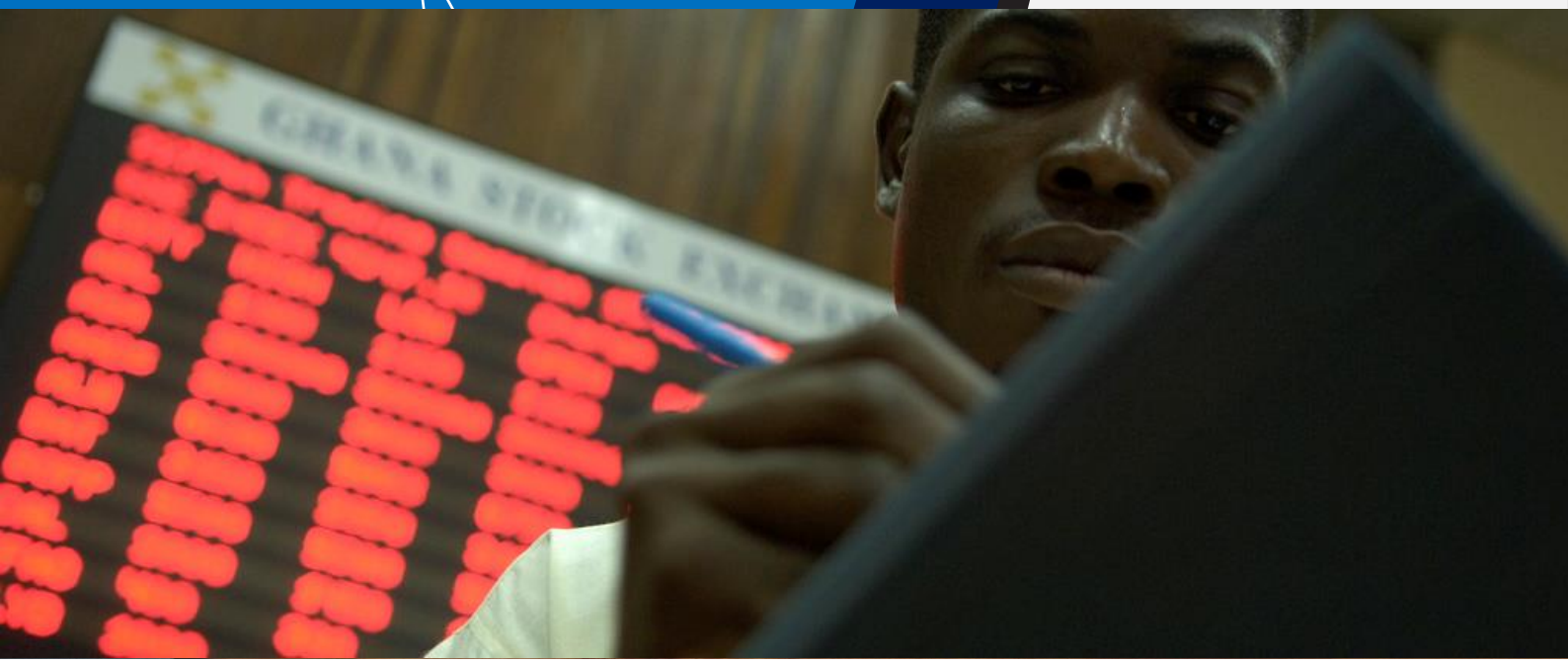

Note

The Rise of Digital Services in COVID-19: Recent Trends and the Interests of Developing Countries

By Cyann Staub

Summary

The COVID-19 pandemic brought a boost to the digital services sector. Third-parties online marketplaces enable the economy to keep running during a global shutdown and build resiliency for the days to come. However, the regulatory framework surrounding digital services on the international scene is still unclear. There is up to this date no consensus on a definition neither on a classification. This strongly impedes the ability of countries to develop digital services and consists in one of the main challenges to tackle. Still, digital services also bring opportunities that should be studied.

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Introduction: COVID-19 and the Growth of Digital Services in Developing Countries

Digital services such as digital marketing, online financial services, digital entertainment, e-learning and telemedicine services have been among the fastest-growing areas of trade in recent years.[1] In 2018, telecommunications, computer and information services witnessed a 15 per cent increase, the largest growth share in global services' exports, according to the World Trade Organization (WTO).[2]

This last year, with the COVID-19 pandemic, the increase in digital trade in services has been even stronger.[3] More than 1 in 3 digital service consumers started using the services due to COVID-19.[4] First, the use of teleworking has been rising backed by the development of collaboration platforms, video conferences softwares and VPNs for example.[5] It allowed telemigration and created new job opportunities. Second, for those not yet on the labour market, remote education was the new habit. Students were able to keep on learning and this revealed the potential of digital education. On top of that, the World Health Organization (WHO) encouraged telemedicine to contain the spread of COVID-19 and save protective equipment.[6] This trend is expected to last as 94 per cent of new digital services consumers reported their intention to continue using digital services in the post-pandemic world.[7]

An article by Silvana Kostenbaum and Cem Dener for the World Bank Blogs states that "digital services help governments deliver solutions during COVID-19".[8] It gives the example of Urugay which has been working on developing and improving digital platforms for more than ten years. With the COVID-19 outbreak, it could offer 90 per cent of government services online from start to completion. Over 90 per cent of its population has access to the internet which ensure the relevancy of these services.[9] This enabled the economy to keep running amidst the crisis. On top of that, the United Nations Conference on Trade and Development (UNCTAD) finds that "third-party online marketplaces have performed better than e-commerce companies" during the crisis.[10] Digital services create opportunities for people all around the world, but they also come with their set of challenges, especially for developing countries.

This note aims to unpack digital services by exploring their definitions and attempts to classify them. It then looks into relevant global rules and regulations in place. The focus is made on ongoing work at the WTO such as the work programme on Electronic Commerce or the Joint Statement Initiative on Electronic Commerce. Finally, the Note exposes the opportunities and

[1] WEF (2020). *Trade in digital services is booming. Here's how organican unleash its full potential*. Available at: https://www.weforum.org/agenda/2020/06/trade-in-digital-services-is-booming-here-s-how-we-can-unleash-its-full-potential/

[2] WTO (2019). *World Trade Statistical Review 2019*. Available at: https://www.wto.org/english/res_e/statis_e/wts2019_e/wts2019_e.pdf

[3] UNCTAD (2021*). COVID-19 and E-Commerce. A Global Review* . Available at: https://unctad.org/webflyer/covid-19-and-e-commerce-impact-businesses-and-policy-responses

[4] Google, Temasek and Bain Southeast Asia's Internet economy research program (2020*). e-Conomy. SEA 2020*. Available at: https://storage.googleapis.com/gweb-economy-sea.appspot.com/assets/pdf/e-Conomy_SEA_2020_Report.pdf

[5] UNCTAD (2021*). COVID-19 and E-Commerce. A Global Review* . Available at: https://unctad.org/webflyer/covid-19-and-e-commerce-impact-businesses-and-policy-responses

[6] OECD (2020). *Beyond Containment: Health systems responses to COVID-19 in the OECD.* Available at: https://oecd.dam-broadcast.com/pm_7379_119_119689-ud5comtf84.pdf

[7] Google, Temasek and Bain Southeast Asia's Internet economy research program (2020*). e-Conomy. SEA 2020*. Available at: https://storage.googleapis.com/gweb-economy-sea.appspot.com/assets/pdf/e-Conomy_SEA_2020_Report.pdf

[8] WB Blogs (2020). Silvana Kostenbaum & Cem Dener. *Digital services help governments deliver solutions during COVID-19.* Available at: https://blogs.worldbank.org/governance/digital-services-help-governments-deliver-solutions-during-covid-19

[9] Ibid

[10] UNCTAD (2020). *COVID-19 and E-Commerce. Impact on Businesses and Policy Responses.* Available at: https://unctad.org/webflyer/covid-19-and-e-commerce-impact-businesses-and-policy-responses

challenges of digital services' growth for developing countries.

Unpacking Digital Services

Definitions

It is in 1991 that the internet became a place for commerce as the Commercial Internet eXchange (CIX) association lifted the restriction on the commercial use of the Net.[11] Since then, e-commerce and trade in digital services have been rising.

At the beginning, the words "digital services" or "e-services" were used without any definition provided.[12] Still, researchers already sensed that a distinction had to be made between e-services and e-commerce. One of the first to make this statement was C. Voss in 1999 when he defined e-services as: " the delivery of services using new media such as the web".[13] He specified that there was a broad spectrum from pure sales on the web (e-commerce) to pure services.

According to C. Srinivas[14], the first publication to define e-services was Berthon et al. which stated in 1999 that: "e-services represent services which are available on the Internet to facilitate, execute and process any stages of services, including informing, transacting, interacting, and distributing".[15]

Nevertheless, there is a lack of definition for the term "Digital Services" provided by international and multilateral organisations.[16] Indeed, neither the WTO nor the Organisation for Economic Co-operation and Development (OECD) has defined what a digital service is. The scarcity of delimitation on the subject led to a surge of various interpretations and a lack of consensus.

