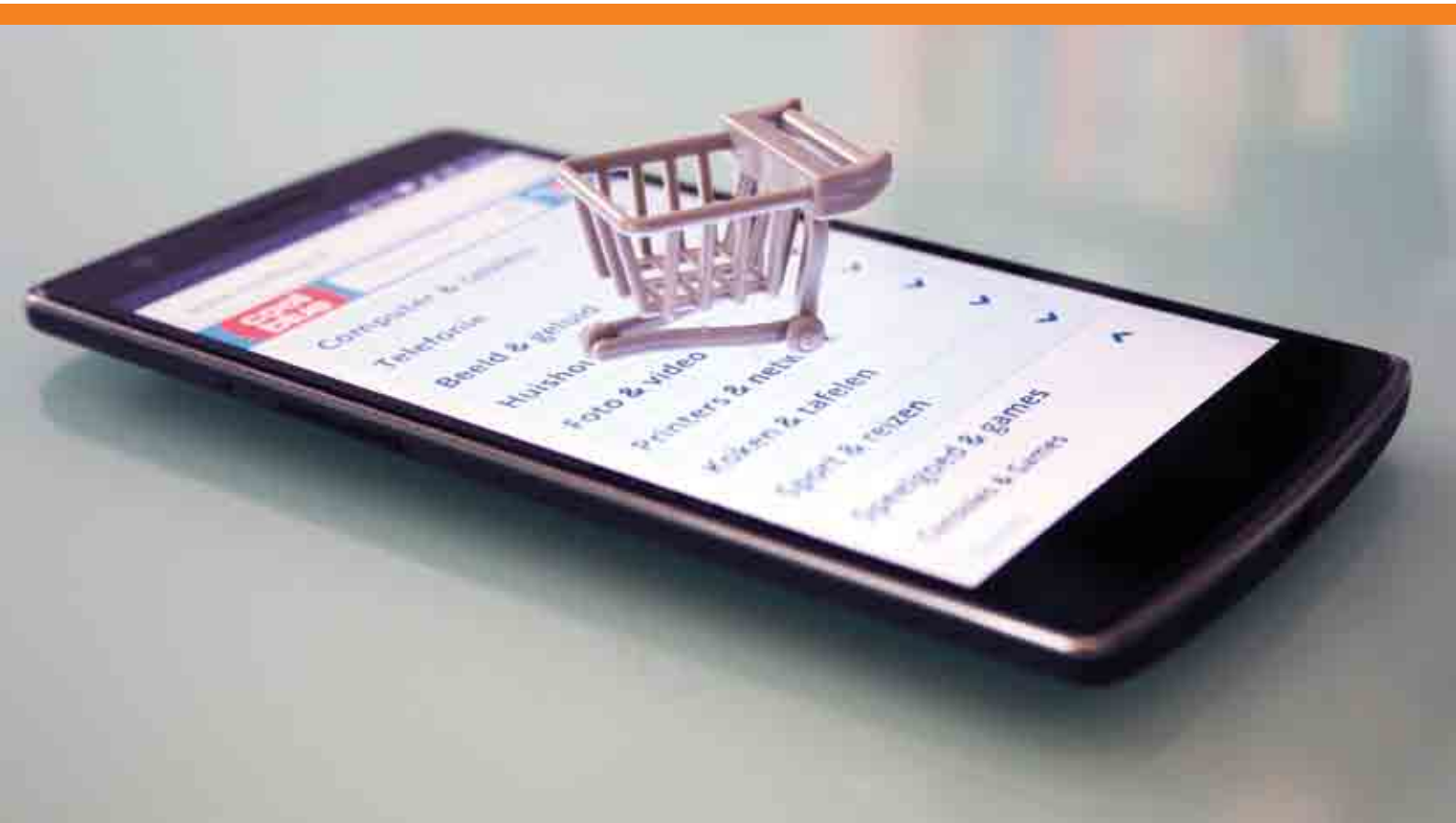
GEGAFRICA
GLOBAL ECONOMIC GOVERNANCE

DISCUSSION PAPER | NOVEMBER 2016

E-COMMERCE IN AFRICA

DEFINITIONS, ISSUES AND THE EVOLVING INTERNATIONAL REGULATORY LANDSCAPE

Heinrich Krogman & Nkululeko Khumalo



GEGAFRICA
GLOBAL ECONOMIC GOVERNANCE

ABOUT GEGAFRICA

The Global Economic Governance (GEG) Africa programme is a policy research and stakeholder engagement programme aimed at strengthening the influence of African coalitions at global economic governance forums such as the G20, BRICS, World Trade Organization and World Bank, among others, in order to bring about pro-poor policy outcomes.

The second phase of the programme started in March 2016 and will be implemented over a period of three years until March 2019.

The programme is expected to help create an international system of global economic governance that works better for the poor in Africa through:

- undertaking substantial research into critical policy areas and helping South African policymakers to prepare policy papers for the South African government to present at global economic governance platforms;
- ensuring that African views are considered, knowledge is shared and a shared perspective is developed through systematic engagement with African governments, regional organisations, think tanks, academic institutions, business organisations and civil society forums; and
- disseminating and communicating research and policy briefs to a wider audience via mass media and digital channels in order to create an informed and active policy community on the continent.

For the next three years the work of the programme will be focused on three thematic areas: development finance for infrastructure; trade and regional integration; and tax and transparency.

GEGAFRICA is funded by the UK Department for International Development and managed by a consortium consisting of DNA Economics, the South African Institute of International Affairs and Tutwa Consulting.

DISCUSSION PAPER
NOVEMBER 2016

E-COMMERCE IN AFRICA

DEFINITIONS, ISSUES AND THE EVOLVING INTERNATIONAL REGULATORY LANDSCAPE

Heinrich Krogman & Nkululeko Khumalo

GEGAFRICA
GLOBAL ECONOMIC GOVERNANCE

CONTENTS

ABSTRACT

E-commerce is becoming an integrated part of the global economy, with revenue in business-to-business and business-to-consumer e-commerce transactions rapidly increasing. This development has prompted countries to introduce regulations to address the challenges of e-commerce faced by consumers, producers, service providers and governments. Of particular interest is the opportunities e-commerce offers entrepreneurs as well as small, medium and micro enterprises to reach a wider market and potentially link into cross-border value chains and tap into foreign markets. Considering the developmental constraints faced by many developing and least-developed countries in Africa, e-commerce and the productive use of the information and communications technology sector could help to address some of the systemic issues. However, Africa currently lacks comprehensive legislation to address the challenges faced by the sector. While domestic legislation needs to be cognisant of consumer protection in relation to distance selling, electronic transactions, cybercrime, data protection and privacy, developed countries have started to address these issues in plurilateral and regional trade agreements. Considering that the majority of e-commerce companies are currently based in developed countries, these progressive regional agreements could become the benchmark for cross-border e-commerce transactions and divert investment and trade away from non-members. This paper considers the nature of e-commerce, the environmental factors that affect the sector's development and uptake, the current state of negotiations in the World Trade Organization, and how regulation is being shaped by the so-called mega-regional trade agreements. Based on literature review, a framework is provided to guide further studies on the measurement of e-commerce, the barriers affecting e-commerce, and the regulations that should be considered in developing a comprehensive enabling environment for e-commerce.

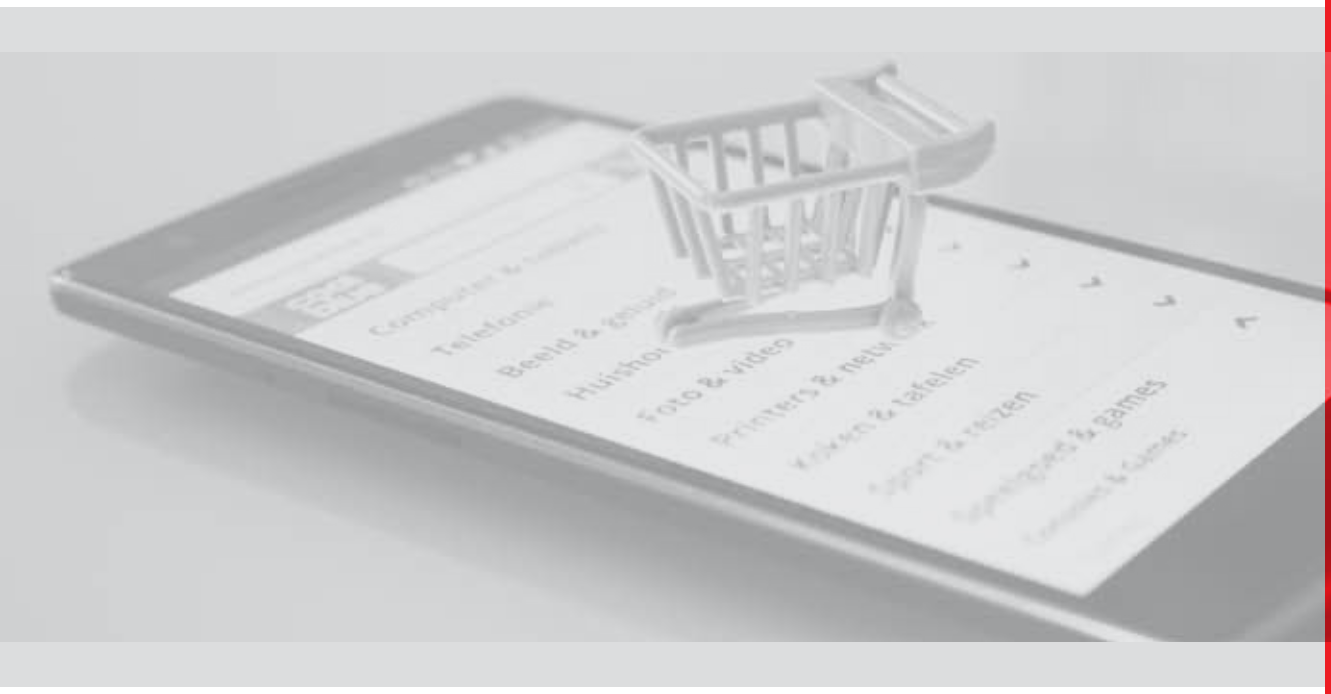
ACKNOWLEDGMENT

Heinrich Krogman would like to thank Chiziwiso Pswarayi for providing invaluable research support and other colleagues for input that helped to shape the paper.

AUTHORS

Heinrich Krogman is an Economist and Researcher with Tutwa Consulting. He has conducted a comparative study on the EU's economic partnership agreements with Africa for COMSEC, and worked on a project to develop an Africa–international relations strategy for the Gauteng provincial government, among others. He completed his postgraduate degree in International Trade at the North-West University, Potchefstroom in 2011 and a postgraduate diploma in Management in 2012.

Nkululeko Khumalo is a Senior Associate at Tutwa Consulting, a Trade and Competition Law Consultant and a part-time Commissioner at the International Trade Administration Commission of South Africa. He has extensive experience as both an international trade policy expert and a trade and competition law attorney. He previously worked as a Senior Researcher on trade policy at the South African Institute of International Affairs.



INTRODUCTION

E-commerce has become an increasingly important and fundamental function of economic transactions around the world. In 2013 global e-commerce transactions reportedly generated an estimated $16.2 trillion, with the majority occurring in developed countries with a large number of Internet users, such as the US, UK, Japan and China.[1] More importantly, e-commerce is changing the way producers and consumers interact within markets at a tremendous rate.

