 as cited in Andrenelli and López González 2019).

A review of the schedule of commitments in GATS indicate that the Philippines has made specific commitments with “None” (i.e. no limitations) under National Treatment in Mode 1 (Cross-border supply) in the following services (non-exhaustive): packet-switched data transmission services, circuit-switched data transmission services, On-line information and data base retrieval, Electronic data exchange, Videotex, financial advisory services, commercial banking, credit card services, etc.

Similar commitments (i.e. no limitation in Mode 1 under National Treatment) in the following services were made by the Philippines under the ASEAN Framework Agreement on Service (AFAS) Package 9 (non-exhaustive): architectural services, data base services, R&D services on agricultural sciences, R&D services on economics, interdisciplinary research and experimental development services on ICT, advertising services, interior design services, electronic e-mail, content development services sold to telecommunications companies, data and message transmission services, data network services, electronic message and information services, data and message transmission services, data network services, electronic message and information services, production services of animated cartoons of any kind, motion picture projection services in private screening rooms, singer group and band entertainment services, etc.

3.2 Other impacts

The impact on all sectors dependent on cross-border data flows must be considered for a more balanced assessment of the costs and benefits of trade disciplines on e-commerce. Specifically, trade rules that facilitate cross border data flows would be in line with the country’s interests as a net exporter of digitally-deliverable services (Table 14).

Table 14. Trade in digitally-deliverable services, Philippines (USD million, BPM6)

YEAR	2015	2016	2017	2018	2019
Insurance and pension services	(778.52)	(1,268.53)	(1,416.61)	(1,378.65)	(1,479.09)
Financial services	(36.51)	(164.26)	(268.41)	(287.35)	(524.02)
Charges for the use of intellectual property n.i.e.	(601.42)	(536.92)	(734.47)	(872.90)	(804.84)
Telecommunications services	(117.83)	36.51	20.12	263.62	(133.60)
Computer services	2,822.34	4,802.47	4,797.19	4,729.12	4,697.29
Information services	(16.47)	(17.30)	(30.66)	(44.09)	50.04
Research and development (R&D)	56.55	25.34	9.69	41.32	52.84
Professional and management consulting services	(86.59)	(65.54)	(142.55)	(154.95)	(152.67)
Technical, trade-related, and other business services	12,469.78	10,254.24	10,728.83	12,138.77	11,902.23
Audiovisual and related services	17.65	13.60	(9.84)	(29.57)	(12.80)
TOTAL	13,728.98	13,079.61	12,953.27	14,405.32	13,595.38

Source: <https://unctadstat.unctad.org/> accessed on November 28, 2020.

The success of the Philippine services exports is due to the Information Technology - Business Process Management (IT-BPM) sector. Based on the Balance of Payments, the biggest contributor to the Philippines' services exports is 'Other services'. Moreover, exports are concentrated in a couple of services specifically, 'Technical, trade-related, and other business services' and 'Computer services' revealing the country's reliance on the IT-BPM sector as the main driver of services trade (Serafica 2019).

Should barriers to cross-border data flows be imposed including customs duties, the Philippine IT-BPM sector could be adversely affected given the data-intensive nature of the services it offers. Based on the Annual Survey of Philippine Business and Industry (ASPBI), there were 1,532 establishments in the IT-BPM sector in 2017, with the computer programming activities accounting for the biggest share of 35.2 percent to the total number of IT-BPM establishments. In 2017, the IT-BPM sector generated a total income of USD 11.4 billion and value added of USD 7 billion. Income from transactions outside the country increased by 5.7 percent in 2017, with nearly USD 4 billion earned or 34.6 percent of the total income. Among the trade partners, the USA accounted for the highest share of the total income from transactions outside the country with 65.7 percent.¹⁴

The Philippines emerged two decades ago as an alternative to India for IT-BPM services. It is now the top destination for voice-related services and is rapidly growing its capability to offer non-voice services to a wider set of clients globally.¹⁵ It is expanding its horizontal BPM services in areas such as finance and accounting, as well as vertical-focused solutions such as healthcare information services. According to the industry roadmap, most of the Philippine IT-BPM sector's growth will be driven by high-value services as the country aspires to move up the value chain. Some of these high-value services include:¹⁶

Contact Center and BPO subsector

- Engineering Services Outsourcing (ESO)
- Data Analytics
- Performance Management
- Legal Process Outsourcing (LPO)

Information Technology (IT) Services subsector

- Application Development Management (ADM)

¹⁴ Philippines Statistics Authority, Annual Survey of 2017 Annual Survey of Philippine Business and Industry (ASPBI) - Information Technology -Business Process Management (IT-BPM) Sector: Final Results

