RESEARCH STUDY

Understanding E-Commerce Issues in Trade Agreements

A Development Perspective Towards MC11 and Beyond

Amir Ebrahimi Darsinouei
Rashid S. Kaukab

CUTS International

Understanding E-Commerce Issues in Trade Agreements: A Development Perspective Towards MC11 and Beyond

Authored by:

Amir Ebrahimi Darsinouei
Rashid S. Kaukab

Published by:

CUTS INTERNATIONAL, GENEVA
Rue de Vermont 37-39
1202 Geneva, Switzerland
www.cuts-geneva.org

Funding support

SWEDEN

This publication should be cited as: Ebrahimi Darsinouei, Amir and Kaukab, Rashid S. (2017). "Understanding E-Commerce Issues in Trade Agreements: A Development Perspective Towards MC11 and Beyond" Geneva. CUTS International, Geneva.

Cover image: © 2008 G.L. Barose

Table of Contents

Abbreviations

ASEAN	Association of Southeast Asian Nations
B2B	Business to Business
B2C	Business to Consumer
C2B	Consumer to Business
CTG	The Council for Trade in Goods
CTS	The Council for Trade in Services
CTD	The Committee on Trade and Development
DDA	The Doha Development Agenda
FED	The Friends of E-Commerce for Development
GATT	The General Agreement on Tariffs and Trade
GATS	The General Agreement on Trade in Services
GVC	Global Value Chain
ICT	Information and Communications Technology
ITU	International Telecommunication Union
IP	Intellectual Property
LDC	Least Developed Country
MSME	Micro, Small and Medium Enterprises
ML	Machine Learning
MFN	Most Favoured Nation
NT	National Treatment
OECD	The Organization for Economic Co-operation and Development
RCEP	The Regional Comprehensive Economic Partnership
RTA	Regional Trade Agreement

SME	Small and Medium Enterprises
TFA	Trade Facilitation Agreement
TISA	The Trade in Services Agreement
TTIP	The Transatlantic Trade and Investment Partnership
TRIPS	The Agreement on Trade-Related Aspects of Intellectual Property
TPM	Technological Protection Measures
UN	The United Nations
UNCTAD	The United Nations Conference on Trade and Development
UNECE	The United Nations Economic Commission for Europe
UNESCAP	The United Nations Economic and Social Commission for Asia and the Pacific
WTO	The World Trade Organization
WIPO	The World Intellectual Property Organization

Abstract

E-commerce (also known as digital commerce) has become the buzzword of the multilateral trade discussions. There is no international event organized to address trade-related issues that does not offer at least a number of sessions followed by numerous formal and informal discussions about the role of digital economy and e-commerce in the global economy and trade negotiations. In addition, the recent communication papers submitted by the Member States to the World Trade Organization (WTO) suggest that e-commerce is going to be discussed in the upcoming 11th WTO Ministerial Conference (MC11) - more than any other previously held Ministerial Conferences. Despite all these, the definition and structure of e-commerce, and how it affects the development dimensions of trade agreements are not clear for many who are involved in the e-commerce discussions at the global level. This paper explores different aspects of e-commerce in terms of technology and trade impact, suggests a possible framework for e-commerce in trade agreements, and finally touches on the possible outcomes of the e-commerce discussions at MC11 by taking into account the development-related aspects of the digital trade.

Introduction

In the fiscal year ending March 31, 2017, Alibaba, Chinese e-commerce giant, reported a consolidated revenue of USD$ 23 billion[1]. In the United States, the world largest consumer market, another e-commerce titan, Amazon, recorded a revenue of US$ 136 billion in the 2016 fiscal year[2]. Goldman Sachs, an American investment bank, predicts that the Chinese e-commerce market is on track to double by 2020[3]. According to the UNCTAD, the value of online trade has been accelerating upwards -worth about US$ 22.1 trillion in 2015 which is 38% more than the global value of e-commerce in 2013[4].

There is a set of reasons that suggest e-commerce will keep growing in the coming years, and will play an important role in economic gain around the world. Expansion of distribution networks that locates inventories closer to consumers will push more categories such as healthcare and grocery to go online. Millennials in developed countries who grow up buying goods using e-commerce platforms are moving to a phase of their lives in which they will be able to spend even more on goods and services that are being sold online. In least developed countries (LDCs) and developing countries more people choose online shopping methods as their income continue to raise and mobile networks coverage expands. Advancement in data analysis, and machine learning (MI) will support e-trades and manufacturers to become more productive by understanding and analyzing the ever-growing of consumer data, and tailor their products and services based on consumer behavior and needs[5]. The digital economy revolution, and its core engine, e-commerce, has also raised the trade in Global Value Chains (GVCs). The emergence of GVCs allows companies to be specialized in a small part of the supply chain, giving Micro, Small and Medium Enterprises (MSMEs) more avenues to participate in international trade[6].

Consumers benefit from the spread of e-commerce services through increase in competition and market transparency. MSMEs could benefit from more productivity and expanded demand as they go online. E-commerce and modern communication technologies reduce the costs of trade by lowering transaction costs and by enabling firms and their clients to communicate more effectively with one another[7]. In particular, firms in developing countries that offer labor intensive, differentiated products such as software or crafts will experience increased in demand through e-commerce channels. For small firms in developing countries being able to trade internationally through GVCs, means that they can engage in business activities and tasks in which they have a comparative advantage, and to overcome their knowledge gap[8]. The World Trade Organization (WTO) World Trade Report 2016 states that "On average, 97 percent of internet-enabled small businesses export". MSMEs can access to global advertisement networks and offer their products and

[1] "Annual revenue of Alibaba Group from 2010 to 2017." statista.com. https://www.statista.com/statistics/225614/net-revenue-of-alibaba/ (accessed November 29, 2017).

[2] "Net Sales Revenue of Amazon from 2004 to 2016." statista.com. https://www.statista.com/statistics/266282/annual-net-revenue-of-amazoncom/ (accessed November 29, 2017).

[3] "China E-Commerce: The Next Leg of Growth." goldmansachs.com. http://www.goldmansachs.com/our-thinking/pages/ronald-keung-china-next-leg-of-growth.html (accessed November 29, 2017).

[4] "$22 Trillion E-Commerce Opportunity for Developing Countries." Unctad.org. http://unctad.org/es/paginas/newsdetails.aspx?OriginalVersionI D=1281&Sitemap_x0020_Taxonomy=Information%20and%20Communication%20 (accessed November 29, 2017).

[5] "The New Bazaar: E-Commerce Takes Off." economist.com. https://www.economist.com/news/special-report/21730546-e-commerce-transforming-business-and-daily-life-mostly-better-says-charlotte (accessed November 29, 2017).

[6] Ebrahimi Darsinouei, Amir. "Integrating Micro, Small and Medium Enterprises in International Trade: A Brief Analysis of Challenges and Opportunities." Geneva. CUTS International, Geneva. (2016)

[7] Ibid

[8] "Global Economic Prospects and The Developing Countries." Washington DC: The Instruction Bank of Reconstruction and Development (IBRD) / The World Bank (2001)

services to potential customers anywhere in the world, using Internet and e-commerce platforms such as e-Bay and Alibaba.