From a business perspective, the benefits of migrating to a digital platform lie in the reach afforded by the World Wide Web. Through its global reach, e-commerce allows businesses to showcase goods and services on an international stage, enabling producers to access markets and identify suppliers that would have otherwise been inaccessible. According to the UN Conference on Trade and Development (UNCTAD), from an economic perspective this immediate access to a global market has the potential to create new businesses and jobs, promote small- and medium-sized enterprise (SME) export participation (via export market diversification, increased start-up survival and trade volumes), enhance competitiveness (via access to a greater variety of quality inputs to businesses),

1 UNCTAD (UN Conference on Trade and Development), 'The Information Economy Report 2015', http://unctad.org/en/PublicationsLibrary/ier2015_en.pdf, accessed 4 October 2016.

increase consumer welfare (greater variety of products available at lower cost) and augment labour and total factor productivity. These purported benefits show that e-commerce also offers potentially enticing solutions to countries struggling with unemployment, low productivity and a high degree of concentrated economic activities.

However, e-commerce also has its unique set of challenges. Two are particularly relevant to Africa: the issue of tax residency for multinational corporations (MNCs) and, related to this, the Base Erosion and Profit Shifting (BEPS) agenda advocated by the G20. These raise important regulatory issues, pertinent to Africa and the world alike. Currently, there is a moratorium on taxation of e-commerce products and services in the World Trade Organization (WTO), but there are moves afoot to revisit this. Furthermore, the issue of surveillance of private individuals by the US National Security Agency, inter alia, in the wake of the Snowden affair, has raised the prominence of data protection in and beyond the so-called mega-regional negotiations either currently underway, such as the Transatlantic Trade and Investment Partnership (TTIP), or close to adoption, such as the Trans-Pacific Partnership (TPP). The TPP has an e-commerce chapter and a range of other provisions pertinent to the issue. In addition, since developed countries' economies are predominantly services based, negotiations over the proposed Trade in Services Agreement (TISA) on the margins of the WTO are also relevant.

The core negotiating parties to these various agreements are from developed countries. Whereas Africa stands to benefit from embracing e-commerce, this has to be coupled with a supportive enabling environment characterised by sound regulation, quality infrastructure and ready skills supply. Negotiations concluded elsewhere, and most likely drafted by developed countries, will have major implications for how e-commerce is regulated globally. Therefore African countries have a strong interest in proactively preparing positions on the issues, with a view to shaping the regulatory environment where feasible.

Given the potentially enormous scope of a topic as poorly understood and as hard to measure as e-commerce, we first define the concept and practice, given that there are varying perspectives on this. Then we identify the main issues currently subject to debate, internationally, at key global economic governance forums and/or as part of major international trade negotiations. This includes technical issues around how e-commerce is defined and measured; as well as regulatory and tax-related issues. We then outline key e-commerce related provisions in the WTO, before discussing pertinent provisions in the TPP. Unfortunately, we do not have access to the negotiating texts for the TTIP and TISA, and so these are not discussed in detail. Nonetheless, we are of the view that the TPP's provisions set the essential benchmarks for e-commerce regulation, and this justifies the focus on that agreement. The paper concludes with some reflections on what the evolving regulatory norms, in relation to the e-commerce opportunity, mean for Africa in general, particularly the poor and women.

DEFINING E-COMMERCE

The challenge in defining e-commerce lies in its intangible nature and the rapid changes to the environment in which it exists. Much like services trade, e-commerce adds value in non-physical form or function. Beyond its intangible nature it is also hard to classify exactly where economic activity has taken place or how value was created. Nonetheless, one constant element remains: e-commerce transactions always require the exchange of data over a computer network.

Creating, distributing and/or hosting online content usually incur costs, and often these costs are covered via traditional consumer–to–producer transactions (albeit predominantly online), by users or subscribers who pay for goods and services provided. Costs could also be absorbed internally, by third-party sponsors or online community donations. The consideration as to how the cost is covered separates e-commerce from the broader classification of other online activities.

Since 2001 the Organization for Economic Cooperation and Development (OECD) and its member countries have worked to define exactly what e-commerce is and how to convey the concept without inviting ambiguity regarding its interpretations. To arrive at an agreeable and unambiguous definition of e-commerce is of the utmost importance, as divergent interpretations can affect national, regional and multilateral policies guiding the regulation and treatment of an ever-increasing mode of commerce. The OECD's latest attempt, in 2009, offers a widely used and easily understood definition:[2]

> 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. An e-commerce transaction can be between enterprises, households, individuals, governments, and other public or private organisations. To be included are orders made over the web, extranet or electronic data interchange. The type is defined by the method of placing the order. To be excluded are orders made by telephone calls, facsimile or manually typed e-mail.

This is the first singular definition of e-commerce from the OECD. Previous versions distinguished e-commerce both broadly and narrowly, based on which network was being used. This singular-definition version was specifically developed to increase international harmonisation on the matter. To a large extent this objective is being

2 OECD (Organization for Economic Cooperation and Development), 'OECD science, technology and industry scoreboard 2011', http://www.oecd-ilibrary.org/sites/sti_scoreboard-2011-en/06/10/index.html?contentType=&itemId=/content/chapter/sti_score board-2011-64-en&containerItemId=/content/serial/20725345&accessItemIds=/content/book/sti_scoreboard-2011-en&mimeType=text/html, accessed 3 October 2016.

met, as numerous international organisations[3] use this definition in their reports and studies on e-commerce. However, this definition does deviate from the WTO Work Programme on Electronic Commerce's[4] definition of e-commerce.[5] It was also intended to offer basic principles to help define e-commerce, rather than provide an exhaustive list of methods on how electronic transactions can be conducted; unlike the definition of electronic services used by the South African Revenue Service (SARS).

However, the definition and concept of ordering services gets complicated, especially in terms of digital services involving sponsored or advertisement-funded content. Colloquially, digital or electronic services are understood to be services, professional or otherwise, available for consumption or use via web pages, extranets and other applications, that run over the Internet or over any other web-enabled application, regardless of how the web is accessed (eg, through a mobile phone, a TV set, etc.). However, governments define electronic services for tax purposes in very different ways. The EU defines electronic services as[6]

> [s]ervices which are delivered over the Internet or an electronic network and the nature of which renders their supply essentially automated and involving minimal human intervention, and impossible to ensure in the absence of information technology[,]

while SARS defines electronic services as[7]

> The services listed in regulation 3 (educational services), regulation 4 (games and games of chance), regulation 5 (internet-based auction services); regulation 6 (miscellaneous services) and regulation 7 (subscription services) … where such services are supplied by means of any electronic agent, electronic communication or the internet for any consideration.

3 Including UNCTAD, the International Trade Centre (ITC) and IDEAS Centre, as well as the WTO (World Trade Organization), 'E-commerce in Developing Countries: Opportunities and Challenges for Small and Medium-sized Enterprises', 2013, https://www.wto.org/english/res_e/booksp_e/ecom_brochure_e.pdf, accessed 20 October 2016.

4 WTO, 'Electronic commerce', https://www.wto.org/english/tratop_e/ecom_e/ecom_e.htm, accessed 20 October 2016.

5 *Ibid.*: 'Exclusively for the purposes of the work programme, and without prejudice to its outcome, the term "electronic commerce" is understood to mean the production, distribution, marketing, sale or delivery of goods and services by electronic means.'

6 European Commission, Taxation and Customs Union, 'Electronically supplied services', http://ec.europa.eu/taxation_customs/individuals/buying-goods-services-online-personal-use/buying-services/electronically-supplied-services_en, accessed 3 October 2016.

7 *Government Gazette*, 'Regulations prescribing services for the purpose of the definition of "electronic services" in section 1 of the Value-Added Tax Act, 1991', 20 March 2014, http://www.sars.gov.za/AllDocs/LegalDoclib/SecLegis/LAPD-LSec-Reg-2014-03%20-%20Regulation%20R221%20GG%2037489%2028%20March%202014.pdf, accessed 3 October 2016.

SARS's detailed and granular definition of electronic services does seem to cover the current possible extent of digital services. However, as the OECD mentions regulatory certainty and for the sake of international harmonisation, such definitions are better addressed via guiding principles. South Africa's electronic transactions are regulated under the Electronic Communications and Transactions Act of 2002, as part of the legislative mandate of the Department of Telecommunications and Postal Services (DTPS).[8] The act does not specifically mention e-commerce but rather refers to automated transactions, which are defined as[9]

> an electronic transaction[10] conducted or performed, in whole or in part, by means of data[11] messages[12] in which the conduct or data messages of one or both parties are not reviewed by a natural person in the ordinary course of such natural person's business or employment.

In this context is seems that the DTPS's definition of automated transactions closely follows the principles of the OECD definition of e-commerce. However, during stakeholder engagements it was noted that a BRICS framework on e-commerce co-operation is being developed that will include a new definition of e-commerce. Exactly what this new definition will be and the extent to which it will vary from the current definition is unclear, as the framework still has to be approved.

Both definitions attempt to clarify that not all online activity, or exchange of data, can be seen as e-commerce or automated/electronic transactions. Rather, from the OECD's definition, three criteria need to be fulfilled.

First, the interaction between enterprises, households, individuals, governments and other public or private organisations must involve a sale or purchase of goods or services. If the interaction does not include a sale or purchase it cannot be considered as an e-commerce transaction. In this regard the DTPS definition closely follows, albeit with a broader scope, the OECD principle, as it defines an electronic transaction, with transaction meaning 'a transaction of either a commercial or non-commercial nature'.[13] The precise limitations of 'non-commercial' transactions is not included in the Electronic Communications and Transactions Act, but the

8 DTPS (Department of Telecommunications and Postal Services), 'Legislative mandates', http://www.dtps.gov.za/legislative-and-other-mandate.html, accessed 20 October 2016.

9 Republic of South Africa, Electronic Communications and Transactions Act, 2002, http://www.gov.za/sites/www.gov.za/files/a25-02.pdf, accessed 20 October 2016.

10 *Ibid.*: 'transaction' means a transaction of either a commercial or non-commercial nature, and includes the provision of information and e-government services.

11 *Ibid.*: 'data' means electronic representations of information in any form.

12 *Ibid.*: 'data message' means data generated, sent, received or stored by electronic means and includes (a) voice, where the voice is used in an automated transaction; and (b) a stored record.

13 Electronic Communications and Transactions Act, *op. cit.*

definition does go on to states that it includes 'the provision of information and e-government services'.[14]

Second, the method by which an order is placed or received is the determining factor in the OECD definition, rather than the method of payment or delivery of the goods or services. Therefore, the sale or purchase of goods or services between enterprises, households, individuals, governments and other public or private organisations over a computer network that results in a receipt or placement of an order, again over a computer network, can be considered e-commerce. The DTPS's definition of automated transactions also notes the principle as 'by means of data messages in which the conduct or data messages of one or both parties are not reviewed by a natural person'.

Third, the definition explicitly states that orders made by telephone call, facsimile or manually typed e-mail are excluded, as these orders are not considered to be automated or conducted via methods specifically designed for the purpose of receiving or placing orders over a computer network. The DTPS's definition also follows this principle in defining automated transactions as transactions 'in which the conduct or data messages of one or both parties are not reviewed by a natural person in the ordinary course of such natural person's business or employment', implying automation.