Some global institutions provide attempted definitions. The UNCTAD, for example, describes *Information and Communications Technology (ICT) – enabled services* as: 'services that are delivered remotely over information and communications technologies network' and 'include activities that can be specified, performed, delivered, evaluated and consumed electronically'.[17] This definition was reviewed and adopted by the United Nations Statistical Commission at its 47th session in March 2016.[18] The Western Australia Government defines digital services by stating that: 'from the customer's perspective the service is delivered fully through online channel'.[19] Altogether, digital services could be defined broadly as services that are supplied entirely digitally.

The WTO does not define digital services, but in 1998, in the framework of its Work Programme on Electronic Commerce, the organisation defined e-commerce as the 'production, distribution, marketing, sale or delivery of goods and services

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[11] OECD (1998). *Internet Traffic Exchange*. OECD Digital Economy Papers No. 34. Available at: https://www.oecd-ilibrary.org/docserver/236767263531.pdf?expires=1616404785&id=id&accname=guest&checksum=D06A9E15BA5153664BC4B7C6FDCE2524

[12] For example, in this American Telephone and Telegraph Co article by Gary J. Handler (1984). Available at: https://dl.acm.org/doi/pdf/10.1145/1500676.1500761

[13] Voss C. (1999). *Developing an eService Strategy*. ICS, Colchester. Available at: https://onlinelibrary.wiley.com/doi/epdf/10.1111/1467-8616.00126?saml_referrer

[14] Srinivas, Chalamala (2017). *What is this thing called electronic service (e-service)? – A review of definitions.* International Journal of Multidisciplinary Research Review, Vol 1. Issue 25. Available at: http://www.ijmdrr.com/admin/downloads/2004201714.pdf

[15] Berthon et al. (1999). *Executive Insights: Virtual Services Go International: International Services in the Marketspace.* Journal of International Marketing. Vol7. Issue 3. Available at: https://journals.sagepub.com/doi/abs/10.1177/1069031X9900700307

[16] Burri, Mira (2015). *The International Economic Law Framework for Digital Trade*. Zeitschrift fur Schweizerisches Recht, Vol.135, Issue II. Available at: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2602817

[17] UNCTAD (2015). *International Trade in ICT Services and ICT-enabled Services.* United Nations. Available at: https://unctad.org/system/files/official-document/tn_unctad_ict4d03_en.pdf

[18] UNCTAD (2018). *UNCTAD Project on Measuring Exports of ICT-enabled Services.* Available at: https://unctad.org/system/files/non-official-document/dtl_eWeek2018p06_DianaKorka_en.pdf

[19] Western Australia Government Information and Services (2018). Available at: https://www.wa.gov.au/sites/default/files/2018-07/Digital%20services%20definition%20and%20examples.pdf

by electronic means'[20]. The definition is broad and covers digital services. The OECD has a narrower definition as it excludes sales or purchases done physically[21]: '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. The goods or services are ordered by those methods, but the payment and the ultimate delivery of the goods or services do not have to be conducted online'.[22]

The OECD also defines the ICT sector as follows: "a combination of manufacturing and services industries that capture, transmit and display data and information electronically".[23] This definition, once more, encompasses digital services. The same happens for the definition of the digital economy by the US International Trade Commission: "US domestic commerce and international trade in which the Internet and Internet-based technologies play a particularly significant role in ordering, producing or delivering products and services".[24] To sum up, definitions of digital services specifically are rare. However, other broader definitions encompass the definition of digital services. They can provide a background for a more comprehensive view of digital services.

Classifications

The scarcity of definitions specific to digital services renders its scope hard to determine and its inside classification even blurrier. The WTO General Agreement on Trade in Services (GATS) provides a global framework for the classification of services.[25] It regulates the system of international traderelated to services. The GATS identifies four modes of supplying services: cross-border supply, consumption abroad, commercial presence and presence of natural persons.[26]

When it comes to digital services, a Note prepared by the WTO Secretariat for the Council for Trade in Services stated that 'the Agreement makes no distinction between the different technological means by which a service may be delivered [...]. The supply of services through electronic means is therefore covered by the Agreement in the same way as all other means of delivery'. [27] However, even though it is often the view that 'electronic delivery of services falls within the scope of the GATS' and that it is 'technologically neutral'[28], some members do not share the same opinion and raised concerns that these issues were 'complex and needed further examination'.[29] Still, in order to apply the GATS' obligations, it is necessary for Members to be able to fit the various digital services into the GATS classification.

In her article 'GATS classification of digital

[20] WTO. Electronic commerce. Available at: https://www.wto.org/english/tratop_e/ecom_e/ecom_e.htm
21 Ismail, Yasmin (2020*). E-commerce in the World Trade Organization: history and latest developments in the negotiations under the Joint Statement*. IISD and CUTS International. Available at: https://www.iisd.org/system/files/publications/e-commerce-world-trade-organization-.pdf
[22] OECD. Glossary. Available at : https://stats.oecd.org/glossary/detail.asp?ID=4721#:~:text=Web%20Service,receiving%20or%20placing%20of%20orders
[23] OECD (2002). *Measuring the Information Economy*. Annex 1. Available at: http://www.oecd.org/digital/ieconomy/2771153.pdf
[24] US International Trade Commission (2014*). Digital Trade in the U.S. and Global Economies, Part2.* Available at: https://www.usitc.gov/publications/332/pub4485.pdf

[25] WTO. *The General Agreement on Trade in Services (GATS): objectives, coverage and disciplines*. Available at: https://www.wto.org/english/tratop_e/serv_e/gatsqa_e.htm
[26] Ibid
[27] WTO (1998). *The Work Programme on Electronic Commerce. Note by the Secretariat*. Council for Trade in Services. Available at: https://docs.wto.org/dol2fe/Pages/SS/directdoc.aspx?filename=q:/S/C/W68.pdf&Open=True
[28] WTO (1999). *Work Programme on Electronic Commerce. Progress Report to the General Council.* Available at: https://docs.wto.org/dol2fe/Pages/SS/directdoc.aspx?filename=q:/S/L/74.pdf&Open=True
[29] See communications from the Russian Federation (JOB/GC/137), Hong Kong, Japan and Taiwan (JOB/GC/138), Costa Rica (JOB/GC/139) and the draft ministerial decision on electronic commerce as proposed by Australia, Canada, Chile, the EU, Korea, Norway and Paraguay (JOB/GC/140)

services'[30], published in 2018, Ines Willemyns uses a positive list approach (like in the GATS) but with a teleological point of view. She constructs a way to classify digital services based on the GATS. She examines what function is achieved by the service rather than how it is produced. Thereby, she can split digital services into two broad categories: digital infrastructure services and digitally-enabled services.

Digital infrastructure services contain mainly support services linked to the utilisation of the internet.[31] It comprises internet telecommunications services that provide access to the internet through carrier services, network management services or IT infrastructure provisioning services. Cloud computing is also a part of digital infrastructure services. It enables the delivery of computing services such as servers, storages, databases, softwares and so on. On the other hand, digitally-enabled services encompasse services that are not necessarily linked to the support of internet but only supplied through it. She defines digitally-enabled services as "those services that are supplied over the internet, which constitute the bulk of digital services".[32] For example, internet telephony or video-on-demand services are two sub-categories that already exist without the online connection but that could also be used through the internet. This category also includes search engines, social networks, e-payment services and blogs.

According to Ines Willemyns (2018) the GATS is 'applicable to many, if not all, digital services' as the GATS uses a teleological approach and focuses exclusively on the outcome of the service and not its way of supply. [33] What changes is not the function achieved by the service but its supplying channel.

Figure 1: Willemyns classification of digital services

Digital Infrastructure Services	Internet Telecommunications Services	
	Cloud Computing	Software as a service
		Cloud platform as a service
		Cloud infrastructure as a service

Digitally Enabled Services	Search engines
	Social networks
	Internet telephony
	Video-on-demand services
	E-payment services
	Blogs

Source: Tables made by the author based on Willemyns (2018).