2017 end of period exchange rate USD 1 = PhP 49.92

(http://www.bsp.gov.ph/statistics/statistics_exchrates.asp)

¹⁵ See <https://boi.gov.ph/uFAQs/it-bpm/>

¹⁶ See https://boi.gov.ph/sdm_downloads/it-bpm-2/

- System Integration
- Automation Enablement
- IoT-Enablement languages

Health Information Management (HIM) subsector

- Preventive Health
- Remote Healthcare Management
- Provider Services

Animation and Game Development subsector

- 3D animation
- Augmented & Virtual Reality (AR/VR)
- Gamification

Global In-house Center (GIC) subsector

- Industry specific services for Telecom, Healthcare, Insurance and Pharmaceutical

The value of cross-border data flows, however, is not confined to high tech or data intensive sectors such as IT-BPM. Even traditional industries from agriculture, mining, and manufacturing are relying on data from all over the world to support the various stages of their operations and in the conduct of research and development. Moreover, data and the internet are now critical in driving commercial and international trade opportunities, particularly for SMEs. Consumers are benefiting as well from data sharing across borders (Castro and McQuinn 2015; Meltzer and Lovelock 2018). Governments too, rely on imported digital products (e.g. digital maps) to deliver various public services. As such, trade openness and in particular digital trade openness have economy-wide effects enabling productivity growth in both digital and non-digital sectors (Ferracane, *et al.* 2018).

4 Conclusion and Recommendations

This paper provided estimates of the potential revenue losses from a moratorium on customs duties based on different hypothetical definitions of electronic transmissions. Practical difficulties and policy constraints which could limit the actual intake from tariffs were also highlighted. The practical difficulties refer to the technical challenges of implementing and enforcing customs duties on electronic transmissions while the policy constraints refer to existing laws and international commitments of the Philippines which are being pursued in line with other objectives of the government.

To date, regulations on electronic transactions have not yet successfully reached the multilateral level. In the meantime, the Philippine government should consider all scenarios and be ready to respond to whatever international consensus is reached at the WTO regarding the moratorium on the imposition of customs duties. In particular, it should consider the case wherein the WTO members agree on a permanent moratorium in the near future. In this scenario, the Philippine government is on the right track in its effort to mainstream taxation of internet transactions, which is the alternative route that some countries have already taken. Currently, there are proposed bills (e.g., House Bill (HB) 6122, HB6958, and Senate Bill 1591) relating to digital transactions.

In this light, the Philippine government should invest in digital infrastructure to be able to track and document/record, measure and value, and in turn, tax digital transactions. It should create an inter-agency technical working group (IATWG) comprised of the DICT, DTI, DOF-BIR, BOC, DOJ, and other relevant agencies to examine the technical and legal aspects/requirements of an efficient and effective tax system that is appropriate to the digital economy. The IATWG should tap the private sector, particularly the telecommunications company, internet service providers, and others as they serve as gateways of cross-border (i.e., including international and local) digital transactions. Moreover, the Philippine government should consider active participation in the BEPS IF. It should reflect on the questions raised by Valente (2018) presented earlier as they capture the technical challenges that are associated in drawing up a tax mechanism for digital transactions.

On the other hand, if the WTO members decide for the lifting of the moratorium, it is likewise critical for the Philippine government to put in place the appropriate digital infrastructure to track and document/record, measure and value, and impose customs duties on international cross-border electronic transmissions. Such endeavor can be combined with the imposition of internal taxes, which in this case is no longer an alternative route but a complementary initiative to generate government revenues. In this sense, the Philippine government can maximize its investments to digital infrastructure.

Lastly, there are various barriers to data flows, which could adversely affect not only data-intensive industries such those engaged in IT-BPM but the economy more broadly. Thus, the country should support trade rules that facilitate cross-border data flows in line with national interest.

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6 ANNEX A Description of Banga (2019a) methodology

Step 1: Identification of 49 products in the Harmonized System which are digitizable (i.e. which were earlier traded only in physical form but with advancement in technology being traded both in physical form as well as electronically):

- Photographic and Cinematographic Films (5)
- Printed Matter (20)
- Sound and Media (12)
- Software (7)
- Video Games (5)

Step 2: Estimation of the physical trade in each of these identified 49 digitizable products in the period 1998-2017

Step 3: Estimation of the global 'online' imports or electronic transmissions of the 49 identified digital products.

Estimate of global online imports (or ET) from 2011 to 2017 = Hypothetical global physical imports of digitizable products without digitalization - Actual global imports with digitalization

where

Global physical imports of digitizable products in 2011 to 2017 is estimated applying the average annual growth rate of global imports of these products in 1998 to 2010 (a conservative assumption given that new technologies have made electronic transmission easier).