Consider the qualifying method by which an order is placed or received, in terms of checking out items in a grocery store at the cashier or point of sale. In traditional bricks-and-mortar operations, consumers pick the goods or services they wish to purchase and approach the point of sale or cashier, who calculates the amount owed by the consumer, prepares an invoice if required, indicates the options for the consumer(s) to make payment and, following the payment, issues a receipt for the transaction. For a transaction to be considered an e-commerce transaction the initial order process has to be automated, implying the use of an e-sales system.

The definition allows for the sale or purchase of almost anything, since 'the payment and the ultimate delivery of the goods or services do not have to be conducted online'. Again, the DTPS maintains the principle by including any 'electronic transaction[15] conducted or performed, in whole or in part'. This means that a good or service can be ordered online without necessarily having to be a digital good or service. For example, you can order an album online (the physical copy), which you can retrieve or have delivered to you; order a digital copy of the album online; or subscribe online to a music streaming service hosting the album. In all three cases the transaction will be considered an e-commerce transaction, since the ordering method occurred over a computer network in the presence of an e-sales or automated system. The DTPS's definition of automated transactions is not limited to certain goods or services, but simply requires that a transaction, in whole or in part, be conducted.

14 *Ibid.*

15 *Ibid.*: 'transaction' means a transaction of either a commercial or non-commercial nature, and includes the provision of information and e-government services.

Regardless of how individual governments define electronic services or transactions, their use requires that a person orders or requests a service and that the service is delivered or rendered with minimal human input. Often consumers can access or 'order' electronic services without having to engage in a sale or purchasing transaction. Since electronic services can be ordered by clicking on a link or opening and using an application, this always satisfies the ordering method and automation criteria in the OECD's definition of e-commerce. However, the interaction might not necessarily satisfy the transactional (sale or purchase) criteria. As revenue can be generated and the costs of electronic services covered in a number of ways not involving the consumer, not all electronic services can be considered e-commerce services. Electronic service providers can internalise the costs of the services provided. The costs can also be covered by third parties that sponsor the content, or the service providers can choose to 'monetise' their content and/or services by allowing third parties to enjoy marketing rights.

In the first instance, where the cost of electronic services is internalised by the service provider, these services can be considered as digital promotion or marketing materials rather than e-commerce services. The use of such a digital service might satisfy both the ordering method and the automation criteria but its use does not require a sale or purchasing transaction, and therefore it fails to satisfy the e-commerce transaction criteria.

In the second instance, where the cost of digital goods or services are covered by third parties, the producer of the content is likely to engage with the third parties via modes that satisfy all e-commerce criteria. To best understand this variation of e-commerce it is helpful to think about the services and content being accessed as radio or television programming whose main source of revenue comes from third parties purchasing 'air time' or 'advertorial-space' to promote themselves. Platforms such as Google's AdSense, AdWords and video advertising on YouTube enable online content creators and electronic service providers to generate revenue without having to charge users for the services. While the use of these electronic services cannot be considered e-commerce, the underlying agreements with third-party 'sponsors' are likely a result of e-commerce.

While there might be further complications relating to the digitisation[16] of physical goods, it does not necessarily have an impact on the definition of e-commerce.

16 Some physical goods can be digitised, ie, reconstructed in a digital format, changing the product from tangible to intangible without compromising utility. Digitised goods can also be distributed and sold anywhere in the world, which blurs the lines between whether they should be classified as a good or service. In addition, digital products never go through customs or get taxed in the same way that their physical counterparts do. SARS definition of electronic services designates digitised goods as electronic services and they are treated accordingly. Examples of digitised goods include e-books, digitised music, music streaming services, video streaming services or video on demand streaming services.

The OECD also provides a framework for the measurement of e-commerce,[17] distinguishing between two types: web e-commerce and electronic data interchange (EDI) e-commerce. The former refers to orders made at an online store or via web forms over a computer network, while the latter is defined as 'orders initiated with EDI'.[18] In this context, EDI refers to an e-business tool that allows for the exchange of business information via an agreed format for automatic processing. EDI e-commerce is limited to the placement of orders via EDI messages.

While the OECD's defining principles of e-commerce simplifies the question of what can be considered as e-commerce, the elements affecting e-commerce go far beyond these principles. Several studies have been conducted specifically to identify barriers to e-commerce development, as well as the policy implications and related regulations affecting its efficiency and potential impacts on economic growth.

ENABLING E-COMMERCE

In this section we discuss the barriers to e-commerce and highlight the enabling factors required for it to contribute to economic growth. But first the development potential and importance of e-commerce is considered.

THE ROLE OF E-COMMERCE IN ECONOMIC GROWTH AND DEVELOPMENT

There are many arguments for e-commerce's potential developmental impact, ranging from the expected benefits for producers and consumers alike to the possible impact a thriving e-commerce environment can have on the economy. UNCTAD offers a competitiveness and development point of view, noting that[19]

> E-commerce offers potential benefits in the form of enhanced participation in international value chains, increased market access and reach, and improved internal and market efficiencies as well as lower transactions costs.

This point of view focuses on the benefits the digital platform holds for both established suppliers and new entrants. These impacts can be wide reaching, and similar to information and communications technology (ICT) spillovers identified

17 OECD, 'Measuring the Digital Economy: A New Perspective', 2014, http://www.keepeek.com/Digital-Asset-Management/oecd/science-and-technology/measuring-the-digital-economy_9789264221796-en#page5, accessed 4 October 2016.

18 OECD, 'OECD Guide to Measuring the Information Society 2011', 2011, http://www.keepeek.com/Digital-Asset-Management/oecd/science-and-technology/oecd-guide-to-measuring-the-information-society-2011_9789264113541-en#page76, accessed 3 October 2016.

19 UNCTAD, 'The Information Economy Report 2015: Unlocking the Potential of E-Commerce for Developing Countries', 2015, http://unctad.org/en/PublicationsLibrary/ier2015_en.pdf, accessed 4 October 2016.

in the global value chains (GVC) literature.[20] More importantly, this argument places e-commerce as the driver and enabling factor affecting wider economic participation.

While not specifically relating to e-commerce alone, UNCTAD[21] notes that the productive use of ICT could contribute to UN sustainable development goals 5, 9 and 17:[22]

- Goal 5 Achieve gender equality and empower all women and girls: enhance the use of enabling technologies, in particular ICT, to promote women's empowerment.
- Goal 9 Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation: significantly increase access to ICT and strive to provide universal and affordable access to internet in LDCs [least-developed countries] by 2020.
- Goal 17 Strengthen the means of implementation and revitalize the global partnership for sustainable development in technology: fully operationalize the Technology Bank and STI [Science, Technology and Innovation] capacity building mechanism for LDCs by 2017, and enhance the use of enabling technologies in particular ICT.

According to the UNCTAD report,[23] the recent and widespread uptake of mobile telephony and social media has enabled more people and enterprises to connect to the Internet and increased their opportunity to partake in e-commerce. Combined with new payment methods, both enterprises and consumers have a wider choice to conduct transactions (online). Entry barriers are also declining as new applications, platforms and services are making e-commerce more accessible and easier to navigate.

Additionally, e-commerce offers enterprises lower overhead costs compared to traditional bricks-and-mortar operations. Using multiple online and mobile channels to source and supply goods and services, enterprises can both target and reach more consumers than with traditional channels, as well as use innovative ways of delivering physical goods when need be (via dedicated e-fulfilment services).[24] These new online channels allow entrepreneurs to identify unexplored

20 Manyika J *et al.*, 'Global Flows in a Digital Age: How Trade, Finance, People, and Data Connect the World Economy', McKinsey Global Institute, 2014; Lund S & J Manyika, 'How Digital Trade is Transforming Globalisation', E15 Initiative. Geneva: ICTSD (International Centre for Trade and Sustainable Development) & WEF (World Economic Forum), 2016, http://e15initiative.org/wp-content/uploads/2015/09/E15-Digital-Economy-McKinsey-FINAL.pdf, accessed 20 October 2016.

21 UNCTAD, *op. cit.*

22 UN Open Working Group, 'Introduction to the Proposal of the Open Working Group for Sustainable Development Goals', 2014.

23 UNCTAD, *op. cit.*

24 *Ibid.*

business opportunities such as the introduction of payment solutions, new e-commerce platforms and logistics solutions.

Lastly, the UNCTAD report notes that e-commerce has the potential to affect employment, spurring 'new job creation in the ICT sector related to software development, information technology (IT) consultancy services, web hosting and, of course, in enterprises that become more successful thanks to expanded online sales'.[25] E-commerce could also increase exports if domestic enterprises can gain

E-commerce has been pivotal in transforming the way in which business is done both domestically and internationally, predominantly via the proliferation in consumer choice

market share in foreign markets or tap into cross-border supply chains. Dr Kati Suominen notes that 'technology enabled'[26] SMEs are much more likely to engage in cross-border trade than traditional SMEs, as their market access and presence is immediately expanded beyond their geographical location.[27]

The consumer-driven perspective as proffered by Liz Coll[28] recognises that e-commerce has been pivotal in transforming the way in which business is done both domestically and internationally, predominantly via the proliferation in consumer choice. Coll's perspective offers a view from both consumer and intermediate purchaser points of view, and notes the following four benefits:

- convenience: anytime, anywhere;
- rating and feedback on a mass scale, more information about products and services and quality, driven by consumers (increasing business efficiencies);
- ability to compare across a range of providers to seek the best deal (promoting competition); and
- powerful choice tools to navigate options.

With the myriad of choices available, consumers and business alike have increased their demand for e-commerce, which explains its exponential growth.

25 *Ibid*.

26 SME engaging in e-commerce.

27 Suominen K, *Aid for eTrade: Accelerating the Global eCommerce Revolution*. Washington DC: CSIS (Center for Strategic and International Studies), 2014.

28 Coll L, 'Unlocking opportunities: Consumer trust and confidence in cross border E-commerce', Consumers International MIKTA (Mexico, Indonesia, South Korea, Turkey and Australia) workshop on electronic commerce, Geneva, 5 July 2016.

The UNCTAD Information Economy[29] report gives insights into the estimated number of online buyers in six global regions with data collected through enterprise surveys by most developed countries and by selected developing and transitioning economies. Table 1 shows that by far the largest estimated growth in online buyers is projected for the Middle East and Africa, with a predicted 82% increase from 2013 to 2018.

TABLE 1 ESTIMATED NUMBER OF ONLINE BUYERS WORLDWIDE, BY REGION, 2013–2018

REGION	TOTAL USERS (MILLION)		GROWTH (%) 2013–2018
	2013	2018[e]	
Asia and Oceania	460.3	782.4	70
Western Europe	182.3	210.2	15
North America	172.3	203.8	18
Middle East and Africa	93.6	170.6	82
Latin America	84.7	139.3	64
Central and Eastern Europe	86.4	117.4	36
World	1 079.6	1 623.7	50

e Indicates estimated data.