Despite all the promising benefits of e-commerce for businesses, consumers and international development in general, the e-commerce adaptation in LDCs and developing countries face many challenges. Access to Internet is the fundamental ingredient of e-commerce development. However, in many developing countries inadequate information and communication technology (ICT) infrastructure keeps the Internet penetration rate lower than in developed countries –for instance 32% in Africa compared to 89% in North America[9]. This along with other issues such as lack of efficient logistic services, and lack of digital knowledge lead to the formation of the global digital divide. The digital divide prevents half of the world's population access to Internet, and creates a highly unequal distributed Internet access between developed and developing countries -where developed countries account for the majority of Internet subscriptions[10]. Thus, a multi-stakeholder approach is required in order to address these challenges and support developing countries in their efforts to develop progressive e-commerce adaptation measures.

As more firms choose to go online, and e-commerce expands beyond the domestic territories of countries, the inclusion of e-commerce provisions into regional initiatives including, regional trade agreements (RTAs) and broader economic partnership agreements, become more important. Addressing digital commerce related issues in trade agreements could ease the e-commerce adaptation in the developing world and enables LDCs and developing countries to effectively harness the benefits of e-commerce.

The traditional e-commerce discussions, such as in the Organization for Economic Co-operation and Development (OECD) 1998 framework on e-commerce, mainly focused on online consumer protection, privacy, and authentication. In recent years the connection between the technical aspects of e-commerce and trade issues has been explored in the multilateral trading discussions in the WTO also though the issue had been covered in the core text and annexes of telecommunications and financial services agreements. Moreover, dedicated e-commerce provisions are being included in the agenda of regional and mega-regional trade agreements and negotiations. Examples of such mega regional trade agreement negotiations are: The Trade in Services Agreement (TISA), the Regional Comprehensive Economic Partnership (RCEP), and the Transatlantic Trade and Investment Partnership (TTIP).

The World Trade Organization (WTO) plays a vital role in facilitating the discussions about e-commerce. In 1998, the WTO established the Work Programme on Electronic Commerce to examine in-depth e-commerce issues related to four major areas: trade in services, trade in goods, intellectual property (IP) rights, and trade and development. In recent years, the discussions about the future of Work Programme and e-commerce discussions in general have been intensified at the WTO- especially since July 2016, when a number of Member States proposed to negotiate new rules and push e-commerce negotiations into the WTO agenda. This is opposed by many developing countries as it challenges the current mandate of Work Programme on Electronic Commerce, as well as the Nairobi Ministerial Declaration that puts the remaining Doha issues at the core of the negotiations at the WTO[11].

In this context, this paper sheds light on the definition of e-commerce, and explores how it is being treated in trade agreements - in order to provide a clear understanding about the latest e-commerce related dynamics at the WTO, and how they might impact e-commerce discussions in MC11.

[9]"Global Internet Penetration Rate as of September 2017, By Region." statista.com https://www.statista.com/statistics/269329/penetration-rate-of-the-internet-by-region/ (accessed December 2, 2017)

[10] Karake-Shalhoub Zeinab. Al Qasimi, Lubna. "The Diffusion of E-Commerce in Developing Countries: A Resource-Based Approach." UK: Edward Elgra Publishing Limited (2006)

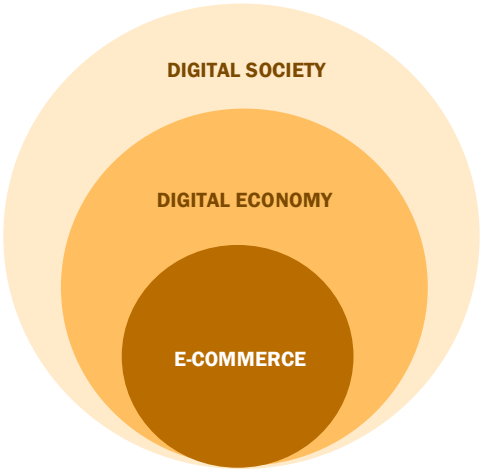
[11] "The WTO's Discussions on Electronic Commerce". Geneva, Switzerland: The South Center. (2017).

SECTION 1

Digital Economy and E-Commerce

In order to understand electronic commerce issues in trade agreements, we need to understand how e-commerce is being formed, and how it is being defined in the multilateral trading system. The structure and formation of e-commerce are linked to two broader concepts: the digital society and the digital economy. The advancement in ICT technologies and services in the past few decades is leading to the establishment of a unique global digital society. Modern communication, computing, and content creation tools such as broadband connectivity, social media and cloud computing, enable us to rethink the traditional definitions of social norms, communication, economy and business organizations[12]. This new digital society and its ICT-enabled mechanisms are the cornerstones of the digital economy in which billions of economic activities that results from billions of everyday online connections among people, businesses, devices, data and processes can be circulated and facilitated all over the world in the shortest time possible[13]. One of the most important characteristics of the digital economy is the transformation of knowledge and economic activities into data. Vast amount of data is being generated constantly through all these interconnected people, devices and processes. In the digital economy storing and access to data, and knowledge of data analysis are the main drivers for creativity and creating new business opportunities. It is at the heart of this digital economy that business processes can be done through the use of electronic networks - especially Internet and web-based services- and lead to the formation of e-commerce (Figure 1)[14].

FIGURE 1



Traditional business models including Business to Business (B2B), Business to Consumer (B2C), and Consumer to Business (C2B) all can be delivered through e-commerce platforms as well. However, given the broad implications of conducting business with the use of electronic networks and constantly changing area of business management and information technology; there has not been a unique and globally accepted definition for e-commerce yet. Different stakeholders define e-commerce using their own terms and methodologies, though, there is one theme that is common in all these definitions: selling and delivering of goods and services using electronic means and computer networks.

The two widely used definitions of e-commerce in the sphere of international relations and in the context of international trade have been suggested by the OECD

[12] Tapscott, Don. "The Digital Economy: Promise and Peril in the Age of Networked Intelligence." McGraw-Hill (1996).

[13] "What is Digital Economy: Unicorns, Transformation and the Internet of Things." deloitte.com. https://www2.deloitte.com/mt/en/pages/technology/articles/mt-what-is-digital-economy.html (accessed November 30, 2017)

[14] S. Kaukab, Rashid. "Understanding E-Commerce Issues in Trade Agreements: A Development Perspective Towards MC11 and Beyond." Presentation: The WTO Public Forum. (September 2017)

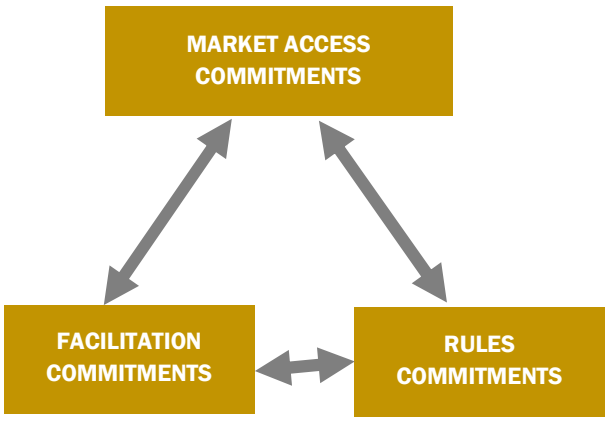
and the WTO. The OECD definition of e-commerce states that "an e-commerce transaction is the sale or purchase of goods or services, conducted over computer networks by methods specifically designed for the purpose of receiving or placing of orders" (OECD, 2013). This definition requires that the order should be made online for the transaction to be considered as e-commerce. However, the payment and delivery may take place physically. The Work Programme on Electronic Commerce at the WTO established a more general definition of e-commerce, which "is understood to mean the production, distribution, marketing, sale or delivery of goods and services by electronic means" (WTO, 1998). In this definition, a transaction can be classified as e-commerce even if some part of it are not being done by electronic means.