The OECD attempted to classify digital services. The two categories proposed are similar to the ones from Ines Willemyns: ICT services and ICT-enabled services, corresponding respectively to Digital infrastructure services and Digitally Enabled services. The definition of ICT services proposed by the OECD, adopted by the Partnership on Measuring ICT for Development, is as follows: 'activities that are intended to enable and/or fulfil the function of information processing and communication'.[34] This clear definition allows for a well-outlined classification, based on the 2010 Extended Balance of Payments Services Classification (EBOPS 2010).[35] ICT services are divided into three categories: telecommunications services,

[30] Willemyns, Ines (2018). *GATS classification of digital services – Does the Cloud have a Silver Lining?.* Working Paper. Leuven Centre for Global Gouvernance Studies, KU Leuven. (forthcoming in Journal of World Trade) Available at: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3194676

[31] Ibid

[32] Willemyns, Ines (2018). *GATS classification of digital services – Does the Cloud have a Silver Lining?.* Working Paper. Leuven Centre for Global Gouvernance Studies, KU Leuven. (forthcoming in Journal of World Trade) Available at: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3194676

[33] Ibid

[34] OECD (2002). *Measuring the Information Economy*. Annex 1. Available at: http://www.oecd.org/digital/ieconomy/2771153.pdf

[35] UN Stats. *2010 Extended Balance of Payments Services Classification.* Available at:

computer services and licenses to reproduce and/or distribute computer software.[36]

ICT-enabled services have yet no clear definition that has been agreed upon. Several OECD reports still considered those services to be classified as 'Computer and information services' and 'Other business services' in the EBOPS 2010.[37] Still, the 'Other business services' category is too wide as it contains services from water treatment (which could not be ICT-enabled) to architectural services (which could be ICT-enabled).[38] Therefore, it highlights the need for a definition in order to establish a more precise classification.

Figure 2: OECD classification of ICT and ICT-enabled services

ICT Services	Telecommunication services
	Computer services (computer softwares and other computer services)
	Licenses to reproduce and/or distribute computer software
ICT-enabled Services	Computer and information services
	Other business services

Source: tables made by the author based on (UNCTAD, 2015)

In 2015, the UNCTAD published a Technical Note on ICT for Development and defined its analysis as the 'first systematic and detailed attempt to define and classify ICT-enabled services'.[39] Their definition of ICT-enabled services is '*services that are delivered remotely over ICT networks'*.[40] This aims to distinguish between '*services that can potentially be delivered remotely over ICT networks and those that can not'*.[41]

As denoted in the table below, ICT services remain the same with the two categories: Telecommunications and Computer Services. Other potentially ICT-enabled services include many categories that already exist for services provided on-site. The UNCTAD provides specific details on certain issues such as telemedicine that do not appear in the table. According to them, telemedicine should be classified under information services as it provides information about illnesses more than the actual treatment.

https://unstats.un.org/unsd/classifications/Econ/Download/In%20Text/EBOPS2010_english.pdf

[36] UNCTAD (2015). *International trade in ICT services and ICT-enabled services. Proposed Indicators from the Partnership on Measuring ICT for Development.* Technical Notes on ICT for Development N3. Available at: https://unctad.org/system/files/official-document/tn_unctad_ict4d03_en.pdf

[37] UN Stats. *2010 Extended Balance of Payments Services Classification.* Available at: https://unstats.un.org/unsd/classifications/Econ/Download/In%20Text/EBOPS2010_english.pdf

[38] UNCTAD (2015). *International trade in ICT services and ICT-enabled services. Proposed Indicators from the Partnership on Measuring ICT for Development.* Technical Notes on ICT for Development N3. Available at: https://unctad.org/system/files/official-document/tn_unctad_ict4d03_en.pdf

[39] UNCTAD (2015). *International trade in ICT services and ICT-enabled services. Proposed Indicators from the Partnership on Measuring ICT for Development.* Technical Notes on ICT for Development N3. Available at: https://unctad.org/system/files/official-document/tn_unctad_ict4d03_en.pdf

[40] Ibid

[41] UNCTAD (2015). *International trade in ICT services and ICT-enabled services. Proposed Indicators from the Partnership on Measuring ICT for Development.* Technical Notes on ICT for Development N3. Available at: https://unctad.org/system/files/official-document/tn_unctad_ict4d03_en.pdf

Figure 3: UNCTAD classification of potentially ICT-enabled services

Potentially ICT-enabled Services	ICT Services	Telecommunication
		Computer services (including computer softwares)
	Other Potentially ICT-enabled Services	Sales and marketing services
		Information services
		Insurance and financial services
		Management, administration and back-office services
		Licensing services
		Engineering, related technical services, research and development
		Education and training services

Source: tables made by the author based on (UNCTAD, 2015)

Digital services have evolved considerably since their first definitions and classifications. There is a need for the regulations governing such services to evolve to ensure that they remain relevant.

Digital Services and Rule-making: Recent trends and debates

The moratorium and the blurry line between goods and services

As defined by the Cambridge dictionary, a moratorium is a 'stopping of an activity for an agreed amount of time'.[42] At the WTO, members have agreed on a moratorium that maintains the current practice of not imposing customs duties on electronic transmissions since 1998.[43] However, many delegation have highlighted some issues with the classification of the content of certain electronic transmission.[44] The debate is about whether the supply of some electronical deliveries called 'digitised products'[45] should be classified under the GATT or the GATS.[46] Although there is no definition of a digitised products at the WTO, digitised products are the idea that 'images, sounds or instructions could be digitised and transmitted electronically'.[47] Some WTO members tried to narrow the question and stated that digitised products were things that had a physical equivalent.[48]

The main challenge among members at the WTO is the the blurry line between goods and services in the digital context. Some delegations expressed the view that, for them, all electronically-delivered products were services. While others thought this was unclear,

[42] Cambridge dictionnary. Available at : https://dictionary.cambridge.org/dictionary/english/moratorium
[43] WTO(2003). The Work Programme on Electronic Commerce. Available at: https://docs.wto.org/dol2fe/Pages/FE_Search/FE_S_S009-DP.aspx?language=E&CatalogueIdList=1544%2c76453&CurrentCatalogueIdIndex=0&FullTextHash=&HasEnglishRecord=True&HasFrenchRecord=True&HasSpanishRecord=True
[44] Ibid
[45] WTO(2003). *Work Programme on Electronic Commerce. Classification Issue.* Available at: https://docs.wto.org/dol2fe/Pages/FE_Search/FE_S_S009-DP.aspx?language=E&CatalogueIdList=93382,102538,56745,8056,6668,69256,40475,23411,19400,21093&CurrentCatalogueIdIndex=4&FullTextHash=&HasEnglishRecord=True&HasFrenchRecord=True&HasSpanishRecord=True
[46] WTO(2003). The Work Programme on Electronic Commerce. Available at: https://docs.wto.org/dol2fe/Pages/FE_Search/FE_S_S009-DP.aspx?language=E&CatalogueIdList=1544%2c76453&CurrentCatalogueIdIndex=0&FullTextHash=&HasEnglishRecord=True&HasFrenchRecord=True&HasSpanishRecord=True
[47] Ibid
[48] WTO (2003). *Fifth Dedicated Discussion on Electronic Commerce under the Auspices of the General Council on 16 May and 11 July 2003*. Available at: https://docs.wto.org/dol2fe/Pages/FE_Search/FE_S_S009-DP.aspx?language=E&CatalogueIdList=97269,92010,56506,57960,51701,56745,78083,2829,1038,1065&CurrentCatalogueIdIndex=8&FullTextHash=371857150&HasEnglishRecord=True&HasFrenchRecord=True&HasSpanishRecord=True

considering that those same products, when physically delivered, are goods. If products were not considered as services, the GATT would apply. On this issue, the UNCTAD states that intangibles differ significantly from services and that their trade has been classified under goods trade rather than services trade.[49]

However, the issue is much more complex and members of the WTO are still debating on this blurry line between goods and services electronically transmitted. The topic has been discussed at the WTO under the Work Programme on Electronic Commerce since 1998 and the classification of digitised products under the GATT or the GATS is still subject to debate between WTO members. The GATT provides only nomenclature for products which had physical identifications or characteristics.[50] On this basis, a delegation stated that digitised products can not be treated as goods and therefore should be considered as services.[51] This would make those digitised products digital services and the GATS would apply. Nevertheless, there are multiple inconsistencies that make this case difficult to solve. First, the GATT comprises electricity which is intangible.[52] Also, the customer may have the choice between downloading a software or make it deliver through cross-border trade. Those two transactions may end to be the same.[53] Whether through a download or through a physical delivery, the customer will end up with the same software on its computer. Still, there is a need to distinguish them. A classification would be needed in order for policies to be implemented. Moreover, solving this issue with a case-by-case basis would be a daunting task.