Source: UNCTAD, 'The Information Economy Report 2015: Unlocking the Potential of E-Commerce for Developing Countries', 2015, http://unctad.org/en/PublicationsLibrary/ier2015_en.pdf, accessed 4 October 2016

Furthermore, the International Trade Centre (ITC)[30] notes that e-commerce can be a driver of development in Africa. As Internet penetration is still comparatively limited in Africa the ITC argues that, given the increase in demand, the increase in digital literacy, and the increasing use of mobile phones for financial transactions (or mobile money), the continent is poised for a boom in e-commerce growth. It is estimated that the African e-commerce market will grow from $8 billion in 2013 to $50 billion by 2018.[31] The ITC further reports that several successful e-commerce platforms have already been developed on the African continent; these platforms also seem to be expanding through the rest of the continent.[32]

29 UNCTAD, *op. cit*.

30 ITC (International Trade Centre), *Bringing SMEs onto the e-Commerce Highway*. Geneva: ITC, 2016.

31 *Ibid*.

32 Thomasson E, 'Africa e-commerce firm expands to new markets', *Reuters*, 28 July 2014, http://www.reuters.com/article/us-africa-retail-internet-idUSKBN0FX0ZN20140728, accessed 20 October 2016.

From the above literature on the developmental potential of e-commerce it seems that Africa is standing on the precipice of a mode of commerce that could snowball economic development. E-commerce has the capacity to connect more enterprises to each other and to consumers, both on the continent and abroad, with SMEs standing to gain the most.[33] Considering the significant role SMEs traditionally play in national economic structures (as it relates to income generation and

It seems that Africa is standing on the precipice of a mode of commerce that could snowball economic development

employment),[34] enabling more SMEs to develop through e-commerce, and potentially engage in cross-border transactions, could have a profound impact on economic growth. Africa is also in a unique position with regard to the increasing use of mobile technology to connect to the Internet and make payments. Both these factors have a positive impact on consumer and supplier choice as well as market reach: as large parts of the population gain access to the Internet more options become available to purchase and sell goods. With more options to make and receive payments,[35] we could also see an increase in demand for e-commerce, feeding back into further SME development.

However, in Africa e-commerce is still in the early stages of development, and the gaps in e-commerce regulation are more pronounced than elsewhere. To realise the projected growth certain constraints need to be addressed.[36]

Enabling factors for and barriers to e-commerce development

Various constraining factors to the uptake of e-commerc have been identified. According to UNCTAD, these can be grouped into one of three broad categories: economic, socio-political and cognitive. The economic barriers relate to ICT and telecommunications infrastructure and use, electricity supply, underdeveloped financial systems and lack of purchasing power. The socio-political barriers relate to the lack of regulatory frameworks that support consumer confidence and help overcome cultural preferences for face-to-face interaction. The cognitive barriers relate to limited knowledge and awareness, and the skills required to successfully engage in domestic or cross-border e-commerce transactions. However, the

33 WTO, 2013, *op. cit.*

34 *Ibid.*

35 Coll L, *op. cit.*

36 UNCTAD, *op. cit.*

report also notes that SMEs and rural enterprises might have trouble adopting e-commerce, due lack of skills in identifying their e-commerce needs and potential benefits, as well as difficulty leveraging international e-commerce platforms and solutions.

The rise of third-party marketplaces offers SMEs the opportunity to outsource a lot of business functions as they often provide a full range of services, including payment processing, customer service, shipping, return processing and delivery. However, most third-party marketplaces require that sellers be a formally registered enterprise when engaging in business–to–consumer or business–to–business transactions. Therefore, regulatory barriers to starting a business can hinder the uptake of e-commerce. Fortunately, insights into these barriers are available via the World Bank Doing Business reports, relating to the number of days and procedures needed to starting a business. These are also reported on in the World Economic Forum (WEF) Global Comparatives Index (see Annex).

While not strictly required per the OECD definition of e-commerce, the online processing of payments is said to be a significant facilitator to e-commerce.[37] Fortunately, multiple options are available for SMEs to receive payment, some of which do not require the seller to have a merchant bank account. Third-party marketplaces occasionally have in-house payment solutions available to sellers that do not require any additional accounts or set-up, but access to third-party marketplaces can be limited to only a small number of countries. Third-party payment gateways, such as PayPal[38] or Google Wallet,[39] are another option for SMEs that do not have a merchant bank account. However, fees are applied per transaction and again these payment solutions can be limited to only certain countries. Finally, the use of a payment gateway[40] linked to a merchant account is another option for e-commerce enterprises to enable online payments. While this option does require the seller to have a merchant bank account it has the added benefit of faster and cheaper transactions, albeit with a higher set-up cost and complexity.

Some consideration should be given to factors affecting the delivery of goods and services or order fulfilment.[41] While this only affects the sale of physical goods requiring delivery and is easily outsourced to third-party marketplaces, the state of a country's physical infrastructure can have an impact on the order fulfilment of

37 UNCTAD, *op. cit*.

38 See Paypal, https://www.paypal.com/, accessed 8 November 2016.

39 See Google Wallet, https://www.google.com/wallet/, accessed 8 November 2016.

40 A merchant service provided by an e-commerce application service provider that authorises credit card or direct payment processing. It facilitates a payment transaction by the transfer of information between a payment portal (such as a website, mobile phone or interactive voice response service) and the front-end processor or acquiring bank.

41 Order fulfilment involves inventory storage and management, packing the order, shipping, providing customer services and taking care of returns and exchanges.

e-commerce transactions. The UNCTAD report notes that 'e-commerce companies in low-income countries face particular challenges due to either inadequate or non-existent building numbers, street names and layouts. In the absence of online payment processing order fulfilment can involve receiving payment (cash on delivery) the risk of which most established package delivery companies are not willing to carry.'[42]

Similar bottlenecks are also identified by the ITC as affecting cross-border e-commerce. By looking at the e-commerce process chain the ITC reports that SMEs face policy challenges in establishing online businesses, affecting international e-payment, international delivery and aftersales. Firms wishing to engage in cross-border e-commerce must understand and know how to use the appropriate technologies to establish an online presence and to conduct international e-payments, in addition to having a supporting business environment that allows enterprises access to affordable Internet and e-commerce platforms as well as to third-party payment and order processing solutions.[43] The report also notes that new consumer protection laws are needed to support e-commerce growth; electronic signature and contract laws are needed to facilitate e-commerce (for both establishing a business and engaging in transactions); regulations are required to enable the free cross-border flow of foreign exchange; and national/international physical infrastructure, in conjunction with customs clearance practices, affect cross-border order fulfilment.[44] The report adds that '[g]lobal solutions to critical challenges – including cross-border e-signature recognition, international e-payments and international consumer and data protection – still need to be found',[45] indicating inadequate cross-border consumer protection.

Coll notes two constraining factors to e-commerce development, which broadly relates to the economic and socio-political constraints identified by UNCTAD. Firstly, there are structural deficiencies, encompassing the quality of digital services and infrastructure and availability of preferred payment methods, as well as hidden costs linked to customs duties and currency conversion costs arising from logistical distance. For example, in South Africa, where Internet cable theft reportedly costs the economy $500 million per year, companies tend to rely more on costlier wireless communications, passing the cost onto consumers.[46]

Secondly, there can be a lack of consumer confidence and consumer protection. This is particularly true in developing countries where consumer protections in respect of goods and services purchased via e-commerce might not yet be fully

42 UNCTAD, *op. cit.*

43 ITC, *op. cit.*

44 *Ibid.*

45 *Ibid.*

46 Kogan B, 'How to get in on Africa's e-commerce boom', TNW (The Next Web), http://thenextweb.com/africa/2016/02/10/how-to-get-in-on-africas-e-commerce-boom/#gref, accessed 20 October 2016.

fleshed out. A customer who uses a US-based platform, for example, will be protected under US legislation; however, it is not clear what recourse or protection is available to a consumer in Africa using a US-based platform. According to Diagne,[47] cross-border e-commerce consumers in Africa mostly do not have consumer protection under commercial law, as the concept of distance selling is not elaborated upon in domestic legislation. This compounds the issue of trust, regardless of the fact that increasingly Africa states are introducing e-commerce legislation. UNCTAD provides a world map that shows relevant legislative coverage in four areas, namely:[48]

- electronic transactions;
- consumer protection;
- privacy and data protection; and
- cybercrime.

The map shows that only seven African states have legislation covering all four relevant areas, eight states covering at least three areas, seven states covering at least two and 12 states covering at least one relevant legislative area. With regard to consumer protection legislation, 17 African states are reported to have the relevant online consumer protection legislation and a further six states have draft online consumer protection legislation. However, most African states in the Global Cyberlaw Tracker either have no relevant legislation or have no data available.[49]

There is also a lack of clarity on protections afforded by the vendors' jurisdiction and what recourse and redress is available if anything goes wrong. Nonetheless, some e-commerce platforms, such as e-Bay, have independent resolution functions in place for consumers.[50] The platform deals with some 60 million disputes a year, most of which are of low value. Currently the problem of consumer trust and confidence in e-commerce is significant. According to Consumers International,[51] 58% of users abandon a purchase because of fears over payment security, 75% do so owing to charges being added at the payment stage, and 30% of EU citizens abandon a purchase owing to concerns over delivery problems.

47 Diagne INE, 'E-commerce and Africa: How to valorize the third generation (2015–2025)', in Ideas Centre, *The Future of the WTO and the WTO of the Future*, 14 July 2016, http://www.ideascentre.ch/wp-content/uploads/2016/07/E-book-5-Diagne.pdf, accessed 20 October 2016.

48 UNCTAD, 'Summary of adoption of e-commerce legislation worldwide', http://unctad.org/en/Pages/DTL/STI_and_ICTs/ICT4D-Legislation/eCom-Global-Legislation.aspx, accessed 7 November 2016.

49 UNCTAD, 'Online consumer protection legislation worldwide', http://unctad.org/en/Pages/DTL/STI_and_ICTs/ICT4D-Legislation/eCom-Consumer-Protection-Laws.aspx, accessed 7 November 2016.

50 Diagne INE, *op. cit*.

51 Coll L, *op. cit*.

Cross-border e-commerce has its own unique set of barriers to overcome, albeit closely linked to existing international trade barriers. UNCTAD reports that unreliable and lengthy transit times, complex and ambiguous return processes, customs delays, lack of transparency on delivery and pricing, and limited ability to alter delivery times and locations constitute barriers to cross-border e-commerce in goods.[52] Recently an additional consideration has been raised by the OECD BEPS project under Action 1: Addressing the tax challenges of the digital economy. The report[53] notes that the digital economy is increasingly becoming the economy itself, which under the current international tax system could have a significant impact on value-added tax (VAT) collection as goods, services and intangibles are acquired by private consumers from suppliers abroad that do not necessarily attract VAT, putting domestic suppliers at a disadvantage. In response, the OECD encourages countries to 'apply the principles of the International VAT/GST Guidelines[54] and consider the introduction of the collection methods included therein'.[55] South Africa, on the other hand, introduced legislation in 2014 to tax foreign suppliers delivering electronic services[56] to South African consumers. While the legislation requires foreign suppliers[57] to register and account for VAT, it does not distinguish between business–to–consumer transactions and business–to–business transactions.[58] There is also no legislation that levies corporate income tax on foreign suppliers of electronic services or VAT on electronic advertising services supplied from offshore.[59] These issues are pressing matters for developing countries looking to increase their tax base and require domestic and multilateral solution.