SECTION 2

A Possible Framework for E-Commerce in Trade Agreements

The ever-growing importance of e-commerce has found its way into regional initiatives including, regional trade agreements (RTAs) and broader economic partnership agreements. Studies show that more than half of the WTO members have signed at least one RTA that contain a standalone e-commerce provision. That includes several developing countries, however, no LDC has yet signed such RTA. Nowadays there are 69 RTAs worldwide with embedded stand-alone e-commerce chapters, along with at least 21 other RTAs without a dedicated e-commerce chapter, but with digital commerce relevant provisions in their texts[15]. Looking into different chapters of these trade agreements including, different aspects of their e-commerce provisions such as electronic authentication and e-signature, cross border data flows and paperless trading, enable us to draw a framework for e-commerce in trade agreements especially when it comes to the WTO discussions on e-commerce. The main digital commerce related issues discussed in RTAs worldwide can be divided into three categories: market access, rules and regulations, and facilitations (Figure 2)[16].

FIGURE 2



[15] Wu, Mark. "Digital Trade-Related Provisions in Regional Trade Agreements: Existing Models and Lessons for the Multilateral Trade System." Geneva, Switzerland: International Centre for Trade and Sustainable Development (ICTSD) and World Economic Forum. (2017).

[16] S. Kaukab, Rashid. "Understanding E-Commerce Issues in Trade Agreements: A Development Perspective Towards MC11 and Beyond." Presentation: The WTO Public Forum. (September 2017)

Market Access Commitments

Market access commitments contain a wide range of topics including customs duties, valuation issues, movement of natural persons, and access to data. Among those, the elimination of customs duties is by far the most commonly found provision in all RTAs related to market access (Wu, 2017). Elimination of tariffs ease the delivery procedures of goods sold – especially when it comes to cross-border low-value e-commerce transactions. For instance, the US FTAs with Colombia[17], Korea (KORUS)[18] and Peru[19] set de minimis threshold at $200 USD for duties and taxes on express shipments.

Data access is another important and challenging issue related to market access. As mentioned, data has become the essence of the digital economy. E-commerce platforms such as Amazon and Alibaba rely on global flows of data in order to enable e-traders and consumers to sell and buy goods and services on the Internet. However, RTAs that contain provisions on trans-border data flows (TDF) and data localizations are not many. Several RTAs (and plurilaterals) - whether in force or currently being negotiated - including, the Trade in Services Agreement (TISA), US-South Korea Free Trade Agreement (KORUS) and Transatlantic Trade and Investment Partnership (TTIP), have addressed issues related to international data flows (Wu, 2017). For instance, article 15.8 of KORUS –under the provision of electronic commerce- states "Recognizing the importance of the free flow of information in facilitating trade, and acknowledging the importance of protecting personal information, the Parties shall endeavor to refrain from imposing or maintaining unnecessary barriers to electronic information flows across borders." [20] In TISA negotiations, several countries including Canada, Colombia and the US have called for prohibition of blocking cross-border information transfer and would strongly discourage data localizations mandates[21].

Rules and Regulations Commitments

These commitments touch on different issues including intellectual property rights, protection of personal information, consumer protection and competition. Almost two-thirds of RTAs dated back to 2001 offer provisions in favor of adaptation of consumer protection laws (Wu, 2017). In addition, they often call for providing protection for consumers who interact with e-commerce platforms equal to consumers who engage with traditional bricks-and-mortar businesses. For example, article 12.7 of the China – Australia FTA (ChAFTA)[22] on online consumer protection states that "Each Party shall, to the extent possible and in a manner it considers appropriate, provide protection for consumers using electronic commerce that is *at least equivalent to that provided for consumers of other forms of commerce* under their respective laws, regulations and policies."

The study (Wu, 2017) found that approximately one-third of RTAs contain chapters that address protection of personal information, along with calling for implementation of measures to tackle the issue of unsolicited commercial messages such as promotional emails sent to consumer without their prior request – also known as unsolicited commercial emails (UCE).

Intellectual property is important for e-commerce and vice versa. E-commerce more than other forms of doing business involves selling products and services that require IP licensing. That includes but not limited to, music, photos, software, design and training modules. In addition, IP is vital for making e-commerce work as

[17] "Colombia TPA: Final Text" ustr.gov. https://ustr.gov/trade-agreements/free-trade-agreements/colombia-fta/final-text (accessed November 30, 2017)

[18] "KORUS FTA: Final Text" ustr.gov. https://ustr.gov/trade-agreements/free-trade-agreements/korus-fta/final-text (accessed November 30, 2017)

[19] "Peru TPA: Final Text" ustr.gov. https://ustr.gov/trade-agreements/free-trade-agreements/peru-tpa/final-text (accessed November 30, 2017)

[20] "Free Trade Agreement between the Republic of Korea and the United States of America." uskoreaconnect.org. http://www.uskoreaconnect.org/pdfs/fta_all.pdf (accessed November 30, 2017)

[21] Ahmed, Usman and Anupam Chander. "Information Goes Global: Protecting Privacy, Security, and the New Economy in a World of Cross-border Data Flows." E15Initiative. Geneva, Switzerland: International Centre for Trade and Sustainable Development (ICTSD) and World Economic Forum. (2015).

[22] "Text of China-Australia Free Trade Agreement "gov.au. http://dfat.gov.au/trade/agreements/chafta/official-documents/pages/official-documents.aspx (accessed November 30, 2017)

Internet functions based on components that each are a type of IP such as, software, routers, networks, switches and user interface[23]. The creation of the WTO and the implementation of the Agreement on Trade-Related Aspects of Intellectual Property (TRIPS) led to a significant growth in the number of RTAs that contain provisions on IP rights[24]. Many of IP provisions in RTAs discuss the applicability of intellectual property rights in the context of e-commerce and ICT. However, there is no significant efforts to move beyond the WTO framework in order to initiate new rule-making on intellectual property rights and e-commerce[25].