Thus, the estimate of online (ET) imports = Estimated physical imports – actual physical imports.

7 ANNEX B Existing and proposed taxes on the digital economy

Description of existing and proposed taxes on digital economy: Preliminary Discussion

Country	Summary
Australia	The release of a discussion paper exploring options for taxing digital business in Australia is expected soon.
Austria	Introduction of the concept of a virtual permanent establishment, aimed at taxing profits of multi-national enterprises (MNE) active in the digital economy having an online presence but no physical presence.
Chile	Plans to introduce a tax on revenues of foreign companies that provide digital services in Chile through online platforms.
Germany	Coalition agreement of the current ruling parties expressly supports taxing large digital companies.
Malaysia	Practice note issued on the tax treatment of digital advertising provided by non-residents. Payments made to a nonresident digital advertiser subjected to withholding tax if the nonresident does not have a PE or a business presence in Malaysia.
Norway	Proposal issued requesting an assessment of different ways MNEs with a digital business model are taxable.
OECD	Released an interim report on the taxation of the digital economy, including a history, as well as discussions related to business models and value creation, implementation, relevant tax policy developments, adapting the international tax system, interim measures, and the impact of digitalization on other aspects of the tax system.
Singapore	Singapore advocates tax certainty for businesses; tax neutrality between traditional and digital business models; and international consensus on issues relating to the taxation of the digital economy.
United Kingdom	Her Majesty's Revenue and Customs (HMRC) issued an updated position paper on the challenges posed by the digital economy for the corporate tax system and its preferred solutions. The update includes plans for a sales levy on internet-based companies as a temporary solution.

Source: AICPA (2018)

Description of existing and proposed taxes on digital economy: Proposed Laws/Rules

Country	Summary
Estonia	In response to the EU's digital tax package, Estonia suggested different thresholds apply for each member country considering the size of each member country.
EU	Two proposals issued for the taxation of digital economy companies. (i) Temporary Digital Services Tax imposed on revenue or turnover (ii) Long-term solution requiring companies to pay tax in each EU member where they maintain a "significant digital presence" or a "virtual permanent establishment."
Indonesia	Proposal to introduce a 0.5% tax rate on digital economy transactions.
Latvia	Draft tax bill released for digital economy transactions that includes measures to track transactions occurring through online platforms, including joint ventures that conduct online transactions; and provide rules for nonresident websites whose only economic activity is advertising.
Romania	Approved the EC's recommendation for a temporary Digital Services Tax.
Spain	Announced intention to introduce a digital services tax, in line with the EU draft directive. Expected to send a proposed law to Spanish Congress within 3 months of approval of the 2018 budget.

Source: AICPA (2018)

Description of existing and proposed taxes on digital economy: Enacted Laws/Rules

Country	Effectivity	Summary
Brazil	Jan. 1, 2018	A federal law was approved that authorizes cities to create a minimum service tax on companies that provide video, imaging, sound, and text for downloading, as well as the sale of applications. San Paulo and Rio de Janeiro have both imposed a minimum service tax.
Colombia	Jan. 1, 2017	New law provides that provision of digital services by non-resident companies to a Colombian beneficiary are subject to VAT. Credit and debit card issuers and other payment processors will withhold Colombian VAT, subject to implementation regulations that are not yet issued.
Hungary	July 1, 2017	Enacted new law on the taxation of online advertising revenues.
India	April 1, 2019	Enacted new law that “significant economic presence” of a non-resident in India will constitute a “business connection.”
Israel	April 11, 2016	Establishes new digital “significant economic presence” PE rules.
Italy	Jan. 1, 2019	The new law introduces a 3% tax on digital services provided to Italian companies and PEs.
Saudi Arabia	July 30, 2015	Establishes new virtual service permanent establishment rules.
Singapore	Jan. 1, 2020	Extended goods and services tax on imported services.
Slovakia	Jan. 1, 2018	Digital platforms facilitating transport and lodging services in Slovakia are subject to a new regulatory regime. Digital platforms that act as a marketplace for such services in Slovakia must register a PE.
South Africa	Oct. 1, 2018	VAT rules were amended to include in the definition of “enterprise” the supply of “electronic services” by a nonresident to a recipient in South Africa.
Taiwan	May 1, 2018	Enacted new law clarifying the taxation of income obtained by foreign companies from cross-border sales of electronic services to residents.
Thailand	May 14, 2018	Two emergency decrees issued on taxation of digital asset business operations and Thai tax ramifications on certain income earned from digital assets.

Source: AICPA (2018)