52 Van Heel B, Lukic V & E Leeuwis, 'Cross-border e-commerce makes the world flatter', bcg. perspectives, 18 September 2014, https://www.bcgperspectives.com/content/articles/transportation_travel_tourism_retail_cross_border_ecommerce_makes_world_flatter/.

53 OECD, 'Addressing the Tax Challenges of the Digital Economy, Action 1: 2015 Final Report', 2015, http://www.keepeek.com/Digital-Asset-Management/oecd/taxation/addressing-the-tax-challenges-of-the-digital-economy-action-1-2015-final-report_9789264241046-en#page1, accessed 21 October 2016.

54 Guidelines seeking to address the problems that arise from unco-ordinated national VAT systems. These guidelines aim to set standards that ensure neutrality in cross-border trade and more coherent taxation of business–to–business trade in services.

55 *Ibid*.

56 As defined by SARS.

57 If the total value of such taxable supplies exceeds ZAR 50,000.

58 Gaarlandt F & J Harmse, 'South Africa: New VAT rules for foreign suppliers of e-services', *Indirect Tax Briefing: A Review of Global Indirect Tax Developments and Issues*, 10 July 2014, http://www.ey.com/Publication/vwLUAssets/EY-Indirect-Tax-Briefing-June-2014/$FILE/ey-indirect-tax-briefing.pdf, accessed 21 October 2016.

59 *FIN24tech*, 'SA 'misses opportunity' to tax foreign e-services – PwC', 16 March 2016, http://www.fin24.com/Tech/News/sa-misses-opportunity-to-tax-foreign-e-services-pwc-2016 0315, accessed 21 October 2016.

BOX 1 BRIEF DISCUSSION ON SELECT WEF GLOBAL COMPETITIVENESS INDEX INDICATORS

From the WEF's Global Competitiveness Index data in the Annex it is evident that 49% of South African individuals are using the Internet. However, the vast majority opt for mobile broadband subscriptions rather than fixed broadband. This preference for mobile broadband over fixed broadband subscriptions is prevalent throughout Africa, as the infrastructure required for fixed broadband subscriptions is lacking outside large commercial cities. Of the 37 African countries included in the Annex, only four have more fixed broadband subscriptions than mobile broadband subscriptions. In Cameroon, Chad and Gabon fewer than 12% of individuals use the Internet, with the dataset showing that no one uses mobile broadband subscriptions. Seychelles, on the other hand, has many more individuals using the Internet (54%) but also with slightly more fixed broadband than mobile broadband subscriptions. To take advantage of the digital revolution and realise the potential of e-commerce, African countries need to invest in telecommunications and ICT infrastructure.

As Xing[a] notes in his empirical analysis on the 'Impacts of Information and Communications Technology (ICT) and E-commerce on Bilateral Trade Flows', a positive correlation exists between the number of fixed and mobile phone subscriptions and secured Internet services, and bilateral trade. The most significant positive correlation with bilateral trade was noticed in the high-speed broadband subscriptions, bilateral Internet adoption and B2B (business to business) and B2C (business to consumer) Internet usage variables. This means that simply introducing better ICT technologies to a market is likely to have a positive impact on bilateral trade, while investing in improving ICT infrastructure and actively pursuing a national e-commerce strategy is likely to further increase bilateral trade. It is therefore important to developed policies that increase the availability of the latest technologies and related firm-level technology absorption via adjusting foreign direct investment (FDI) legislation to allow for increased technology transfers.

To increase the number of individuals using the Internet in the short to medium term, priority should be given to investment in wireless or mobile broadband infrastructure, as the rate of mobile telephone subscriptions is already much higher than the rate of fixed landline subscriptions (see Annex).

Lastly, it is also important to create an enabling environment for SMEs and reduce the barriers to starting businesses. Recommendations are provided in the annual World Bank 'Doing Business Report' on how governments can reduce the number of procedures and time to starting a business in each economy with insights into 'international best practices'.

a Xing Z, The impacts of Information and Communications Technology (ICT) and E-commerce on bilateral trade flows. WTO Workshop on Electronic Commerce, 5 July 2016, WTO, Geneva, Switzerland

MULTILATERAL APPROACHES TO E-COMMERCE REGULATION

The complexity involved in creating a comprehensive, internationally recognised standard for e-commerce has begun to be addressed in multiple forums. The necessity for establishing a regulatory framework is compounded by the Internet's growth.

E-COMMERCE REGULATION IN THE WTO

Cognisant of the growing importance of e-commerce in world trade, WTO members adopted a declaration on global e-commerce on 20 May 1998 at its Second Ministerial Conference in Geneva, Switzerland. The declaration mandated the WTO General Council to establish a comprehensive work programme to examine all trade-related issues arising from electronic commerce, and to present a progress report to the WTO Ministerial Conference. Importantly, the 1998 declaration also included a moratorium stating that 'members will continue their current practice of not imposing customs duties on electronic transmission'.[60] The moratorium on the imposition of customs tariffs has so far, upon examination, been extended from one WTO ministerial conference to the next. The WTO has been increasing its focus on e-commerce through the Council for Trade in Goods, the Council for Trade in Services, the Committee on Trade and Development, and the Council for Trade-related Aspects of Intellectual Property Rights.[61]

Discussions on e-commerce regulation are continuing in the WTO. In July 2016 seven new proposals were made by the US, Japan, EU, Brazil, the MIKTA[62] countries, Singapore and Japan. There is some convergence on the regulations proposed by the US, EU and Japan on some of the key e-commerce regulatory issues. These are some of the issues covered in the US proposal:[63]

No customs duties/non-discrimination: Call for prohibiting customs duties for digital products and ensuring that non-discrimination principles such as most favoured nation and national treatment are applicable to digital products. There are concerns are that such an approach would in future render non-agricultural market tariffs duty-free. Such rules would disregard WTO members' tariff schedules by creating a parallel trade route without any constraints, tariffs or regulations in the way of imports into domestic markets.

60 WTO, 'The Geneva Ministerial Declaration on global electronic commerce', WT/MIN(98)/DEC/2, 25 May 1998, https://www.wto.org/english/tratop_e/ecom_e/mindec1_e.htm, accessed 20 October 2016.

61 Diagne INE, *op. cit*.

62 Mexico, Indonesia, South Korea, Turkey and Australia.

63 WTO, 'Work Programme On Electronic Commerce', JOB/GC/94, 4 July 2016, https://docs.wto.org/dol2fe/Pages/FE_Search/DDFDocuments/229772/q/Jobs/GC/94.pdf, accessed 21 October 2016.

Enabling cross-border data flows: Call for rules to enable companies and consumers to move data freely while at the same time catering for reasonable safeguards such as the protection of consumer data when exported. However, some countries prefer to have data from their citizens in local servers for political, security and economic reasons and will find it difficult to endorse the cross-border free flow of data.

Promoting a free and open Internet: Call for ensuring that the Internet is open and free in respect of all legitimate commercial purposes. This is meant to prevent countries from blocking certain websites for political and economic reasons.

No localisation barriers: Call for prohibiting member states from requiring the localisation of computing facilities as a condition for companies to do business in their territories. This is meant to prevent a situation where companies that rely on cloud computing and delivering Internet-based products and services have to build physical infrastructure and expensive data centres in every country in which they wish to operate, which would add high costs to their operations.

Barring technology transfer, protecting source codes and ensuring technology choice: Call for trade rules to prohibit requirements on companies to transfer technology, production processes or other proprietary information as a condition for market access. In addition, companies are not to be required to provide access to their source code or proprietary algorithms to their competitors or regulator, which may pass them on to a state-owned enterprise. However, exceptions are to be provided to allow authorities to obtain access to source code in order to protect health, safety or other legitimate regulatory goals. Further, the US proposes that companies should be free to use the technology that works best and suits their needs, and should not be forced through local content requirements to purchase and utilise local technology instead. However, there are concerns that such rules may not foster innovation by domestic firms by denying them the potential to get sufficient capital to invest in research and development. These rules may as such make it difficult for developing countries to bridge the digital divide. This is a strategy that the Chinese used successfully to ensure that their local technologies are utilised by Internet service suppliers and domestic consumers.

Safeguarding network competition: This is meant to allow digital suppliers to access build networks or such essential facilities and services from incumbents in other countries in order to gain better access to consumers and businesses. However, since some countries impose such requirements as a means to ensure that both profitable areas (ie, urban areas) and non-profitable areas (ie, rural areas) are serviced, exceptions need to be made for public policy objectives.

Currently the following regulatory initiatives are particularly relevant:

- The General Agreement on Trade in Services (GATS) provides the rules and regulations governing international trade in services, with great implications for e-commerce. GATS identifies four modes in which services are supplied:
  - » cross-border (Mode 1) – covers services supplied from the territory of one member into the territory of another. In practice, it creates the possibility for a non-resident service supplier to supply services cross-border into the

territory of a WTO member. For example, a service supplier of banking services can supply banking services through telecommunications cross-border into any WTO member;

» consumption abroad (Mode 2) – covers services supplied in the territory of one member to the consumers of another;

» commercial presence (Mode 3) – covers services supplied by a service supplier of one member, through a commercial presence in the territory of any other member; and

» presence of natural persons (Mode 4) – deals with the temporary movement of natural persons to the territory of other members as service suppliers or employees of service suppliers.

GATS has two sets of rules. Firstly, there are general rules that impose obligations on all countries with regard to measures affecting trade in services. A good example of this is Article II, which requires each member state to 'accord immediately and unconditionally to services and service suppliers of any other member state treatment no less favourable than that it accords to like services and service suppliers of any other country'.[64] Secondly, there is a set of sector-specific commitments that determines the extent of liberalisation each member state undertakes. The GATS framework is built around two pivotal principles, namely market access (Article XVI) and national treatment (Article XVII). Market access deals with the extent to which foreign services suppliers have access to a country's markets, while national treatment is a requirement that foreign suppliers (once inside a member state's territory) be treated the same as locals and be subject to the same regulations. As such, a country's level of liberalisation in a particular services sector is assessed using these two principles, according to the mode of supply. It is important to note that the most commitments made by WTO members are business, professional and financial services, followed by telecommunications – all of which can be supplied through the Internet.[65] This underscores the importance of the GATS as an important regulatory instrument in regard to e-commerce.

- The TISA is a plurilateral agreement being negotiated between a diverse group of like-minded WTO member states, including the EU, the US, Hong Kong, Mauritius and Mexico.[66] The TISA is apparently a result of frustration with the slow progress in the Doha Round of multilateral trade negotiations in the services arena. As noted above, currently trade in services, which covers many

64 WTO, *General Agreement on Trade in Services*, https://www.wto.org/english/docs_e/legal_e/26-gats.pdf, accessed 21 October 2016.

65 Meltzer JP, 'A New Digital Trade Agenda', E15 Initiative. Geneva: ICTSD & WEF, August 2015, http://e15initiative.org/wp-content/uploads/2015/07/E15-Digital-Economy-Meltzer-Overview-FINAL.pdf, accessed 20 October 2016.