As of March 2021, the last decision regarding the Work Programme on Electronic Progress dates back to 2019. Under this item, the Members decided to continue the work and the General Council announced that they will maintain the current moratorium practice of not imposing customs duties on electronic transmissions until the 12th Ministerial Conference. [54]

The moratorium on the imposition of customs duties on electronic transmissions is an interesting topic to study more thoroughly. During a webinar on the moratorium, it was denoted that the scope of the moratorium was not clearly defined and that this point was crucial. Without clarity on the definition of electronic transmissions, governments would not know their rights and obligations and this would raise uncertainties and divergences across policies.[55] The debate is still the same: are digitisable products a good or a digital service? As discussed above, electronical transformation has enabled goods to be transmitted electronically. Thus, those goods are now intangibles. This, combined with innovative business models and access management, has arguably transformed digital products into digital services.[56] But, if that is the

[49] UNCTAD (2020). *Research Paper 47*. Available at: https://www.researchgate.net/publication/342411898_UNCTAD_Research_Paper_47

[50] WTO(2003). *Work Programme on Electronic Commerce. Classification Issue.* Available at: https://docs.wto.org/dol2fe/Pages/FE_Search/FE_S_S009-DP.aspx?language=E&CatalogueIdList=93382,102538,56745,8056,6668,69256,40475,23411,19400,21093&CurrentCatalogueIdIndex=4&FullTextHash=&HasEnglishRecord=True&HasFrenchRecord=True&HasSpanishRecord=True

[51] WTO (2003). *Fifth Dedicated Discussion on Electronic Commerce under the Auspices of the General Council on 16 May and 11 July 2003*. Available at: https://docs.wto.org/dol2fe/Pages/FE_Search/FE_S_S009-DP.aspx?language=E&CatalogueIdList=97269,92010,56506,57960,51701,56745,78083,2829,1038,1065&CurrentCatalogueIdIndex=8&FullTextHash=371857150&HasEnglishRecord=True&HasFrenchRecord=True&HasSpanishRecord=True

[52] Ibid

[53] WTO (2003). *Fifth Dedicated Discussion on Electronic Commerce under the Auspices of the General Council on 16 May and 11 July 2003*. Available at: https://docs.wto.org/dol2fe/Pages/FE_Search/FE_S_S009-DP.aspx?language=E&CatalogueIdList=97269,92010,56506,57960,51701,56745,78083,2829,1038,1065&CurrentCatalogueIdIndex=8&FullTextHash=371857150&HasEnglishRecord=True&HasFrenchRecord=True&HasSpanishRecord=True

[54] WTO (2019). *Work Programme on Electronic Commerce. General Council Decision*. Available at: https://docs.wto.org/dol2fe/Pages/SS/directdoc.aspx?filename=q:/WT/L/1079.pdf&Open=True

[55] Abhijit, Das (2020*). Webinar on the Moratorium on Customs Duties on Electronic Transmissions*. Available at: https://www.wto.org/english/tratop_e/ecom_e/ecom_webinar_13jul2020_e/das.pdf

[56] NASSCOM (2019). *Workshop on the Moratorium on Customs Duties on Electronic Transmissions.* Available at:

case, we can not apply customs duties to them anymore. This will fly in the face of established GATT/WTO principle and practice where reduction/elimination of customs duties is always offered/accepted by the member concerned by transcribing it in its schedule of commitments.

Rising interest in regulating digital services

Amid the rise of digital services and the fast paced related innovations, on top of taxes, countries are starting to adopt rules in order to regulate the sector of digital services itself. One of the most recent examples is the EU Commission's proposal of a Digital Services Act (DSA) on the 15th of December 2020, now subject to debate in the EU parliament.[57]

This Digital Services Act aims to create a safer digital space and establish a level playing field to foster innovation, growth and competitiveness in the services sector.[58] According to the European Commission, digital services include 'large category of online services, from simple websites to internet infrastructure services and online platforms'.[59] This definition is broad and not clearly outlined. They therefore specified that rules in the DSA will primarily concern online intermediaries and platforms such as online marketplaces, social networks, content-sharing platforms, app stores as well as online travel and accommodation platforms.[60]

The proposal includes diligence obligation for online platforms and other online intermediaries, enabling any user to flag illegal content. Higher standards of transparency and accountability on how information is moderated and intermediated by platforms will also be required in order to enhance online security. Indeed, many challenges came with the growth of the digital economy. An increased trade of illegal goods, services and content online and manipulative algorithmic systems[61] among others are threatening digital activities.[62] Those rules provide a regulatory oversight in response to the growing risks emerging on the internet. Moreover, digital markets are often controlled by a few large platforms, emerging as gatekeepers. New regulations are required in order to empower smaller businesses. Finally, the DSA will implement an European governance system for digital services, enabling an efficient cooperation between member states.

The increasing interest in regulations on digital services is based on the need of a more precise and relevant regulatory framework for this fast-growing area.

Digital Services and Taxes

One incipient policy tool designed to regulate the digital economy is the digital services tax (DST). The debate on how to tax digital services is not recent. In 1998, the OECD organized the Ottawa Ministerial Conference on e-commerce, the first event to tackle this issue. During this conference, ministers adopted a report which sets up the taxation framework conditions for electronic commerce.[63] Then, since 1998, the digital economy has been growing. This exacerbated the limitations of existing regulations, especially with

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https://www.wto.org/english/tratop_e/ecom_e/wkmoratorium29419_e/ashish_aggarwal.pdf

[57] DSA on the European Commission's website. Available at : https://digital-strategy.ec.europa.eu/en/policies/digital-services-act-package

[58] Ibid

[59] European Commission's website. Available at: https://ec.europa.eu/digital-single-market/en/digital-services-act-package

[60] Ibid

[61] Manipulative algorithmic systems refers to the collection of data on customers by technology companies to influence their behavior. To learn more about this subject: Data Science Central (2020). Diego Lopez Yse. *Algorithms of Social Manipulation.* Available at: https://www.datasciencecentral.com/profiles/blogs/algorithms-of-social-manipulation

[62] European Commission (2020). *Proposal for a Regulation of the European Parliament and of the Council.* Available at: https://eur-lex.europa.eu/legal-content/en/TXT/?qid=1608117147218&uri=COM%3A2020%3A825%3AFIN

[63] OECD (1998). *Electronic Commerce Taxation Framework Conditions.* Available at : https://www.oecd.org/ctp/consumption/1923256.pdf

regard to taxes.[64] As the sector is booming, countries' interest in digital services taxes (DSTs) is increasing. In February 2013, the OECD published the report Addressing Base Erosion and Profit Shifting (BEPS), containing an overview of global developments that impact corporate tax matters and identify key principles of the taxation of cross-border activities.[65] One of those developments is the rise of the digital economy and trade.

Since the St. Petersburg Summit in 2013, the G20 is in charge of the OECD's BEPS agenda. This programme aims at tackling a range of tax-related issues summarised in fifteen actions, the first one being 'Tax Challenges Arising from Digitalisation'.[66]

As the digital sector was booming, some countries felt that negotiations, ongoing since 2015 on the first report on regulation, were not moving forward fast enough. In 2018, the European Union (EU) was the first jurisdiction to propose a new DST on some particular activities including advertising, sale of data and digital intermediary platforms that enable transactions among users.[67] The goal was to implement fair taxation of the digital economy package with a tax rate of 3 per cent on gross revenues. However, some member states opposed and the initiative did not move forward.

In January 2019, two key proposals have been featured in a policy note by the OECD in order to address those tax challenges.[68] The first pillar considers the new tax nexus which would create new taxing rights, enabling to tax multinational companies without their physical presence in the jurisdiction. It will re-allocate the taxing rights and determine where the tax should be paid and on what basis.[69] The second pillar will ensure a minimum level of tax that should be paid by multinational enterprises (MNEs).[70] This intends to discourage corporate tax planning and to level the field between traditional and digital companies.[71]

As the target date for reaching an agreement kept getting postponed (now to mid-2021), countries, in fear of no results, started taking unilateral decisions. In July 2019, France instituted its own DST.[72] The French digital services tax is imposed at the rate proposed by the EU, namely 3 per cent on annual revenues. This tax only applies to companies with annual revenues of at least €750 million worldwide and €25 million in France. [73] Potential businesses that may be qualified as taxable services were listed by the French tax authorities. The scope of enterprises concerned by this new legislation goes from the book of transport services or issuance of transport tickets through travel agencies to the provision of digital interface for online multiplayer games.[74]

Following the establishment of the new rules, the United States initiated action against France

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[64] Ismail, Yasmin (2020). *The Global Debate on Taxation in Digital Economy. State of Play and Implications for Developing Countries.* CUTS Internationa. Available at: http://www.cuts-geneva.org/pdf/SSEA19-Study-The_Global_Debate_on_Taxation_in_Digital_Economy.pdf

[65] OECD (2013). *Addressing Base Erosion and Profit Shifting.* Available at: https://www.oecd.org/tax/addressing-base-erosion-and-profit-shifting-9789264192744-en.htm

[66] OECD website. Available at : https://www.oecd.org/tax/beps/beps-actions/action1/

[67] European Commission (2018*). Proposal for a Council Directive on the common system of a digital services tax on revenues resulting from the provision of certain digital services.* Available at : https://ec.europa.eu/taxation_customs/sites/taxation/files/proposal_common_system_digital_services_tax_21032018_en.pdf

[68] OECD (2020). *Addressing the Tax Challenges Arising from the Digitalization of the Economy. Highlights.* Available at : https://www.oecd.org/tax/beps/brochure-addressing-the-tax-challenges-arising-from-the-digitalisation-of-the-economy-october-2020.pdf