Intellectual property provisions in RTAs that address e-commerce and IP come across a range of different areas including, WIPO Internet treaties, domain names, Technological Protection Measures (TPM), and intermediary liability (Wu, 2017). There are several RTAs that refer to intellectual property rights when dealing with e-commerce, such as the RTAs of Japan-Singapore, the Association of Southeast Asian Nations (ASEAN)-Australia-New Zealand (AANZFTA), US-Chile and Canada-Columbia. For example, AANZFTA touches on the issue of IP and e-commerce in article 9 of chapter 10, titled "Co-operation on Electronic Commerce" The article encourages all Parties to implement measures on co-operative research and training activities that may include "sharing information and experiences and identifying best practices in relation to domestic legal and policy frameworks in the sphere of electronic commerce, including those related to data protection, privacy, consumer confidence, cyber-security, unsolicited electronic mail, electronic signatures, intellectual property rights, and electronic government."

Interestingly, the all-important issue of competition in digital trade sphere has not found the mention it deserves in RTAs. One can argue that some aspects of this have found their way through provisions related to data flow. Data and how it is being accessed, treated and regulated play a central role in the realm of competition and e-commerce. Issues such as cross-border data flows, data localization, data protection, and data processes can impact competition – especially when it comes to MSMEs. For instance, the algorithms of the Internet search engines (such as Google and Baidu) might not list small firms in their top results, as they generate their results based on the data collected from most relevant search results by consumers. That usually increases the online visibility of large companies more than smaller ones and newcomers, which might also impact the competition. Large multinational and their restrictive activities, along with the monopoly of ICT-enabled services, and the implementation of data protectionism measures may hinder the ease of doing business, rising costs for smaller firms and possibly prevent them to engage with e-commerce in certain regions. In recent years, this has been the base of many e-commerce discussions on competition. Some countries, led by US and Japan, which define online competition based on the concept of free flows of data, have pushed to make sure that provisions that call for the free flows of information is being included in RTAs (Wu, 2017).

Facilitation Commitments

Paperless trade, e-signatures, and digital authentication are among the main e-commerce issues related to facilitation commitments in RTAs. Nearly half of RTAs include measures on promoting e-certification and e-signature often embedded under their e-commerce provisions -focusing on their mutual recognition and interoperability in particular (Wu, 2017). The coverage of digital recognition of e-signature and e-certification vary among RTAs. For example, Chile – Malaysia FTA[26] briefly touches on this issue in annex A4, under the provision of certification of origin where it states that "Parties should implement an electronic system of certification of origin. Parties also recognize the validity of the digital signature." In contrast, ChAFTA, not only includes the use of electronic means when it comes to certificate of origin procedures, but also, in Article

[23] "Intellectual Property Issues Related to Electronic Commerce" The World Intellectual Property Organization (WIPO).

[24] Raymundo Valdés and Maegan McCann. "Intellectual Property Provisions in Regional Trade Agreements: Revision and Update." The World Trade Organization (WTO). (2014).

[25] Lior Herman. "Multilateralsing Regionalism: The Case of E-Commerce." OECD Trade Policy Working Paper NO.99. (2010).

[26] "Malaysia-Chile Free Trade Agreement." miti.gov.my. http://fta.miti.gov.my/miti-fta/resources/Malaysia-Chile/MCFTA.pdf (accessed November 2017)

12.6, engages with other aspects of the digital authentication and e-signature and covers areas such as:

- Mutual determination of appropriate electronic signature and authentication methods.
- Providing a framework for authentication service providers to prove before judicial or administrative authorities that their electronic authentication services comply with the relevant legal requirements.
- Working towards the mutual recognition of digital certificates and electronic signatures.
- Encouraging the use of digital certificates in the business sector.

E-commerce platforms bring sellers and buyers closer to each other. Although it makes commercial procedures more efficient, goods still need to be transported to buyers and financial transactions should take place. All of this often involves a large amount of paperwork –especially in developing countries- which act as a barrier to cross-border e-commerce developments. Paperless trade usually refers to conducting of such trade activities on electronic basis rather than on paper-based data and documents. Almost 50% of RTAs worldwide contain provisions related to paperless trade including, e-payment system, e-submission and processing of trade-related data/documents, e-submission of sea cargo manifests, and e-transmission of financial information (Wu, 2017). According to a study by Asian Development Bank Institute (ADBI) these measures mostly found in trade facilitations and customs chapters as well as e-commerce chapters of RTAs[27]. The study shows that the most recent RTAs contain more comprehensive paperless trade provisions than those featured in the WTO Trade Facilitation Agreement (TFA). The study also finds out that, in Asia and the Pacific, the number of RTAs covering paperless trade issues has become extensive, and that their articles on paperless trading often feature three key elements:

- Aim to make electronic versions of their trade administration documents publicly.
- Endeavor to accept trade documents submitted electronically as the legal equivalent of their paper version.
- Commitment to exchange views and/or cooperate with each other as well as internationally to enhance the acceptance of electronic documents.

An example of a multi-stakeholder approach to foster the development of paperless trade is the Framework Agreement on Facilitation of Cross-border Paperless Trade in Asia and the Pacific[28]. The initiative adopted by Member States of the United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP) in May 2016 to facilitate cross-border paperless trade by providing dedicated intergovernmental framework to develop legal and technical solutions.

[27] Duval, Yann. Mengjing, Kong. "Digital Trade Facilitation: Paperless Trade in Regional Trade Agreements." Asian Development Bank Institute (ADBI). (2017).

[28] "Framework Agreement on Facilitation of Cross-border Paperless Trade in Asia and the Pacific" unescap.org. http://www.unescap.org/resources/framework-agreement-facilitation-cross-border-paperless-trade-asia-and-pacific (accessed December 3, 2017)

SECTION 3

E-Commerce Issues at the WTO

The WTO has a unique position within the framework of the multilateral trading system in order to facilitate discussions about e-commerce. Through its current treaties including The General Agreement on Tariffs and Trade (GATT), GATS, and TRIPS, the WTO regulates many relevant e-commerce issues. That includes telecommunications liberalization, intellectual property rights (IPR), and some aspects of ICT development. It also provides a platform for Member States to discuss other emerging and challenging issues related to e-commerce including adaptation, capacity building, and data access. Drawing from the study of e-commerce provisions in RTAs, the temptation would be to divide the e-commerce issues at the WTO into similar three categories of market access, rules and regulation, and facilitation.[29] The WTO Work Programme on Electronic Commerce, established in 1998, facilitates the discussions about all these issues and sets out responsibilities for WTO bodies in e-commerce related areas. A look into the history of the WTO Work Programme on Electronic Commerce shows how addressing e-commerce has evolved from the late 90s until now.

The WTO Work Programme on Electronic Commerce: 1998 - 2015

The Work Programme on Electronic Commerce established in 1998 instructed four councils of the WTO[30] to examine and report to the General Council on the treatment of this issue. This work programme allowed the four Councils to examine in-depth e-commerce issued related to their respective areas of mandate and often based on submissions by the WTO Members. Below is a summary of the main discussion points until 2015:

Council for Trade in Services

The Council for Trade in Services (CTS) was tasked to examine and report on the treatment of electronic commerce in the General Agreement on Trade in Services (GATS) legal framework. One of the first points of discussion in the Council was the applicability of GATS to electronic commerce, which led to a reflection on the definition of trade in services. GATS defines trade in services as the supply of a service through any of four modes: cross border supply (mode 1), consumption abroad (mode 2), commercial presence (mode 3), and presence of natural persons (mode 4) (Article I:2). GATS takes an approach of 'technology neutrality', as it makes no distinction between the different technological means by which a service may be delivered and covers the supply of services through electronic means in the same way as all other types of delivery (WTO, 1998b). Moreover, electronic delivery can take place under any of the four modes of supply.