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

e-commerce aspects, is governed by the GATS. While efforts to update the GATS have so far stalled, 'technology and services trade have evolved significantly since GATS went into effect in 1995'.[67] The TISA aims to address this challenge through the negotiation of an agreement with deeper liberalisation commitments, using the GATS as the basis and covering many modern trade issues. It is also envisaged that the TISA commitments would ultimately be 'multilateralised' to include other WTO member states.[68]

The TISA is expected to include e-commerce provisions addressing 'cross-border data flows, consumer online protection, and interoperability among other areas, similar to the provisions in TPP'.[69]

It is likely that the TISA outcomes will significantly mirror the e-commerce provisions of the TPP (discussed in the next section), considering that TISA participants include eight TPP signatories. Apparently the TPP results and ongoing TISA negotiations overlap in several areas, such as cross-border information flows, online consumer protection, personal information protection, source code, interoperability, local infrastructure/local presence, electronic authentication and electronic signatures, international co-operation and security exceptions.[70]

- The WTO's Information Technology Agreement (ITA) represents the primary vehicle for multilateral IT products' liberalisation. The ITA's coverage includes a variety of high technology products such as software, computers, telecommunications equipment, scientific instruments, semiconductors, and most parts and accessories of the products in question. Currently the agreement represents 97% of trade in IT products, includes 82 members, and has resulted in the removal of import duties on products that, according to the WTO, accounted for an estimated $1.6 trillion in 2013.[71] The ITA member states aim to completely eliminate tariffs on IT products covered by this agreement. Pursuant to this objective, over 50 participating member states concluded the expansion of the ITA at the Nairobi Ministerial Conference in December 2015

67 Fefer RF, 'Trade in Services Agreement (TiSA) Negotiations: Overview and Issues for Congress', Congressional Research Service Report, January 2016, https://www.fas.org/sgp/crs/misc/R44354.pdf, accessed 20 October 2016.

68 *Ibid*.

69 *Ibid*., p. 10.

70 Draper P *et al*., 'Will the Trans-Pacific Partnership Agreement Reshape the Global Trade and Investment System? Regional and Systemic Implications: Issues and Options', WEF, Global Agenda Council on Trade & FDI White Paper, July 2016, http://www3.weforum.org/docs/WEF_White_Paper_Regional_and_Systemic_Implications.pdf, accessed 21 October 2016.

71 WTO, 'Information Technology Agreement', https://www.wto.org/english/tratop_e/inftec_e/inftec_e.htm, accessed 21 October 2016.

to include an additional 201 products valued at more than $1.3 trillion a year.[72] However, in our view, the key limitation of the agreement is that it is supported by fewer than half of the WTO's members. In particular, it lacks support from certain developing states that may stand to benefit most from e-commerce growth, as it provides them with the potential opportunity to be part of GVCs. GVCs play an important role in IT transfer, but, owing to trade barriers such as data localisation requirements, developing states may place themselves at a disadvantage in incorporating into GVCs. For example, Wu[73] describes the benefits that have accrued to some developing countries as a result of joining the ITA and the production networks arising therefrom as follows:

> The ability to disaggregate production easily creates opportunities for a developing country to specialize in the performance of a particular task in the supply chain and capture a certain proportion of its value. This possibility, in turn, raises the appeal of signing on to a sector-specific trade agreement such as the ITA. For developing countries, this promise has borne fruit. From when the original ITA was negotiated in 1996 to 2010, the share of exports of IT products from developing countries grew from 31 percent to 64 percent.

The key developing country beneficiaries of the ITA have so far been Asian countries, whose decision to sign the ITA was mainly motivated by the desire not to be left out of global IT production networks.[74] As noted by Stephen Ezell, the Philippines in particular saw a large increase in ICT and ICT-enabled sector revenue, from $100 million in 2001 to $6billion in 2008. Rapid growth in ICT services industries was also noted in Indonesia and Malaysia.[75]

- The WTO Telecoms Reference Paper (TRP) of 1996 includes pro-competitive regulations for the telecommunications sector. The TRP was adopted by many WTO countries as an additional commitment under the GATS and only becomes part of a country's legally binding obligations when it is included in its schedule. When a country adopts the TRP it mainly commits to:[76]
  - » establish an independent regulatory authority;

72 Porges A & A Enders, 'Data Moving Across Borders: The Future of Digital Trade Policy', E15 Initiative. Geneva: ICTSD & WEF, 2016.

73 Wu M, 'Why developing countries won't negotiate: The case of the WTO Environmental Goods Agreement', 6 Trade L. & Dev. 93, 2014, https://dash.harvard.edu/handle/1/16219449, accessed 21 October 2016.

74 *Ibid*.

75 Ezell SJ, 'The Benefits of the ITA Expansion for Developing Countries', ITIF (Information Technology and Innovation Foundation), December 2012, http://www2.itif.org/2012-benefits-ita-developing-countries.pdf, accessed 7 November 2016.

76 WTO, Council for Trade in Services, 'International mobile roaming: Possible implications for GATS', 13 July 2011, https://www.wto.org/english/tratop_e/serv_e/sym_march12_e/document_wto_en.pdf, accessed 21 October 2016.

- » maintain measures that prevent and safeguard against anti-competitive practices by major suppliers;[77]
- » ensure licensing criteria are publicly available, where licensing is required;
- » require major suppliers to interconnect other suppliers at any technically feasible point on a non-discriminatory, cost-oriented basis following transparent procedures and subject to dispute settlement by an independent body;
- » administer universal service programmes in a transparent, non-discriminatory and competitively neutral manner; and
- » allocate and assign use of scarce resources, including the radio spectrum, numbering blocks and rights of way, in an objective, timely, transparent and non-discriminatory manner.

The TRP has two major objectives: (i) to provide foreign service providers with regulatory safeguards to guarantee that monopolies or former monopolies do not abuse their market power to undermine competition; and (ii) to provide regulatory harmonisation so as to minimise the phenomenon of asymmetric regulation.[78]

- The WTO's Understanding on Commitments in Financial Services includes a provision on cross-border data flows. Specifically, members have agreed they will not 'prevent transfers of or the processing of financial information including transfer of data by electronic means'.[79]

The above initiatives are generally inadequate in regulating e-commerce. GATS, for instance, while it still provides the multilateral floor for further regulation, is now archaic and has failed to keep up with technological advances and new ways of doing business.

EMERGING MEGA-REGIONAL DISCUSSIONS ON E-COMMERCE REGULATION

The lack of systematic regulation at the global level has led to countries forming free trade agreements (FTAs) that cover e-commerce. For example, under TRIPS (the WTO agreement on trade-related intellectual property rights), copyright protection is provided for the life span of the author plus 50 years. These same intellectual property rights have been extended in KORUS (the US–South Korea FTA), to the life span of the author plus 70 years.[80]

77 A major supplier is defined as a supplier that, through control of essential facilities or use of market position, can materially affect the price and supply in the relevant market.

78 Guermazi B, 'Exploring the Reference Paper on Regulatory Principles', Centre for the Study of Regulated Industries, McGill University, Montreal, 2000.

79 Meltzer JP, *op. cit*.

80 *Ibid*., p. 8.

Below we examine two important mega-regional initiatives – the TPP and the yet-to-be-concluded TTIP – with a view to identify issues of critical importance in e-commerce regulation. We particularly focus on the TPP since it has been concluded (although it is not yet in force), and has advanced further than any other agreement at present in defining the key e-commerce issues of concern and potential reforms. The TPP may serve therefore as a useful framework for assessing the state of e-commerce trade and regulation in Africa and elsewhere.

Trans-Pacific Partnership

The recently concluded TPP aims to increase e-commerce and contains several pertinent provisions aimed at regulating e-commerce in its various chapters, as well as a standalone chapter on e-commerce. The TPP's chapter 14 (E-commerce) covers all industries with the exception of government procurement and financial services (which have separate chapters dedicated to them). Although most of the provisions relating to digital trade are found in the e-commerce chapter, there are relevant provisions in other chapters, including the Financial Services, IPR, Technical Barriers to Trade, and Telecommunications chapters, that have a bearing on e-commerce. Below we briefly set out some of the key provisions of the TPP in respect of e-commerce and discuss the implications thereof to non-participants, especially in Africa.

Customs duties: The TPP enjoins its signatory states to impose no 'customs duties on electronic transmissions, including content transmitted electronically, between a person of one Party and a person of another Party'.[81] This is not groundbreaking, per se, but rather a codification or formal entrenchment of a WTO ban on the imposition of customs tariffs that was first introduced in 1998. The non-imposition of customs duties on electronic transmissions promotes trade in downloadable products such as e-books, software, music and movies. The scope of covered products will continue to increase with new products being added as a result of technological advances and new ways of conducting business.

Online consumer protection: The TPP enjoins each signatory state to[82]

> adopt or maintain consumer protection laws to proscribe fraudulent and deceptive commercial activities that cause harm or potential harm to consumers engaged in online commercial activities.

As discussed, this is one of the major issues inhibiting the growth of e-commerce and so appropriate measures are needed in order to engender consumer confidence. The TPP also calls for co-operation among consumer protection agencies in order to enhance transboundary online consumer protection.

81 TPP (Trans-Pacific Partnership), Article 14.3.1.

82 *Ibid.*, Article 14.7.2.

Non-discriminatory treatment of digital products: With the exception of grants or subsidies (including government-supported loans, guarantees and insurance) as well as broadcasting, the TPP requires its signatory states to accord no less favourable treatment to digital products that were 'created, produced, published, contracted for, commissioned or first made available on commercial terms in the territory of another Party', and to digital products 'of which the author, performer, producer, developer or owner is a person of another Party, than it accords to other like digital products'.[83] Excluded from legal protection are digital products that contravene intellectual property rights. The exclusion of grants or subsidies and broadcasting seems very pragmatic since this is a sensitive area for those countries that wish to protect their cultural industries. Despite the carve-outs relating to subsidies or grants and broadcasting, the extension of the principle of non-discrimination to e-commerce is significant and should help engender fair trade in e-commerce.

Electronic authentication and electronic signatures: The use of electronic authentication and electronic signatures is very important in electronic transactions. The TPP provides that, except in cases otherwise provided for in its legislation, 'a Party shall not deny the legal validity of a signature solely on the basis that the signature is in electronic form'.[84] Further, the TPP proscribes its signatory states from adopting or maintaining measures regarding electronic authentication that do not allow parties to a particular electronic transaction from mutually determining the type of authentication required, or denying parties to an electronic transaction the opportunity to establish, before judicial or administrative authorities, that their transaction meets legal requirements with respect to authentication. However, TPP signatory states are allowed to require that authentication for a particular category of electronic transactions complies with certain performance standards or is certified by accredited authorities.

Protection of personal information: The protection of personal information of users is recognised as an economic and social imperative in the TPP and signatory states are accordingly required to adopt data privacy legislation. The different approaches to the protection of personal information are a challenge and could constitute a huge constraint to the cross-border flow of personal information and e-commerce in general. Consequently, the TPP requires its signatories to endeavour to adopt non-discriminatory practices in protecting users of electronic commerce from personal information protection violations occurring in their territories and to encourage the development of mechanisms to promote compatibility between different regimes.

Cross-border transfer of information by electronic means: The TPP provides for the cross-border free flow of information by electronic means for business purposes. This is, however, subject to restrictions imposed pursuant to legitimate public policy objectives provided such restrictions are not applied in a manner

83 *Ibid.*, Article 14.4.1.