[69] Ibid

[70] OECD (2020). *Addressing the Tax Challenges Arising from the Digitalization of the Economy. Highlights.* Available at : https://www.oecd.org/tax/beps/brochure-addressing-the-tax-challenges-arising-from-the-digitalisation-of-the-economy-october-2020.pdf

[71] Ibid

[72] KMPG (2019). *France : Digital Services Tax (3%) is enacted.* Available at : https://home.kpmg/us/en/home/insights/2019/07/tnf-france-digital-services-tax-enacted.html

[73] KMPG. 2020. *France : Draft administrative regulations, scope of digital services tax*. Avaliable at: https://home.kpmg/us/en/home/insights/2020/03/tnf-france-draft-administrative-regulations-scope-digital-services-tax.html

[74] Ibid

under section 301 of the Trade Act of 1974.[75] They estimated that the tax was discriminatory and targeted almost exclusively at US firms such as Google, Apple, Facebook and Amazon, mentioned in the legislation as the GAFA tax.[76] The WTO has no regulation in place that could be used against the DST, except from interpretation of most-favoured-nation (MFN) and national treatment in place at the GATS.[77] DST could be judged discriminatory under MFN if it explicitly target or exempt services or services suppliers of a particular origin.[78] The DST was found to be discriminatory in intent and effect by the US Trade Representative's investigation,[79] and thus paving the way for the imposition of duties up to 25 per cent on certain imports from France.

As of the 7th of January 2021, the US Trade Representative's (USTR) office announced that they would indefinitely suspend the tariffs on French cosmetics, handbags and other imports it had planned in retaliation.[80] Stopping this action will allow them to pursue a coordinated response in ten investigations involving nine other countries and the EU, namely: Austria, Brazil, the Czech Republic, India, Indonesia, Italy, Spain, Turkey and the UK.[81]

Indeed, after France announced its own DST, many other countries took or considered similar unilateral tax initiatives. As of December 2020, Patrick Low cited Austria, Belgium, Czech Republic, Hungary, Italy, Latvia, Poland, Slovakia, Slovenia, Spain, Brazil, Canada, India, Indonesia, Israel, Italy, Kenya, New Zealand, Nigeria, Norway, Saudi Arabia, Tunisia, Turkey and the UK in its working paper 'Digital services taxes, trade and development'.[82]

Unilateral tax policies are likely to trigger even more retaliatory trade measures if no solution can be found.[83]

Corporate Tax Negotiations at the OECD are now developed within an Inclusive Framework (IF) since 2019.[84] It allows developing countries to participate in the discussions. Still, developing countries may face difficulties to blend into those negotiations. A summary brief from the International Centre for Tax and Development (ICTD) reports four challenges for developing countries.[85] First, developing countries are only at the early stages of policy development which means that their concerns are not clearly identified for now. Second, the process of decision-making, the frequency of meetings and the volume of documents to read are cumbersome. On top of that, lower-income countries are not well organised into caucuses and often suffer from a disjuncture between technicians and their political counterparts. [86] All of these challenges restrain advancement by developing countries that feel being left behind by

[75] USTR (2019). *USTR Announces Initiation of Section 301 Investigation into France's Digital Services Tax*. Available at : https://ustr.gov/about-us/policy-offices/press-office/press-releases/2019/july/ustr-announces-initiation-section-301

[76] Ibid

[77] Low, Patrick (2020). *Digital services taxes, trade and development.* Working Paper No. 2020-07. Available at: https://iit.adelaide.edu.au/ua/media/1221/dst-paper_final_december_2020.pdf

[78] Ibid

[79] USTR (2019). *Report on France's Digital Services Tax*. Available at : https://ustr.gov/sites/default/files/Report_On_France%27s_Digital_Services_Tax.pdf

[80] USTR (2021). *Suspension of Tariff Action in France Digital Services Tax Investigation*. Available at : https://ustr.gov/about-us/policy-offices/press-office/press-releases/2021/january/suspension-tariff-action-france-digital-services-tax-investigation

[81] Euractive.com with Reuters. 2021. *US suspends French tariffs over digital services tax.* Available at: https://www.euractiv.com/section/digital/news/u-s-suspends-french-tariffs-over-digital-services-tax/

[82] Low, Patrick (2020). *Digital services taxes, trade and development.* Working Paper No. 2020-07. Available at: https://iit.adelaide.edu.au/ua/media/1221/dst-paper_final_december_2020.pdf

[83] Ibid

[84] Hearson, Martin (2020). *Corporate Tax Negotiations at the OECD: What's at Stake for Developing Countries in 2020?* Summary Brief Number 20. ICTD. Available at: https://www.ictd.ac/publication/corporate-tax-negotiations-oecd-developing-countries/

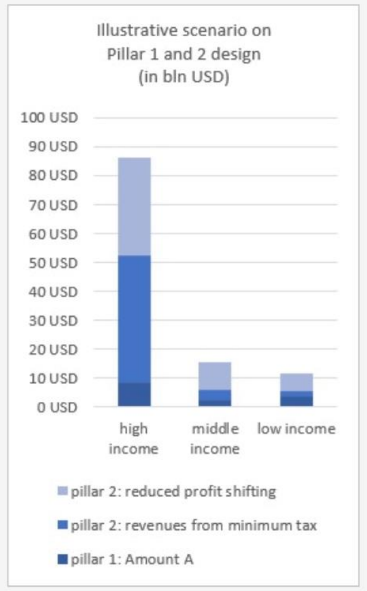
[85] Ibid

[86] Hearson, Martin (2020). *Corporate Tax Negotiations at the OECD: What's at Stake for Developing Countries in 2020?* Summary Brief Number 20. ICTD. Available at: https://www.ictd.ac/publication/corporate-tax-negotiations-oecd-developing-countries/

those discussions.

However, the impact of unilateral DSTs is still uncertain for now, due to a lack of data on the matter.[87] The OECD stipulates that the digital tax proposed by the OECD will bring similar revenue gains for both developing and developed economies.[88] However, when taken in absolute amount, it seems that the potential revenues for low-and-middle-income countries are quite smaller than for high income countries, as observable in Figure 3.

Figure 3: Illustrative scenario on Pillar 1 and 2 design



Source: OECD's analysis and Jeroen Lammers' calculation[89]

Indeed, the DST, like any tax, has the potential to distort the market.[90] If consumers are price-sensitive, the tax could reduce the demand as consumers would find alternatives to digital services. On top of that, an increased price could reduce investments in infrastructures from telecommunication operators. The ITU concludes that when developing fiscal policies, 'governments need to consider the trade-offs between revenue generation and the potential negative impact of the development of the digital sector'.[91]

Leaving the BEPS framework and direct taxation aside, African countries are recent examples of indirect taxation of digital services. In 2018, Uganda, Zambia and Benin imposed taxes for the use of 'over the top' (OTT) mobile communication apps and social media sites such as WhatsApp, Facebook, Skype and so on...[92] The goal of such reforms was to raise public revenues particularly in countries where the number of users is expected to increase with significant rates.[93] Those were also introduced because many taxes on phone calls were no longer effective due to the increasing number of individuals using mobile applications for communication.[94] Even if Uganda achieved raising 14 million USD in its first year, the tax led to higher prices of the subject goods and services.[95] According to Mozilla Foundation (2019), national internet usage rates fell from 47 per cent to 35 per cent in only six months, which

[87] OECD (2020). *Webcast : Update on Economic Analysis and Impact Assessment.* Available at: http://www.oecd.org/tax/beps/webcast-economic-analysis-impact-assessment-february-2020.htm

[88] Ibid

[89] Pillar 1: Amount A refers to the method to reallocate a portion of the residual profit of Multinational Corporations (MNCs) to market jurisdiction. See Lammers, Jeroen (2020). *Less is more. Can developing countries gain revenue by giving up taxing rights?* Copenhagen Business School Law, Research Paper Series No. 20-08. Available at: http://ssrn.com/abstract=3630466

[90] OECD (2018). *Tax Challenges arising from Digitalisation – Interim Report 2018.* OECD/G20 Base Erosion and Profit Shifting Project. Available at: https://www.oecd.org/tax/tax-challenges-arising-from-digitalisation-interim-report-9789264293083-en.htm

[91] ITU (2015*). The Impact of Taxation on the Digital Economy.* GSR15 Discussion Paper. Available at: https://www.itu.int/en/ITU-D/Conferences/GSR/Documents/GSR2015/Discussion_papers_and_Presentations/GSR16_Discussion-Paper_Taxation_Latest_web.pdf

[92] Moz://a (2019). *Taxing social media in Africa*. Available at: https://internethealthreport.org/2019/taxing-social-media-in-africa/

[93] Ibid

[94] Ismail, Yasmin (2020). *The Global Debat on Taxation in Digital Economy: State of Play and Implications for Developing Countries.* CUTS International. Geneva. Available at: http://www.cuts-geneva.org/pdf/SSEA19-Study-The_Global_Debate_on_Taxation_in_Digital_Economy.pdf

[95] Ibid

led to a backdrop in the tax revenues.[96] This is a practical example of the potential counter-effect of a DST that is not well-designed and targetted.