There is a wide range of issues that arise over the mode of supply that need to be considered by CTS. That includes, Most Favoured Nation (MFN) and National Treatment (NT), transparency, increasing participation of developing country, domestic regulation, standards and recognition, competition, protection of privacy, the public morals and prevention of fraud; as well as market access commitments on electronic supply of services (including commitments on basic and value added telecommunications services and on distribution services); access to and use of public

[29] As will be shown later in the study, this would not fully and adequately capture all the issues being discussed in the WTO.

[30] These are: the Council for Trade in Services, The Council for Trade in Goods, the Council on TRIPs, and the Committee on Trade and Development.

telecommunications transport networks and services; customs duties; and classification issues[31].

In terms of MFN, the main issue is to discuss the concept of "like services and service suppliers" when it comes to services that are being delivered electronically. The intangibility of digitally-delivered services, the difficulty to draw a line between product and production, the existence of four modes of supply, and the lack of a detailed nomenclature are some of the factors which complicate the task of establishing "likeness" in services trade. In addition, the "likeness" issue is unresolved in both the GATS and GATT rendering it to be examined on a case-by-case basis.[32]

Regarding transparency, it was generally agreed that Article III of the GATS in this regard applies to electronically supplied services as well. Furthermore, on the issue of increasing participation of developing countries, the CTS proposed the need for more liberal markets and gaining more technology access that would enable better integration of these set of countries in e-commerce trade. Issues of domestic regulation, standards, and recognition have also been discussed in some detail, with a recommendation that measures affecting trade in services in the Article I of the GATS, also apply to the supply of services electronically[33].

When it comes to assessing competition, there was a general view that e-commerce makes it easier for small service suppliers to become engaged in trade, since the sector is expanding all suppliers will benefit from delivering their services through Internet, which acts as a platform that eliminates the traditional barriers of entry to new markets – such as establishing a physical office in the target market. It was however observed that the restrictive activities of big businesses along with monopolies may create obstacles to e-commerce. Furthermore, it has also been noted that the protection of privacy and public morals and the prevention of fraud should apply although such objectives should not be fulfilled in a more trade restrictive manner[34].

On the issue of market-access commitments on electronic supply of services, the CTS has in its work observed that means of delivery or commitments by members do not matter, rather they only permit the electronic supply of services. Besides, national treatment commitments were considered to also cover the electronic supply of services, and it has been acknowledged that the Annex on Telecommunications applies to access to and use of internet network[35].

With regard to customs duties, there are conflicting views with some members asserting that such duties on electronic transmissions could affect e-commerce while others opine that this issue is not relevant in the context of e-commerce. There were also conflicting arguments on current standstill on custom duties although it is acknowledged that the extension of the standstill is a political decision to be determined by the Ministerial Conference[36].

In 2012, the United States of America and European Union's submissions on a number of trade principles that could enhance network and develop e-commerce were discussed by the CTS. Later, in 2013, the CTS also considered a submission by the Separate Customs Territory of Taiwan, Penghu, Kinmen, and Matsu entitled "Protection of Personal Information and the Development of Electronic Commerce". It was then decided that a workshop be held in order to examine services-related issues for the development of e-commerce. The workshop took place in the same year with experts from international organizations, the private sector, government ministries and regulatory agencies facilitating. Members found the event useful in advancing the work programme since it elaborated in detail on the substantive issues[37].

Council for Trade in Goods

The Council for Trade in Goods (CTG) was tasked to examine and report on aspects of electronic commerce relevant to the provisions of GATT, as well as trade agreements covered under Annex 1A of the WTO

[31] WT/L/274 (30 September 1998)

[32] S/L/74 (27 July 1999)

[33] ibid

[34] ibid

[35] ibid

[36] ibid

[37] WT/GC/W/676 (11 November 2013)

Agreement, and the approved work program. The issues examined by CTG contained: market access for and access to products related to electronic 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 electronic commerce; rules of origin issues; and classification issues[38].

Discussions in the CTG also addressed the following topics:

- Delivering digital products free of customs duties;
- Exploring linkages between e-commerce and development;
- Role of e-commerce in poverty reduction in developing countries and LDCs.

Council for Trade-related Aspects of Intellectual Property Rights

The Council for Trade-related Aspects of Intellectual Property Rights (TRIPS) was tasked to examine and report on the intellectual property issues arising in connection with electronic commerce. The key issues proposed for analysis encompass topics such as protection and enforcement of copyright and related rights; protection and enforcement of trademarks; and new technologies and access to technology.

It has been observed in the Council's work that creating a secure and legal framework for intellectual property rights enhances the process of developing e-commerce. In addition, that more effort was needed in order to distinguish between which specific intellectual property rights' issues can be resolved by the right holders themselves, and which require certain governmental intervention on an international level[39].

A number of discussions were held by the Council between 1998 and 2000. These included issues related to copyrights and related rights (e.g. the implications of e-commerce for the definition of publication and to the rights of reproduction and of communication) and the potential role of electronic networks in facilitating the collective management of rights, particular reference was made to the potential contribution they could make in respect of rights related to folklore and other forms of traditional expression. Further, the WTO Secretariat, in response to Members' request prepared notes on the progress of work of the World Intellectual Property Organization (WIPO) concerning particularly the WIPO copyright treaty and the WIPO Performances and Phonograms treaty[9]. The Council therefore was briefed about ongoing work at WIPO concerning internet domain name process, and that on the law of trademarks as well as the implications of the internet use of trademarks on industrial designs and geographical indications[9].

On the issue of new technologies and access to technology, discussions were held on the role intellectual property rights play in the promotion of technological development in connection with electronic communications network, which facilitates access to technology. The Council was also updated on the work program of WIPO on global network and intellectual property services[9]. A number of issues were discussed concerning the enforcement of intellectual property rights on a territorial basis with the growth of use of global electronic networks. The Council agreed that there should be more studies on intellectual property rights in order to better understand the mechanisms of the various issues involved, of course with the continuing work of the WIPO and other inter-governmental organizations dealing with these issues.

In the period 2002-2003, there were further developments with regard to the work programme on e-commerce in the Council for TRIPs, following a 2002 General Council directive to continue work and keep track of WIPO and other intergovernmental

[38] WT/L/274 (30 September 1998)

[39] IP/C/18 (30 July 1999)

organizations in this regard, so as to report to Ministerial Conference meetings.[40]

Concerning transfer of technology to least-developed countries, developed country members provided information on their implementation of Article 66.2 of the TRIPS agreement available for the TRIPS Council meeting in November 2002[10]. Moreover, in its meeting in the following year (February 2003), the TRIPS council put in place a mechanism for the implementation of Article 66.2.