84 *Ibid.*, Article 14.6.1.

that would constitute a means of arbitrary or unjustifiable discrimination or a disguised restriction on trade; and are not greater than what is required to achieve the objective. This provision is likely to be one of the most important provisions of the TPP's e-commerce chapter since a wide range of companies, including those that are not traditionally regarded as Internet companies, move data across national borders electronically (eg, through online sales portals) as a normal part of business, and restrictions on such activities in certain member states would be referred for dispute settlement.[85] Overall, the TPP provisions aim to balance the obligation to ensure free flow of information with governments' right to regulate in the public interest, provided such regulation meets the stated criteria, such as non-discrimination and proportionality.

Location of computing facilities: While recognising that different countries may have their own regulatory requirements in respect of computer facilities, the TPP prohibits its signatory states from requiring the localisation of computing facilities as a condition for companies from other TPP signatories to do business in their territories. Importantly, measures imposed with a view to achieve a legitimate public policy objective are exempt from the prohibition, provided such measures are not applied in a manner that would constitute a means of arbitrary or unjustifiable discrimination or a disguised restriction on trade; and are not greater than what is required to achieve the objective. The TPP provisions on this issue are meant to deal with barriers to e-commerce faced by foreign businesses in some countries. Ahmed and Chander[86] describe the negative impact on e-commerce presented by some data localisation requirements as follows:

> Information services that might have been supplied globally now must build out or pay for national data infrastructures in the countries in which they operate, carefully separating their services by country rather than offering a global service. This dramatically raises the costs of those services, often making them uneconomic to provide, particularly in the case of small- and medium-sized businesses.

As such, a balanced regulatory framework that seeks to eliminate barriers to e-commerce while at the same time recognising and providing for legitimate regulation in the public interest is necessary.

Source code: The TPP prohibits its signatory states from requiring[87]

> the transfer of, or access to, source code of software owned by a person of another Party, as a condition for the import, distribution, sale or use of such software, or of products containing such software, in its territory.

85 Draper P *et al.*, *op. cit.*

86 Ahmed U & A Chander, 'Information Goes Global: Protecting Privacy, Security, and the New Economy in a World of Cross-border Data Flows', E15 Initiative. Geneva: ICTSD & WEF, 2015, http://e15initiative.org/publications/information-goes-global-protecting-privacy-security-and-the-new-economy-in-a-world-of-cross-border-data-flows/, accessed 20 October 2016.

87 TPP, Article 14.17.1.

However, this provision only applies to mass-market software or products containing such software, and does not include software used for 'critical infrastructure'. Since 'critical infrastructure' is not defined, it will be up to each signatory state to determine its meaning, which may result in the prohibition of source code disclosure requirements being severely weakened. 'Critical infrastructure software' exempted, the prohibition on requiring the disclosure of a source code as a condition for doing business in a country does not seem unreasonable. This is a standard that non-TPP countries should be able to meet.

Unsolicited commercial electronic messages: The TPP requires its signatory states to adopt or maintain measures regarding unsolicited commercial messages, or spam, obligating the suppliers of such messages to enable the recipients thereof to prevent further reception of spam; requiring suppliers to receive consent from recipients to receive commercial electronic messages, according to the laws of each country; and otherwise providing for the minimisation of spam and for recourse against non-compliant suppliers. This is a non-controversial provision but may require some countries to set up a commensurate regulatory framework in order to comply.

Co-operation: Since the TPP is trailblazing in various regulatory areas regarding e-commerce, many of its provisions unsurprisingly call for co-operation among its signatory states. The co-operation provisions include such areas as assisting SMEs to overcome obstacles to the use of e-commerce; information exchange and sharing of experiences on regulations, policies, enforcement and compliance regarding e-commerce such as personal information protection; online consumer protection (including means for consumer redress and building consumer confidence); unsolicited commercial electronic messages; security in electronic communications; authentication; and e-government.

Other e-commerce provisions of the TPP: Other issues covered by the TPP include those aimed at avoiding any unnecessary regulatory burden on electronic transmissions and facilitating input by interested parties in the development of a party's domestic e-commerce framework;[88] accepting paperless trading (making trade administration documents available electronically and accepting electronic documents as legal equivalents to their paper version);[89] co-operating on cyber-security;[90] facilitating the use of cloud-computing services; Internet interconnection charge sharing;[91] enhancing access to the Internet for e-commerce purposes;[92] ensuring IPR enforcement rules to provide for criminal penalties for trade secret cyber theft; safeguarding cross-border electronic card payment services; and

88 *Ibid.*, Article 14.5.2.

89 *Ibid.*, Article 14.9.

90 *Ibid.*, Article 14.16.

91 *Ibid.*, Article 14.12.

92 *Ibid.*, Article 14.10.

instituting disciplines on mobile service providers to promote co-operation on international roaming charges.

Transatlantic Trade and Investment Partnership

The TTIP is an FTA currently being negotiated between the US and the EU. The TTIP would govern a third of global goods, and services trade would account for approximately half of global trade.[93] Since customs tariffs between the US and EU are already very low, the key focus of the TTIP would be regulatory issues, including barriers to e-commerce, with a view to facilitate trade. Regulatory co-operation is expected to feature prominently in the eventual agreement.[94] However, the TTIP negotiations have not progressed as anticipated – they have virtually been paused pending the US presidential elections and have been heavily criticised for being conducted behind closed doors.[95]

Where e-commerce is concerned, the TPP remains a trailblazer and might eventually have a great impact in shaping the outcomes for the TTIP and other future FTAs

The EU and US positions as big exporters in the digital economy are largely aligned in terms of the key regulatory issues on e-commerce. An area where the two trading parties do have different regulatory approaches affecting the digital economy is on privacy. However, such differences have been handled under the EU–US Privacy Shield agreement, which is highly likely to be incorporated by reference into the TTIP. The EU–US Privacy Shield is a legal framework aimed at providing robust protections for the personal information of EU citizens when it is transferred to the US. It imposes strong data protection obligations on companies receiving personal data from the EU, provides safeguards on the US government's access to data and provides for redress for individuals.[96]

93 Ahmed U & A Chander, *op. cit*.

94 European Commission, 'The Commission publishes further TTIP documents in ongoing transparency commitment', 21 March 2016, http://trade.ec.europa.eu/doclib/press/index.cfm?id=1477, accessed 21 October 2016.

95 Government of the Netherlands, 'Ploumen: TTIP paused', 23 September 2016, https://www.government.nl/latest/news/2016/09/23/ploumen-ttip-paused, accessed 21 October 2016.

96 European Commission, 'The EU–US privacy shield', http://ec.europa.eu/justice/data-protect ion/international-transfers/eu-us-privacy-shield/index_en.htm, accessed 27 October 2016.

Therefore, where e-commerce is concerned, the TPP remains a trailblazer and might eventually have a great impact in shaping the outcomes for the TTIP and other future FTAs.

Other relevant forums

The Regional Comprehensive Economic Partnership (RCEP) is a proposed FTA involving 10 member states of the Association of Southeast Asian Nations (ASEAN) – Brunei, Burma (Myanmar), Cambodia, Indonesia, Laos, Malaysia, the Philippines, Singapore, Thailand and Vietnam – as well six states with which ASEAN has existing FTAs, namely Australia, China, India, Japan, South Korea and New Zealand. The RCEP is expected to have a chapter on e-commerce and, should Japan have its way, such a chapter will be very similar or even identical to the corresponding TPP text.[97] However, India, as a strong advocate of indigenous innovation policies, may neutralise such ambitions and the final text may lack binding obligations on many key issues covered in the TPP.

Another important forum affecting the development of e-commerce is the G20, an international forum for the governments and central bank governors of 20 major economies.[98] The G20 Joint Communiqué released after its annual summit on 4–5 September 2016 in Hangzhou, China highlighted, inter alia, the importance of the digital economy and emerging technologies such as the 'Internet of Things'[99] and cloud computing as areas that have the potential to significantly contribute to sustainable, balanced and inclusive growth and development.[100] The G20 also affirmed the importance of preserving the global nature of the Internet as an engine for growth, and expressed its commitment to the free flow of information, ideas and knowledge across borders; freedom of expression; and the multi-stakeholder approach to Internet governance.[101]

The BRICS, which includes some of the most powerful emerging economic powers, is also seized with the issue of e-commerce with a view to harness its potential for enhancing development. These countries have an expert group or working

97 We understand from one of the presentations made during the Study Group on 'The Future of e-Commerce Regulation: Implications for South Africa and Africa', Pretoria, 26 October 2016 that, according to some rumours, Japan has tabled an e-commerce chapter that is very similar or even identical to the corresponding TPP text.

98 The G20 comprises Argentina, Australia, Brazil, Canada, China, France, Germany, India, Indonesia, Italy, Japan, South Korea, Mexico, Russia, Saudi Arabia, South Africa, Turkey, the UK, the US and the EU.

99 A proposed development of the Internet in which everyday objects have network connectivity, allowing them to send and receive data.

100 Diplo Internet Governance Community, 'Digital policy issues emphasised at the G20 Leaders' Summit', http://www.diplointernetgovernance.org/profiles/blogs/digital-policy-issues-emphasised-at-the-g20-leaders-summit?xg_source=activity, accessed 27 October 2016.

101 Presentation, 'The Future of e-Commerce Regulation: Implications for South Africa and Africa' Study Group, Pretoria, 26 October 2016.

group on e-commerce and expectations are that a BRICS regulatory framework will emerge out of these engagements. Currently South Africa, as part of the BRICS initiative, is working on a national position on the definition of e-commerce.[102]

THE ROLE OF E-COMMERCE IN REDUCING POVERTY AND EMPOWERING WOMEN: LESSONS FOR AFRICA

As discussed above, e-commerce has great potential benefits, such as increased economic growth, company growth and profitability – and the taxation thereof – as well as prosperity for individuals. The cost- and labour-saving qualities inherent in e-commerce facilitate wider economic participation as entry barriers related to the cost of starting a business are reduced, allowing women and poor communities to partake, contribute and benefit. Gender barriers can also be circumvented by these same cost- and labour-saving qualities: rather than having to search for opportunities in established enterprises women can access and create opportunities themselves. While gender barriers in cultural practices, as these relate to business and capital ownership, might take more time to overcome, e-commerce at least provides a means for women to participate via non-gender specific means.

Furthermore, in the case of 'mobile money' Ndiaye[103] notes that M-Pesa shows tremendous potential to empower women.[104] The fact that M-Pesa is a digital currency means that women can save money. Often women fear that hard currency, stored in the house, can be used by their husbands for personal use rather than to provide for their families. This in turn has meant that women would rather spend money than try to save it. M-Pesa has also proven to increase productivity, as women in rural areas do not have to travel long distances to pay for supplies in person. The example used in the study notes that women can now spend more time processing fish to sell 'or, for the most audacious, construct their own fishing boats and yield an even greater profit'.[105] The productive use of ICT thus empowers

102 Discussions, *ibid*.

103 Ndiaye OK, 'Is the success of M-Pesa empowering Kenyan rural women?', Feminist Africa, 18, 156, http://agi.ac.za/sites/agi.ac.za/files/standpoints_is_the_success_of_m-pesa_empowering_kenyan_rural_women_.pdf, accessed 8 November 2016.

104 Women's Empowerment in Agriculture Index (WAIE) categories:

- production (input in productive decisions, autonomy in production);
- resources (ownership of assets, purchase, sale, or transfer of assets, access to and decisions on credit);
- income (control over use of income);
- leadership (group member, speaking in public); and
- time (workload, leisure).