Opportunities and Barriers to Digital Services' Expansion

Digital services' expansion brings many opportunities for progress to developing countries. Here is a non-exhaustive list of some possibilities:

Possible benefits and opportunities

- *Build Resilience*

The most obvious opportunity observable nowadays is the enhanced resiliency in times of crisis. Indeed, e-services have been proved to be vital to keep the economy running during COVID-19.[97] Third-party marketplaces have been more resilient to the crisis than e-commerce businesses according to an UNCTAD report. [98] The Brazil, Chile and Urugay experience with the WTO's Trade Facilitation Agreement (TFA), which implements standards for electronic data or mechanisms that enable a smooth flow of goods, has shown that the agenda can improve trade facilitation environment and strengthen resilience in time of crisis. [99] Women taking part in the ITC SheTrades initiative testified that access to international e-commerce platforms enabled their business to survive the COVID-19 pandemic. [100]

One of the main findings of the UNCTAD report on COVID-19 and E-commerce is that 'countries with greater e-commerce capabilities have been better placed to mitigate some of the challenges of the pandemic, are in a better position to recover from the current crisis and will be more resilient in the face of future crises than those that are less well-prepared'.[101]

- *Foster Growth*

An empirical study was conducted by Myovella et al with 41 countries of Sub-Saharan countries and 33 countries from the OECD. It concluded that digitalization postitively contributes to economic growth, independent from the country's development level.[102]

Digital services have therefore the potential to foster growth in an economy. The WEF even have stated that: 'It is impossible to imagine the country, sector, industry or area of endeavour that cannot benefit from digital services. The services enabled by digital technology are economic growth drivers, job creators, talent magnets and big sources of exports.'.[103]

This could happen through different mechanisms. First, digital services allow firms to become more competitive.[104] Also, MSMEs could actually benefit from digital services as they are more

[96] Mozilla Foundation (2019). *Taxing Social Media in Africa. Internet Health Report 2019*. Available at: https://internethealthreport.org/2019/taxing-social-media-in-africa/

[97] WB Blogs (2020). *Digital services help governments deliver solutions during COVID-19.* Available at: https://blogs.worldbank.org/governance/digital-services-help-governments-deliver-solutions-during-covid-19

[98] UNCTAD (2020). *COVID-19 and E-Commerce. Impact on Businesses and Policy Responses.* Available at: https://unctad.org/webflyer/covid-19-and-e-commerce-impact-businesses-and-policy-responses

[99] UNCTAD (2021). *COVID-19 and E-Commerce. A Global Review*. Available at: https://unctad.org/system/files/official-document/dtlstict2020d13_en.pdf

[100] ITC website. *From the Guatemalan highlands to the world.* Available at: https://publication.tradeforum.org/achiote/guatemala/

[101] UNCTAD (2021). *COVID-19 and E-Commerce. A Global Review*. Available at: https://unctad.org/system/files/official-document/dtlstict2020d13_en.pdf

[102] Myovella and al. (2020). *Digitalization and Economic Growth: A comparative analysis of Sub-Saharan Africa and OECD economies.* Telecommunications policy. Available at: https://www.sciencedirect.com/science/article/pii/S0308596119302290

[103] WEF (2014). *Delivering Digital Infrastructure. Advancing the Internet Economy*. Available at: http://www3.weforum.org/docs/WEF_TC_DeliveringDigitalInfrastructure_InternetEconomy_Report_2014.pdf

[104] McKinsey (2018). *The Rise of Digital Challengers. How digitization can become the next growth engine for Central and Eastern Europe.* Available at: https://www.mckinsey.com/~/media/mckinsey/featured%20insights/europe/central%20and%20eastern%20europe%20needs%20a%20new%20engine%20for%20growth/the-rise-of-digital-challengers.ashx

likely to adapt quickly to new technologies.[105] In Nigeria, digital services permitted exports of goods to be improved through an excellent record keeping and reduced trade congestions.[106] Finally, digital services open the field to new strategies, new businesses and new consumers, creating more opportunities on the markets.

- *Create jobs and promote employment*

E-commerce and digital services can create new jobs opportunities as new businesses may be launched. The Progressive Policy Institute stated that e-commerce is 'a net job creator rather than a job destroyer'.[107] Their study based on data from the US Bureau of Labor Statistics demonstrated that e-commerce created 400'000 jobs while brick-and-mortar retail lost 140'000 jobs since December 2007.[108] They explain that e-commerce turns unpaid household hours shopping into paid market work and thus, creates employment. Digital services could drive the same mechanism. On top of that, the bigger share of e-commerce has the potential to reduce the income gap thanks to a higher salary in the digital sector.[109]

However, it is important to note that while it creates new jobs, the digital economy also destroys jobs in other sectors that are more prone to automation like in brick-and-mortar sector.[110] The incoming of the digital sector is likely to cause a disruption in the labour market, including but not limited to: favouring skilled over unskilled and certain skill sets over certain others; faster and sometimes shifts in demand for labour; and possibly lower quality of jobs (e.g. longer hours with less benefits). Therefore, implementing policies is necessary to promote skills development and to support workers during the transition as well as to enforce labour rights. The OECD recommends to enforce passive and active measures such as income support or job matching services.[111] [112] It should however be acknowledge that developing countries do not generally have the financial resources to provide such support to their labour force that is much larger in number and much less skilled than in developed countries.

- *Improve governments' services*

A development of e-services in the private sector may come along with the implementation of e-services at the government level. The OECD studied the impact of digital government on citizen well-being and found that digital tools 'enhanced the capacity of citizens to engage with political leaders and find a political voice'. [113] The access to government's digital services strengthens citizatens' engagement and enables the government to publish more information, enhancing its transparency. [114]

In Nigeria, awareness has risen with the implementation of an e-government and citizens now understand better the benefits of paying

[105] ITU (2016). *Trends in tech MSMEs and startup support.* Available at: https://www.itu.int/dms_pub/itu-s/opb/gen/S-GEN-MSMES-2016-PDF-E.pdf

[106] Oseni, Kazeem & Dingley, Kate (2015). *Roles of e-services in economic development, case study of Nigeria, a lower-middle income country*. International Journal of Managing Information Technology. Available at: https://core.ac.uk/download/pdf/77049797.pdf

[107] Progressive Policy Institute (2017). *How Ecommerce Creates Jobs and Reduces Income Inequality*. Available at: https://www.progressivepolicy.org/wp-content/uploads/2017/09/PPI_ECommerceInequality-final.pdf

[108] Ibid

[109] Progressive Policy Institute (2017). *How Ecommerce Creates Jobs and Reduces Income Inequality*. Available at: https://www.progressivepolicy.org/wp-content/uploads/2017/09/PPI_ECommerceInequality-final.pdf

[110] Ibid

[111] OECD (2016). *New Markets and New Jobs in the Digital Economy.* Available at: http://www.oecd.org/digital/ministerial/meeting/New-Markets-and-New-Jobs-discussion-paper.pdf

[112] OECD (2016*). Broadband Policies for Latin America and the Caribbean*. Available at: https://www.oecd-ilibrary.org/science-and-technology/broadband-policies-for-latin-america-and-the-caribbean/skills-and-jobs-in-the-digital-economy_9789264251823-12-en;jsessionid=YtrTRg6ewhkL1gTShMIQDLNj.ip-10-240-5-169

[113] OECD (2019). *The impact of digital government on citizen well-being.* OECD Working Papers on Public Governance No.32. Available at: https://www.oecd-ilibrary.org/docserver/24bac82f-en.pdf?expires=1616752077&id=id&accname=guest&checksum=834FFFB330DDD6384800EE330D20D996

[114] Ibid

taxes. [115] Hence, it brings empirical evidence that digital services have the potential to bring cooperation between the state and its citizens.

Finally, digital services facilitate the reduction of administrative problems, such as slow movement of files in offices, thereby increasing the state's efficiency.[116]

- *Empower women and youth*

The existence of a digital gender gap is now well established and has been brought forward by many instutitions such as OECD[117], WB[118] and Global System for Mobile Communication (GSMA)[119]. If the inclusion of digital services comes with appropriate policies, it has the potential to reduce this gender gap in digital technologies.

A report written by the UN on women in the digital economy cites that 'ICTs could be a powerful tools for women because they offer an array of possibilities for them to negotiate, market and deliver their products'.[120] This statement is backed up by another report focused on Asia which declares: 'Providing women with the necessary tools and resources to adopt the new digital technologies would empower them both economically and socially'.[121]

On top of that, digital services and the platform economy offers women the possibility to work in a more flexible way, enabling them to balance work and family.[122] New habits such as teleworking also allows women to work remotely, from home, and thus enable them to better manage their time between household tasks and work.