The Council also addressed other topics such as the role of IP protection in the transfer of technology. It also addressed the role of information and communications technologies' potential to facilitate worldwide access to technological information contained in patent document, as a way of improving intellectual property offices' efficiencies in this regard[10].

Committee on Trade and Development

The Committee on Trade and Development (CTD) was tasked to examine and report on the development implications of electronic commerce, taking into account the economic, financial, and development needs of developing countries.

In 1998, the CTD was mandated to deal with the following issues in this regard:

- Effects of electronic commerce on the trade and economic prospects of developing countries, notably of their small and medium-sized enterprises (SMEs), and means of maximizing possible benefits accruing to them;
- Challenges to and means of enhancing the participation of developing countries in electronic commerce, in particular as exporters of electronically delivered products including the issue of improved access to infrastructure and transfer of technology, as well as 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 impacts of electronic commerce on the traditional means of distribution of physical goods; and
- Financial implications of electronic commerce for developing countries[41].

In the 2011 Ministerial Decision on e-commerce the General Council was directed to shed more light and to focus more on the development dimension of e-commerce, which instigated the CTD to pursue further initiatives. A workshop was held in 2013 on the theme "e-commerce, development, and SMEs". This workshop was addressed by a number of professionals from different domains (Inter-Governmental Organizations, business, civil society, and academia). The event also afforded representatives of the SMEs and regulators of developing countries and LDCs to share experiences on e-commerce[42]. Issues addressed included the links connecting e-commerce with custom clearance as well as trade facilitation and aid for trade. Developing countries and LDCs were cautioned to be aware of the challenges arising from e-commerce in order to harness the opportunities it provides, this would necessitate aiding SMEs towards accessing domestic and international markets.

Assisting LCCs was also emphasized in this workshop, as well as the importance of the variety of tools on the internet, which are mostly free of charge, and can be used by SMEs in a very helpful way.[43] However, infrastructure problems and lack of regular electricity supply which requires upgrading power grids remain to be addressed, in order for most developing and LDCs to harness benefits from e-commerce. Moreover, there are still difficulties in distribution processes of the electronically bought products with the common lack of electronic payment systems in the developing countries as well as lack of high speed cables[13]. It was further noted that to overcome the problems and

[40] IP/C/W/128/Add.1 (15 May 2003)

[41] WT/COMTD/W/51 (23 November 1998)

[42] WT/GC/W/676 (11 November 2013)

[43] WT/COMTD/W/198 (27 June 2013)

challenges of e-commerce there has to be an entrepreneurial spirit[13].

Current WTO Discussions on E-commerce: Developing Countries Issues

In recent years, especially after the 10th Ministerial Conference of the WTO which was held in December 2015, in Nairobi, Kenya, the debate about e-commerce has been intensified and Member States have taken much clear positions about how to move forward with the issue of e-commerce at the WTO. Developed countries push for bringing e-commerce into the formal negotiations. During the WTO Public Forums in 2016 and 2017, some developed countries suggested making digital commerce a higher priority in the WTO agenda. On the other hand, LDCs and most of developing countries oppose new negotiations about e-commerce and call for focusing the negotiations on the unresolved Doha Development Agenda (DDA) issues and continue the discussions about e-commerce within the current mandate of the Electronic Commerce Work Programme. There is also another group of countries that are taking a middle approach. They advocate for more focused discussions about e-commerce, while prioritizing developing countries issues. They have formed the group of the Friends of E-Commerce for Development (FEDs). The group consists of Argentina, Chile, Colombia, Costa Rica, Kenya, Mexico, Nigeria, Pakistan, Sri Lanka, Uruguay, and China.

For many developing countries starting negotiations on e-commerce is beyond the 1998 mandate. They are also concerned about the digital divide that prevents them to fully participate in e-commerce activities - especially cross-border e-commerce which is required to be liberalized by developed countries' proposed new rules[44]. The ITU's 2017 ICT Facts and Figures clearly illustrate the current status of digital divide in the world[45]. Some of the findings are as follow:

- There are twice as many mobile-broadband subscriptions per 100 inhabitants in developed countries as in developing countries, and four times as many in developed countries as in LDCs.
- The gender gap is substantial in Africa. In Africa, the proportion of women using the Internet is 25% lower than the proportion of men using the Internet. In LDCs, only one out of seven women is using the Internet compared with one out of five men.
- There are 31 fixed broadband subscriptions per 100 inhabitants in developed countries against 9 in developing countries.

Hence, since the start of the WTO Work Programme on e-commerce, developing countries and LDCs have been raising issues that go beyond the three categories of market access, rules and regulation, and facilitation. The issues being raised by these countries can be categorized as "enabling issues" to overcome the barriers that developing countries and LDCs face in relation to their better participation in e-commerce.

There is a wide range of barriers when it comes to address digital divide in developing countries. However, the common challenges can be categorized as follow:

- Infrastructure barriers (access to technology and equipment, availability of ICT skills, qualified personnel)
- Cost factors (costs of ICT equipment, networks, and services)
- Security and trust factor (uncertainty of payment methods and legal frameworks)
- Logistics barriers (complicated delivery procedures, problems in returning of the products)
- Digital knowledge barrier (lack of ICT knowledge)

[44] "The WTO's Discussions on Electronic Commerce." Geneva, Switzerland: The South Center (2017)

[45] "ICT Facts and Figures 2017." Geneva, Switzerland: The International Telecommunications Union (ITU). (2017).

In many developing countries, unreliable electricity supply, poor telecommunication networks, and lack of broadband Internet availability which is a key component in ICT development, result in widening the digital divide and hindering e-commerce adaptation.

The high costs of access to Internet make Internet services inaccessible for most of users in developing countries. Internet access prices impact the decisions of individuals and business to use e-commerce. Lower access costs attract more users and enhance the development of e-commerce services, especially in countries with flat-rate access[46].

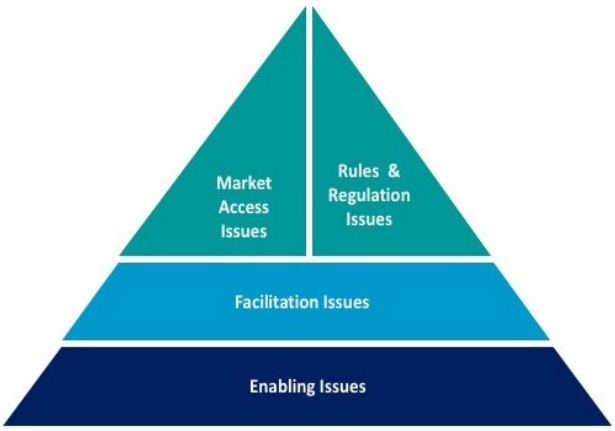
Lack of trust in technology and online payments and culture are the main socio-cultural barriers in most of developing countries to further developing their e-commerce sector. The geographical separation of sellers and buyers on e-commerce platforms often poses challenges to the traditional way of conducting business in real-time with oral and visual interaction in developing countries. This especially becomes challenging when building the confidence of consumers to engage with online financial transactions. The lack of trust in online payments combines with the lack of credible payment channels such as credit cards to make promoting and using of e-commerce financial transactions even more challenging and complicated in developing countries (Lawrence and Tar 2010).