Moreover, as the workforce of women in services is wide, they could benefit from a bigger potential if thir IT skills are developed.

On the other hand, particularly in developing countries, the current digital gender divide is quize large, i.e. women being generally with less skills and access than their male counterparts. The trust and secuiry in cyber space is also much more important for women which is often perceived to be lacking.

Undoubtedly, youth are more likely to have the necessary skills to adapt to new technologies. Therefore, with a good IT education, they would quickly initiate new trends. Furthermore, it has been increasingly shown that digital financial services favour inclusion in the long run.[123]

Possible Barriers and Challenges

The above-mentionedopportunities do not come without barriers and challenges, especially in developing countries. Some of these are mentioned below.

- *Lack of financing and infrastructures*

First and foremost, most developing countries do not have the necessary infrastructures in place to allow quick and swift digital transformation.

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[115] Oseni, Kazeem & Dingley, Kate (2015). *Roles of e-services in economic development, case study of Nigeria, a lower-middle income country*. International Journal of Managing Information Technology. Available at: https://core.ac.uk/download/pdf/77049797.pdf

[116] Ibid

[117] OECD (2018). Bridging the digital gender divide. Available at: http://www.oecd.org/digital/bridging-the-digital-gender-divide.pdf

[118] WB(2020*). Leveraging ICT Technologies in Closing the Gender Gap.* Available at: http://documents1.worldbank.org/curated/en/891391578289050252/pdf/Leveraging-ICT-Technologies-in-Closing-the-Gender-Gap.pdf

[119] GSMA (2019). *The Digital Gender Gap*. Policy Brief. Available at: https://www.gsma.com/mobilefordevelopment/wp-content/uploads/2019/02/Digital-Equity-Policy-Brief-W20-Japan.pdf

[120] UN (2013*). Women in the digital economy*. Available at: https://repositorio.cepal.org/bitstream/handle/11362/16562/1/S2013529_en.pdf

[121] Picot, Maria Dolores & Spath, Kerstin (2020) *Women and the Future of the Digital Economy in Asia. Decent work for all?* Available at : http://library.fes.de/pdf-files/bueros/singapur/16217.pdf

[122] Ibid

[123] Sahay et al. (2020). *The Promise of Fintech: Financial Inclusion in the Post COVID-19 Era*. IMF. Available at: https://www.imf.org/en/Publications/Departmental-Papers-Policy-Papers/Issues/2020/06/29/The-Promise-of-Fintech-Financial-Inclusion-in-the-Post-COVID-19-Era-48623

Unfortunately, ICT equipment is very expensive to set in place but also to maintain. Therefore, the change can not be made overnight. IT infrastructure levels in developing countries are low. Most of them do not have internet access due to lack of connectivity.[124] It is especially the case in rural areas where population are 37 per cent less likely to use mobile internet.[125] Therefore, lack of internet access is one of the main challenges faced by developing countries. The latter also have a restricted access to computers. In Africa and Least Developed Countries (LDCs), only 10 per cent of households have a computer at home.[126] In the developing world, 46 per cent of households have on average internet access at home whether with a cellular or a computer.[127] In comparison, 87 per cent of the citizens of the developed world have internet access.[128] On top of that, the cost of internet connection can be very expensive for poor individuals. Even though the cost of mobile data as a percentage of average monthly income declined from 5.76 per cent to 4.69 per cent in most of low- and middle-income countries, according to the alliance for affordable internet, in some countries, the cost of 1GB data remains over 20% of the average monthly income; which is of course unaffordable for many.[129]

- *Digital skills' issues*

In addition to this, individuals in developing countries mostly lack IT skills. In 40 out of 84 countries assessed by the ITU, less than half of the population possesses basic computer skills such as copying a file or sending an e-mail with an attachment.[130] For more complex and advanced computer skills, the level can even fall below 10 per cent. [131] With already low levels of literacy and no access to technology, it is unlikely that citizens are able to use or provide digital services. Moreover, the main language of IT is English and most of developing countries' citizens do not know another language than their own. Lastly, the school curriculum does not include computer education in most developing countries or at least at the lowest levels. Students need to be trained and educated in order for the digital transformation to happen.

- *Trust Issues*

The major concern of citizens when it comes to digital services is the lack of trust in e-service security.[132] Most of them fear for the protection of their data and privacy. Malware or services attacks could have a disastrous effect if they lead to leaks of client data, especially in the case of e-payments where data are crucial. If companies have access to the data, concerns about privacy also arise. Socio-cultural barriers could be an explanation for this lack of confidence in technology. Online culture does not have a place in most developing countries. Shopping at the market is usually seen as a social activity where relationships and community are of great importance. Therefore, losing this aspect with online technology could explain the reluctance.

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[124] GSMA (2020). *The State of Mobile Internet Connectivity 2020.* Available at: https://www.gsma.com/r/wp-content/uploads/2020/09/GSMA-State-of-Mobile-Internet-Connectivity-Report-2020.pdf

[125] Ibid

[126] ITU (2019). *Measuring digital development. Facts and figures.* Available at: https://www.itu.int/myitu/-/media/Publications/2020-Publications/Measuring-digital-development-2019.pdf

[127] Ibid

[128] ITU (2019). *Measuring digital development. Facts and figures.* Available at: https://www.itu.int/myitu/-/media/Publications/2020-Publications/Measuring-digital-development-2019.pdf

[129] Alliance for Affordable Internet (A4AI) (2019). *Mobile data prices fall across low and middle-income countries.* Availble at: https://a4ai.org/mobile-data-prices-fall-across-low-and-middle-income-countries/

[130] ITU (2019). *Measuring digial development. Facts and figures.* Available at: https://www.itu.int/myitu/-/media/Publications/2020-Publications/Measuring-digital-development-2019.pdf

[131] ITU (2019). *Measuring digial development. Facts and figures.* Available at: https://www.itu.int/myitu/-/media/Publications/2020-Publications/Measuring-digital-development-2019.pdf

[132] Oseni, Kazeem et al. (2015). *Barriers Facing E-Services Technology in Developing Countries: A Structured Literature Review with Nigeria as a Case Study.* UK. Available at: http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.1045.4495&rep=rep1&type=pdf

- *Lack of policy and regulation*

Most developing countries do not have ICT policies to guide the provision of internet services.[133] Without any consumer and data protection laws, few are willing to invest in the digital economy.[134] ICT firms' investment are often determined by the level of transparency and quality of the regulatory regime.[135] Therefore, the progress may be hampered due to the absence of clear policies and their potential way of implementation.[136]

- *Widening of inequalities*

Even if digital services can enhance inclusion in the long-term, they can exacerbate pre-existing divides in the short run.[137] Women in LMIC, for example, are 23 per cent less likely to access the internet via mobile phones than men.[138] Rural populations are also less likely to be able to connect to a network in the countryside. The poor will lack financing to buy electronic devices and the elderly will lack technological skills to adapt. In summary, gender, rural-urban and young-old gaps risk to be worsened in the short-run adaptation time and even longer if appropriate policies, investment and regulations are not undertaken.[139]

Recommendations for Developing Countries

Here are some recommendations for developing countries interested in the topic of digital services. Those are based on the recommendations of the UNCTAD for developing E-Commerce amidst COVID-19. [140]

Increase internet access

Increasing internet connectivity should be a priority. In digital services, without connection, there is no service-provider and no customer. Then, the goal should be to reduce the cost of the internet to allow as many people as possible to connect online. During COVID-19, Lesotho, Nepal, and Tunisia, among others, have taken temporary measures to make Internet data packages more attractive and affordable.[141] Those measures were highly appreciated because, even if the price of data has been decreasing over the last few years, the price of 1 GB still exceeds 2 per cent of average monthly income in LMIC.[142] The Alliance for Affordable Internet and the Web Foundation, recommends governments and private enterprises to partner up to improve internet access and affordability to underserved areas or

[133] Lawrence, Japhet & Tar, Usman (2010). *Barriers to ecommerce in developing countries.* Information, Society and Justice, Volume 3 No. 1, pp 23-35. Availble at: http://repository.londonmet.ac.uk/88/1/InformationSocietyAndJustice_v3n1_p23-35.pdf

[134] Cowhey P. & Kleeman M. (2013). *Unlocking the Benefits of Cloud Computing for Emerging Economies – A Policy Overview.* UC San Diego. Available at: https://gps.ucsd.edu/_files/faculty/cowhey/cowhey_profile_10182012.pdf

[135] Ibid

[136] Centre for Development Informatics Global Development Institute, SEED (2018). *Digital Economy Policy in Developing Countries.* Paper No. 6. Available at: https://diodeweb.files.wordpress.com/2018/03/digital-economy-policy-diode-paper.pdf