E-commerce relies on efficient logistic infrastructures. Well-spread postal and carrier services are vital for the transports of sold goods on e-commerce platforms within and outside of countries. Speed is another important factor in logistics for e-commerce. A large part of the success of e-commerce businesses depend on the speed, reliability and variety of their delivery methods such as overnight delivery, just in time processing and 24/7 operations among others. In addition, burdensome customs procedures reduce the number of cross-border e-commerce transactions. The inefficient postal and delivery systems along with bureaucratic customs procedures are among the major logistics barriers to e-commerce adaptation in developing countries (Lawrence and Tar 2010).

Lack of ICT skills and education in many developing countries reduce the overall appreciation of the potential value of Internet and ICT-enabled services as means to participate in e-commerce. The educational structure in most developing countries does not include ICT curriculum. As a result, the computer and Internet literacy rate remain low which leads to slow adaptation paste of e-commerce services (Lawrence and Tar 2010).

This shows that addressing the enabling issues such as access to infrastructure and technology, and capacity building and technical assistance are the main priorities for LDCs and developing countries in e-commerce discussions at the WTO -before moving towards future discussions about facilitation issues, rules and regulations, and market access issues (Figure 3)[47].

FIGURE 3



[46] E. Lawrence, Jahet. A. Tar, Usman. "Barriers to Ecommerce in Developing Countries." Information, Society and Justice, Vol 3. No 1. (2010)

[47] S. Kaukab, Rashid. "Understanding E-Commerce Issues in Trade Agreements: A Development Perspective Towards MC11 and Beyond." Presentation: The WTO Public Forum. (September 2017)

SECTION 4

E-Commerce Discussions at MC11 and Beyond

Recently a number of discussion papers have been submitted to the WTO by Member States and other initiatives such as the FEDs in preparations for MC11, to be held in December 2017 in Buenos Aires. The issues discussed in the contributions can be divided into four main areas, as suggested in the EU et al. proposal from 11 January 2017, as well as in their previous communication dated 13 July 2016: regulatory frameworks, open markets, facilitation of e-commerce, and transparency. In addition, many countries have been advocating for the WTO role in promoting the development dimension of digital commerce, for example the role of e-commerce in promoting agriculture and rural development. Analyzing the main issues discussed in the contributions could help understanding the position of different countries at MC11[48]:

Regulatory Frameworks

Many of the contributions highlight that well-developed legal frameworks in consumer protection, privacy and data protection, and cyber security could strengthen consumer confidence and result in boosting e-commerce.

Open markets

The issues related to market access are mentioned in some of the proposals (USA, EU et al, Japan, Brazil, MIKTA). Those include liberalization, data flows and data localization.

Liberalization

Most of developed countries call for the extension of the moratorium of customs duties. However, in the future, as the technology improves, more types of physical goods can be transmitted digitally – for instance through 3D printing. In that context, the extension of this moratorium may have a negative impact on the custom revenues in developing countries.

Data flows

The free movement of data is touched upon by most of the contributions submitted by developed countries as key to the growth of e-commerce. However, some developing countries require foreign suppliers to benefit the domestic economy by establishing a physical presence. This approach may have different reasons including, local employment, technology transfer, or to able to tax the foreign company. This may not be possible if the service is delivered via Mode 1.

Data Localization

It is covered in several papers which mention its potentially negative effects on trade. According to the USA "localization requirements can add unnecessary costs and burdens on providers and consumers alike." On the other hand, LDCs and developing countries argue that instead of giving away the data for free - which will be further processed and sold at a cost to

[48] This section is adapted from DiploFoundation (2017) Digital commerce discussions at the World Trade Organization. Digital Commerce online course, Module 4.

others domestically and internationally- they would like to ensure that the data is reserved for domestic firms, or provided for foreign companies with a price tag. In addition, for political and security reasons, particularly after Snowden revelation, countries may want all, some part or certain types of data generated by their citizens remains in their jurisdictions in order to prevent other countries to conduct surveillance on their citizens.

Facilitation of E-Commerce

Supporting the implementation of the TFA, and advancing paperless trade are encouraged by many countries including China and Pakistan -as measures that will have positive impacts on all types of trade, including e-commerce.

Transparency

A significant number of the papers expressed support for enhanced transparency, which, in the context of the WTO, usually relates to duly publishing or making public the measures adopted by member states with regards to digital commerce and observing the obligation of notification. New proposals to enhance transparency have also been advanced, such as putting greater emphasis on e-commerce on the occasion of the Trade Policy Reviews (EU et al.), ensuring faster and more transparent customs procedures (USA), and promoting transparency and stakeholder participation in the development of regulations and standards (USA).

Other Points Addressed by Some Papers

Issues such as technology transfer, access to the source code, encryption, and network neutrality are also discussed in some of the papers - mainly by developed countries. Such topics could rise to conflicting views. For instance, the USA's paper calls for the development of trade rules to prohibit requirements on companies to transfer technology. However, developing countries and LDCs argue that technology transfer is an effective mechanism to bridge the digital divide. In addition, discouraging technology transfer might undermine a commitment already taken by WTO Members under the GATS Annex on Telecommunications to provide technology required by LDCs to support the development of their telecommunication infrastructure.

Post-MC11 Roadmap

Several discussion frameworks for post-MC11 are mentioned in communications submitted by some Members in July 2017. These submissions advance ideas regarding a possible decision by the MC11 for post-MC11 work on e-commerce. The main thrust of these submissions is to strengthen both the substance and institutional framework of the current WTO Work Programme on e-commerce. Japan has suggested that during the first year after MC11, Members could consider evaluating whether it is necessary to clarifying or strengthening the existing WTO rules – based on the Work Programme on e-commerce and taking into account the challenges ahead for MSMEs and developing countries. Depending on the result of this evaluation, Members may then decide to initiate negotiations without delay. Russia, on the other hand, has brought up the idea of establishing a Working Group on Electronic Commerce by MC11 under the supervision of the General Council in order to foster discussions on e-commerce. After the initial discussions in the Working Group, authorized WTO bodies (CTG, CTS, CTD and TRIPS Council) could consider specific elements further within their respective mandates and report back to the Working Group. The Working Group, in turn, would report to MC12 where further decision with regard to the future work or negotiation process on e-commerce could be taken based on the recommendation of the Working Group. The submissions by both Japan and Russia also enumerate substantive issues that should be the focus of discussions post MC11.

Many developing countries, however, have argued that no new decision by MC11 on e-commerce is needed as the current WTO Work Programme on E-commerce is sufficiently broad and still relevant. Moreover, the priority should be completing the negotiations under the DDA which has been going on for a long time now and where development outcomes were promised to developing countries.

Conclusion

The importance of e-commerce for trade and growth in developing countries has been widely accepted by different stakeholders. The rapid growth of e-commerce can be used as the main driver of economic gain in developing countries. Internet based platforms and global data flows enable businesses of all sizes in LDCs and developing countries to engage with trade, gain market information and expand their market locally and across borders. However, the digital divide imposes numerous challenges on developing countries and prevent them to fully participate in digital commerce -especially cross-border e-commerce. As a result, addressing the digital divide and the enabling issues such as infrastructure, technology transfer, skills, etc. should be considered as the main priorities of developing countries in e-commerce discussions in the WTO.

The WTO E-Commerce Work Programme is currently the main platform in the WTO to facilitate discussions on trade-related issues relating to e-commerce. There is no negotiating mandate embedded in the WTO E-Commerce Work Programme. Thus, pushing e-commerce "negotiations" in the WTO agenda is beyond the E-Commerce Work Programme mandate adopted by the General Council on 25 September 1998, and in the WTO technical context, it goes under the category of "new issues"[49]. As the result, if some Members want to negotiate new e-commerce rules, then the current mandate of E-Commerce Work Programme would need to be updated.

LDCs and most of developing countries argue that the aim of the negotiations at the WTO should be at resolving the "remaining Doha issues", and that no new decision by MC11 on e-commerce is needed as the current WTO Work Programme on E-commerce is sufficiently broad and still relevant. In contrast, developed countries, along with a number of developing countries call for moving into more focused discussions about e-commerce. That includes strengthening the institutional framework of the current WTO E-Commerce Work Programme, and establishing a Working Group on e-commerce with a focused mandate.

[49] "The WTO's Discussions on Electronic Commerce". Geneva, Switzerland: The South Center. (2017).

References

Annual revenue of Alibaba Group from 2010 to 2017. statista.com. https://www.statista.com/statistics/225614/net-revenue-of-alibaba/ (accessed November 29, 2017).

Net Sales Revenue of Amazon from 2004 to 2016. statista.com. https://www.statista.com/statistics/266282/annual-net-revenue-of-amazoncom/ (accessed November 29, 2017).

China E-Commerce: The Next Leg of Growth. goldmansachs.com. http://www.goldmansachs.com/our-thinking/pages/ronald-keung-china-next-leg-of-growth.html (accessed November 29, 2017).

$22 Trillion E-Commerce Opportunity for Developing Countries. Unctad.org. http://unctad.org/es/paginas/newsdetails.aspx?OriginalVersionID=1281&Sitemap_x0020_Taxonomy=Information%20and%20Communication%20 (accessed November 29, 2017).

The New Bazaar: E-Commerce Takes Off. economist.com. https://www.economist.com/news/special-report/21730546-e-commerce-transforming-business-and-daily-life-mostly-better-says-charlotte (accessed November 29, 2017).

Ebrahimi Darsinouei, Amir (2016). "Integrating Micro, Small and Medium Enterprises in International Trade: A Brief Analysis of Challenges and Opportunities." Geneva. CUTS International, Geneva. (2016).

Global Economic Prospects and The Developing Countries. Washington DC: The Instruction Bank of Reconstruction and Development (IBRD) / The World Bank (2001)

Global Internet Penetration Rate as of September 2017, By Region. statista.com https://www.statista.com/statistics/269329/penetration-rate-of-the-internet-by-region/ (accessed December 2, 2017).

Karake-Shalhoub Zeinab. Al Qasimi, Lubna (2006). The Diffusion of E-Commerce in Developing Countries: A Resource-Based Approach. UK: Edward Elgra Publishing Limited.

The WTO's Discussions on Electronic Commerce. Geneva, Switzerland: The South Center. (2017).

Tapscott, Don (1996). The Digital Economy: Promise and Peril in the Age of Networked Intelligence. McGraw-Hill.

What is Digital Economy: Unicorns, Transformation and the Internet of Things. deloitte.com. https://www2.deloitte.com/mt/en/pages/technology/articles/mt-what-is-digital-economy.html (accessed November 30, 2017).

S. Kaukab, Rashid. Understanding E-Commerce Issues in Trade Agreements: A Development Perspective Towards MC11 and Beyond. Presentation: The WTO Public Forum. (September 2017).

Wu, Mark (2017). Digital Trade-Related Provisions in Regional Trade Agreements: Existing Models and Lessons for the Multilateral Trade System. Geneva, Switzerland: International Centre for Trade and Sustainable Development (ICTSD) and World Economic Forum.

Colombia TPA: Final Text. ustr.gov. https://ustr.gov/trade-agreements/free-trade-agreements/colombia-fta/final-text (accessed November 30, 2017).

KORUS FTA: Final Text. ustr.gov. https://ustr.gov/trade-agreements/free-trade-agreements/korus-fta/final-text (accessed November 30, 2017).

Peru TPA: Final Text. ustr.gov. https://ustr.gov/trade-agreements/free-trade-agreements/peru-tpa/final-text (accessed November 30, 2017).

Free Trade Agreement between the Republic of Korea and the United States of America. uskoreaconnect.org. http://www.uskoreaconnect.org/pdfs/fta_all.pdf (accessed November 30, 2017).

Ahmed, Usman and Anupam Chander (2015). Information Goes Global: Protecting Privacy, Security, and the New Economy in a World of Cross-border Data Flows. E15Initiative. Geneva, Switzerland: International Centre for Trade and Sustainable Development (ICTSD) and World Economic Forum.

Text of China-Australia Free Trade Agreement. gov.au. http://dfat.gov.au/trade/agreements/chafta/official-documents/pages/official-documents.aspx (accessed November 30, 2017).

Intellectual Property Issues Related to Electronic Commerce. The World Intellectual Property Organization (WIPO).

Raymundo Valdés and Maegan McCann (2014). Intellectual Property Provisions in Regional Trade Agreements: Revision and Update. The World Trade Organization (WTO).

Lior Herman (2010). Multilateralsing Regionalism: The Case of E-Commerce. OECD Trade Policy Working Paper NO.99. (2010).

Malaysia-Chile Free Trade Agreement. miti.gov.my. http://fta.miti.gov.my/miti-fta/resources/Malaysia-Chile/MCFTA.pdf (accessed November 2017).

Duval, Yann. Mengjing, Kong (2017). "Digital Trade Facilitation: Paperless Trade in Regional Trade Agreements." Asian Development Bank Institute (ADBI).

Framework Agreement on Facilitation of Cross-border Paperless Trade in Asia and the Pacific. unescap.org. http://www.unescap.org/resources/framework-agreement-facilitation-cross-border-paperless-trade-asia-and-pacific (accessed December 3, 2017).

ICT Facts and Figures, 2017. Geneva, Switzerland: The International Telecommunications Union (ITU). (2017).

E. Lawrence, Jahet. A. Tar, Usman (2010). Barriers to Ecommerce in Developing Countries. Information, Society and Justice, Vol 3. No 1.

WTO Documents

WT/L/274 (30 September 1998)

S/L/74 (27 July 1999)

WT/GC/W/676 (11 November 2013)

WT/L/274 (30 September 1998)

IP/C/18 (30 July 1999)

IP/C/W/128/Add.1 (15 May 2003)

WT/COMTD/W/51 (23 November 1998)

WT/GC/W/676 (11 November 2013)

WT/COMTD/W/198 (27 June 2013)