[137] IMF (2020). *Digital Financial Services and the Pandemic : Opportunities and Risks for Emerging and Developing Economies.* Available at: https://www.imf.org/~/media/Files/Publications/covid19-special-notes/en-special-series-on-covid-19-digital-financial-services-and-the-pandemic.ashx

[138] GSMA (2019) *: The State of Mobile Internet Connectivity 2019.* Available at: https://www.gsma.com/mobilefordevelopment/wp-content/uploads/2019/07/GSMA-State-of-Mobile-Internet-Connectivity-Report-2019.pdf

[139] IMF (2020). *Digital Financial Services and the Pandemic : Opportunities and Risks for Emerging and Developing Economies.* Available at: https://www.imf.org/~/media/Files/Publications/covid19-special-notes/en-special-series-on-covid-19-digital-financial-services-and-the-pandemic.ashx

[140] UNCTAD (2020). *COVID-19 and E-Commerce. Impact on Businesses and Policy Responses.* Available at: https://unctad.org/webflyer/covid-19-and-e-commerce-impact-businesses-and-policy-responses

[141] Ibid

[142] UNCTAD (2020). *COVID-19 and E-Commerce. Impact on Businesses and Policy Responses.* Available at: https://unctad.org/webflyer/covid-19-and-e-commerce-impact-businesses-and-policy-responses

populations.[143] It could be achieved through a public-facing wifi for residents in areas covered by an operator or through the establishment of a fund for students and households in need, for example.[144] According to the GSMA, it is important for governments to collaborate with the mobile telecom industry through policies and programmes that create the right incentives for innovation and an enabling environment for extended connectivity.[145] In Côte d'Ivoire, for example, a mobile payment programme was successful thanks to five government policies. One of them included the collaboration of the government with private actors to ensure the efficiency of the service year on year.[146]

Develop a strategy

Developing a strategy is necessary to implement e-commerce and digital services. Countries such as Cambodia and Senegal, for example, accelerated the adoption and implementation of their respective national e-commerce strategies during COVID-19.[147] The first important step would be to gather as much information as possible about digital services and the potential of the country in this sector. Knowing the subject's opportunities and challenges is crucial to take a decision. Definitions and classifications should be determined to formulate adequate policies and regulations, leading to the implementation of policies and regulations. In consequence, the country can learn about the state of digital services and identify priority areas for their development. Moreover, increasing the amount of information available on digital services is necessary for the launch of new businesses in this sector. Future potential providers should be aware of any rules and regulations on the matter. Advertising is also important to attract customers and to convince them of the potential of this new way of transmitting services. In Uganda, higher visibility led to an increased use of digital platforms, both in terms of more sellers and new customers.[148] On top of that, the government should support the new e-commerce marketplaces and ensure business continuity through funding.[149]

Foster the use of digital financial services

Digital financial services include a broad range of financial services accessed and delivered through digital channels such as payments, credit, savings, remittances, and insurance.[150] Those are essential to ensure the integration of other digital services. Digital financial services facilitate procedures and allow transactions to be faster in cross-border trade.[151] On top of that, digital financial services increase financial inclusion, bring higher efficiency of delivery, higher quality of service, higher revenue growth, and lower operational and transactional costs.[152] The launch of new e-payment applications should also be promoted. Indeed, e-payment services are crucial for the development of e-commerce in order to enable online payments. Rwanda, for example, temporarily suspended its mobile

[143] A4AI (2020). *COVID-19 Policy Brief: Internet Access and Affordability.* Available at: https://a4ai.org/research/covid-19-policy-brief-internet-access-and-affordability/
[144] Ibid
[145] GSMA (2017*). The Mobile Economy. Sub-Saharan Africa 2017*. Available at : https://www.gsma.com/subsaharanafrica/wp-content/uploads/2018/11/2017-07-11-7bf3592e6d750144e58d9dcfac6adfab.pdf
[146] Ibid
[147] UNCTAD (2020). *COVID-19 and E-Commerce. Impact on Businesses and Policy Responses.* Available at: https://unctad.org/webflyer/covid-19-and-e-commerce-impact-businesses-and-policy-responses
[148] UNCTAD (2020). *Ugandan e-commerce platforms power recovery from COVID-19 crisis.* Available at: https://unctad.org/news/ugandan-e-commerce-platforms-power-recovery-covid-19-crisis
[149] Ibid
[150] Lina Kambale (2018). *Digital Financial Services – A Case of Malawi.* Available at: https://www.itu.int/en/ITU-D/Capacity-Building/Documents/IG_workshop_August2018/Presentations/Session8_LindaKambale.pdf
[151] IMF (2020). *Digital Financial Services and the Pandemic : Opportunities and Risks for Emerging and Developing Economies.* Available at: https://www.imf.org/~/media/Files/Publications/covid19-special-notes/en-special-series-on-covid-19-digital-financial-services-and-the-pandemic.ashx
[152] Ibid

money fees during COVID-19 to reduce e-payment costs and enhance e-commerce.[153] However, the lack of trust in online e-payment services may restrain the number of interested customers. In LDCs, only 40 per cent of the countries have laws on consumer protection in place.[154] Therefore, it is important to take action to ensure the security of provided services. The government can achieve that through secured software, authentification mechanisms, intrusion detection systems, encryption, and many others...[155] A broader descriptive list of measures can be found in the linked article.

Enhance skills

Finally, it is crucial to enhance computer skills in the developing country for people to be able to participate in the integration of digital services. In an ITU report, Solana-Charris et al. stated that digital skills will support the future learning of individuals and their ability to adapt to workplaces and future disruption, therefore succeeding in the digital economy.[156] They recommend that education should adapt to the challenges of digitisation with practical orientation and accelerated changes in vocational training. Indeed, as children constitute the future of the economy, it is consistent to include IT courses in the schooling programme. Proposing workshops for businesses also allows them to strengthen their ability to propose their services online. However, further training and retraining will be necessary due to the many changes in skills requirements triggered by automation and digitisation.[157] Another article by Mwakatumbula and Moshi examined the emerging gig economy in Africa through interviews conducted with Uber drivers.[158] Their results highlighted the need to improve the level of digital skills among youth in Tanzania. They expressed that digital skills training was likely to unlock employment opportunities for youth and to reduce critical entry barriers to the workforce. To conclude, Brudvig *et al*. stressed the importance of targeting women in the policy-making process.[159] They stated: 'Any policy or project to get more people online will only reinforce digital inequalities unless it specifically targets the gender gap'.[160]

Enhance global cooperation

Global cooperation is critical for a number of reasons. One, developing countries do not have the financial and technical resources to undertake the required investments, and develop and implement the necessary policies and regulations. Two, bridging the digital divide is also in the interest of developed countries. More capacitated developing countries will increase the overall opportunities for digital services substantially that will be beneficial for the digital service providers (and consumers) of develop countries. Three, sharing of information, knowledge and experience on various strategy, policy and regulatory issues among all countries will enhance overall understanding and will lead to better policies, strategies and regulations at the national levels. Four, it is difficult to imagine digital services being contained behind "physical

[153] UNCTAD (2020). *COVID-19 and E-Commerce. Impact on Businesses and Policy Responses.* Available at: https://unctad.org/webflyer/covid-19-and-e-commerce-impact-businesses-and-policy-responses

[154] UNCTAD (2020). *Data on privacy unprotected in one third of countries, despite progress*. Available at: https://unctad.org/news/data-and-privacy-unprotected-one-third-countries-despite-progress

[155] Oseni, Kazeem et al. (2015). *Barriers Facing E-Services Technology in Developing Countries: A Structured Literature Review with Nigeria as a Case Study.* UK. Available at: http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.1045.4495&rep=rep1&type=pdf

[156] Elyn L. Solana-Charris, Carolina Velásquez-Mora and Estephanie Silva-Avellaneda (2020). *Bibliometric analysis for mapping digital skills for future jobs.* Digital Skills Insights. ITU. Available at: https://academy.itu.int/sites/default/files/media2/file/Digital%20Skills%20Insights%202020.pdf

[157] Ibid

[158] Hilda Mwakatumbula and Goodiel Moshi (2020). *Digital skills for gig workers in digital platforms*. Digital Skills Insights. ITU. Available at: https://academy.itu.int/sites/default/files/media2/file/Digital%20Skills%20Insights%202020.pdf

[159] Ingrid Brudvig, Nanjira Sambuli and Dhanaraj Thakur (2020). *#eSkills4Policymakers: From policy recommendations to policy action – Training policy – makers on gender equality in ICT policy formulation.* Digital Skills Insights. ITU. Available at: https://academy.itu.int/sites/default/files/media2/file/Digital%20Skills%20Insights%202020.pdf

[160] Ibid

borders". The very nature of these services make the concept of hard border somewhat irrelevant. On the other hand, physical borders and national sovereignties do matter as the legal, political and economic systems of the world are organised on that basis. The only way to reconcile the two, therefore, is through global cooperation.

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