105 Ndiaye OK, 'Is the success of M-Pesa empowering Kenyan rural women?', *Feminist Africa*, 18, 156, 2013, http://agi.ac.za/sites/agi.ac.za/files/standpoints_is_the_success_of_m-pesa_empowering_kenyan_rural_women_.pdf, accessed 8 November 2016.

women by affording them control over their finances and freeing up more time for them to pursue other opportunities.

UNCTAD further notes that e-commerce platforms create new opportunities for women entrepreneurs to engage in commerce, particularly micro and small enterprises able to scale up and connect with international value chains in both goods and services. Since some goods can be digitised it also means that products or services can be delivered without the need for a physical presence in the purchasing market.

People who lack access to capital could also potentially benefit from e-commerce platforms due to the increases in efficiencies and, as a result, realise higher profits with limited investment. As e-commerce is ubiquitous it holds the potential to reduce or completely remove market inefficiencies, notably intermediary costs and cost-related barriers to entry. As one example from the Chinese town of Donglou shows, the introduction and uptake of e-commerce can have a tremendous effect on a community. This once poor, rural village has become a hub for online trade within a niche market – party and fancy-dress clothing. Transformed by Alibaba's consumer–to–consumer site Taobao, it is reported that more than 90% of Donglou's residents now work in the e-commerce sector.[106]

These benefits, however, depend on the adoption of a sound e-commerce regulatory environment that maximises opportunities while minimising risks such as Internet fraud by unscrupulous suppliers. In addition, e-commerce might not be as widely adopted in low-income developing countries as other ICT innovations. As George[107] points out, 'Technology innovation is a risk in societies where people do not tolerate failures.' Given that communities in low-income countries operate in very thin margins of survivability, the appetite for risk is inherently much lower. E-commerce could also conceivable shift economic activity to more privileged groups that have ready access to the required technology and knowledge. Finally, it is worth noting that the online market has become fairly saturated. Smaller suppliers might struggle to distinguish themselves online and could find themselves competing against cheaper suppliers from around the world.

Most of the provisions discussed above are TPP innovations, and as such are groundbreaking. However, these provisions may present a potentially huge challenge for some non-TPP signatory states, especially those in Africa. Should multinational companies and potential investors use TPP standards as the benchmark for determining basic e-commerce regulatory standards on the free flow of information, for example, there is a risk of marginalisation or further marginalisation from participation in GVCs for entities in non-TPP signatory

106 Sunday Telegraph, 'E-commerce has sparked a workers' revolution', 7 November 2016, http://www.timeslive.co.za/thetimes/2016/11/07/E-commerce-has-sparked-a-workers-revolution, accessed 9 November 2016.

107 George FS, 'How can e-commerce alleviate poverty?', Krooman Consulting, http://www.slideshare.net/kizuki/e-commerce-andpovertypdfversion, accessed 9 November 2016.

states, depending on how adequate their regulatory frameworks are compared to the provisions of the TPP.

CONCLUSION

E-commerce, rather than becoming a means of conducting business or transactions, is rapidly becoming the economy itself. As more businesses and individuals start to use electronic platforms to process orders and affect payments, the norms regarding international transactions are also likely to shift towards e-commerce. Given the benefits of having a well-developed and widely used e-commerce environment, and the current trends in Africa with regard to mobile broadband uptake and the use of mobile money as a means of payment solutions, African states are advised to actively develop an enabling environment for e-commerce uptake.

E-commerce, rather than becoming a means of conducting business or transactions, is rapidly becoming the economy itself

Despite all the potential benefits it is, however, unclear at present as to what the implications of the emerging regulatory approaches on e-commerce would be for African countries, in particular for women and the poor. An assessment of the e-commerce environment in a representative sample of two to three African states might help shed light on the e-commerce environment on the continent, existing regulatory frameworks and the impact thereof on vulnerable groups, including women and the poor. We have therefore developed an analytical framework, available in the Annex, that builds on the definitions presented in this paper and the current deliberations around e-commerce and the multilateral mega-regional level, particularly focusing on the trailblazing TPP agenda.

ANNEX

TABLE A1 WEF GCI E-COMMERCE INDICATORS, 2015, RANKED BY % OF INDIVIDUALS USING THE INTERNET

BOTTOM AFRICAN STATES (0–5.9% OF INDIVIDUALS USING THE INTERNET)

Row labels	Burundi	Guinea	Sierra Leone	Chad	Ethiopia	Madagascar	Tanzania	Benin	Liberia	Malawi
Availability of latest technologies, 1–7 (best)	3,07	3,26	3,03	2,94	3,91	3,97	3,70	3,46	3,23	3,57
FDI and technology transfer, 1–7 (best)	3,31	3,79	3,63	3,07	4,05	3,80	3,88	3,44	3,59	3,80
Firm-level technology absorption, 1–7 (best)	3,21	3,69	3,46	3,32	3,81	4,37	3,80	3,98	3,75	3,85
Fixed telephone lines/100 pop.[1]	0,21	0,00	0,27	0,18	0,85	1,06	0,30	1,85	0,23	0,38
Fixed broadband Internet subscriptions/100 pop.[2]	0,02	0,01	0,00	0,08	0,49	0,11	0,17	0,40	0,12	0,05
Individuals using Internet, %[3]	1,38	1,72	2,10	2,50	2,90	3,70	4,86	5,30	5,41	5,83
Int'l Internet bandwidth, kb/s per user[4]	6,91	2,37	1,99	0,73	5,00	0,27	6,08	2,84	6,31	4,24
Mobile broadband subscriptions/100 pop.[5]	0,53	2,16	13,03	0,00	7,55	6,09	3,04	2,84	7,63	4,09
Mobile telephone subscriptions/100 pop.[6]	30,46	72,10	76,66	39,75	31,59	38,22	62,77	101,71	73,35	30,50
Number of days to start a business[7]	5,00	8,00	12,00	60,00	15,00	8,00	26,00	12,00	4,50	38,00
Number of procedures to start a business[8]	3,00	6,00	6,00	9,00	9,00	4,00	9,00	7,00	4,00	8,00

MIDDLE BOTTOM AFRICAN STATES (5.9–16% OF INDIVIDUALS USING THE INTERNET)										
Row labels	Mozambique	Mali	Gabon	Rwanda	Mauritania	Cameroon	Lesotho	Côte d'Ivoire	Namibia	Gambia, The
Availability of latest technologies, 1–7 (best)	3,94	3,99	3,95	5,17	4,38	3,82	3,60	4,83	5,12	4,49
FDI and technology transfer, 1–7 (best)	4,23	4,00	3,95	4,87	3,15	3,99	3,52	4,19	4,53	4,24
Firm-level technology absorption, 1–7 (best)	4,24	4,13	4,38	4,97	4,18	4,41	3,54	4,55	4,87	4,53
Fixed telephone lines/100 pop.[1]	0,26	1,00	1,01	0,41	1,29	4,61	2,44	1,17	7,78	2,93
Fixed broadband Internet subscriptions/100 pop.[2]	0,05	0,02	0,63	0,11	0,20	0,07	0,11	0,28	1,76	0,12
Individuals using Internet, %[3]	5,94	7,00	9,81	10,60	10,70	11,00	11,00	14,60	14,84	15,56
Int'l Internet bandwidth, kb/s per user[4]	7,76	1,88	19,66	8,52	1,45	1,80	2,41	5,16	8,16	10,93
Mobile broadband subscriptions/100 pop.[5]	2,98	11,30	0,00	11,12	14,42	0,00	32,80	24,56	35,46	8,04
Mobile telephone subscriptions/100 pop.[6]	69,67	149,02	210,37	64,02	94,20	75,69	101,90	106,25	113,76	119,63
Number of days to start a business[7]	13,00	11,00	50,00	6,50	9,00	15,00	29,00	7,00	66,00	26,00
Number of procedures to start a business[8]	9,00	5,00	7,00	8,00	7,00	5,00	7,00	4,00	10,00	7,00

MIDDLE TOP AFRICAN STATES (16–40% OF INDIVIDUALS USING THE (INTERNET)										
Row labels	Zambia	Senegal	Uganda	Algeria	Botswana	Ghana	Zimbabwe	Swaziland	Egypt	
Availability of latest technologies, 1–7 (best)	4,63	4,61	4,19	3,59	4,25	3,86	4,13	3,85	3,88	
FDI and technology transfer, 1–7 (best)	4,71	4,06	4,53	3,77	4,03	4,10	2,81	3,62	4,37	
Firm-level technology absorption, 1–7 (best)	4,68	5,04	4,09	3,35	4,32	4,31	4,09	3,93	3,84	
Fixed telephone lines/100 pop.[1]	0,76	2,14	0,84	7,75	8,30	0,98	2,26	3,50	7,57	
Fixed broadband Internet subscriptions/100 pop.[2]	0,14	0,71	0,29	4,01	1,63	0,27	1,04	0,34	3,68	
Individuals using Internet, %[3]	17,34	17,70	17,71	18,09	18,50	18,90	19,89	27,10	31,70	
Int'l Internet bandwidth, kb/s per user[4]	4,22	8,35	4,00	12,46	16,44	3,60	3,94	1,72	9,30	
Mobile broadband subscriptions/100 pop.[5]	1,00	23,74	14,66	20,79	49,74	59,78	39,23	7,97	43,50	
Mobile telephone subscriptions/100 pop.[6]	67,34	98,84	52,43	93,31	167,30	114,82	80,82	72,32	114,31	
Number of days to start a business[7]	6,50	6,00	32,00	22,00	60,00	14,00	90,00	30,00	8,00	
Number of procedures to start a business[8]	5,00	4,00	15,00	13,00	10,00	8,00	9,00	12,00	7,00	

TOP AFRICAN STATES (>40% OF INDIVIDUALS USING THE INTERNET)										
Row labels	Cape Verde	Mauritius	Nigeria	Kenya	Tunisia	South Africa	Seychelles	Morocco		
Availability of latest technologies, 1–7 (best)	4,63	5,01	4,23	5,05	4,48	5,34	4,95	5,05		
FDI and technology transfer, 1–7 (best)	4,55	4,45	4,41	4,61	4,20	4,50	4,16	4,63		
Firm-level technology absorption, 1–7 (best)	4,60	5,03	4,34	4,84	4,45	5,43	4,74	4,53		
Fixed telephone lines/100 pop.[1]	11,62	29,80	0,10	0,40	8,54	8,10	22,73	7,43		
Fixed broadband Internet subscriptions/100 pop.[2]	3,79	14,57	0,01	0,19	4,44	3,21	12,68	2,96		
Individuals using Internet, %[3]	40,26	41,44	42,68	43,40	46,16	49,00	54,26	56,80		
Int'l Internet bandwidth, kb/s per user[4]	12,33	32,99	3,15	25,20	25,97	149,54	28,94	10,77		
Mobile broadband subscriptions/100 pop.[5]	51,26	31,78	11,71	9,09	47,56	46,70	12,67	26,82		
Mobile telephone subscriptions/100 pop.[6]	121,79	132,25	77,84	73,84	128,49	149,68	162,19	131,71		
Number of days to start a business[7]	10,00	6,00	30,80	30,00	11,00	19,00	38,00	11,00		
Number of procedures to start a business[8]	7,00	5,00	8,70	10,00	10,00	5,00	9,00	5,00		

Source: World Economic Forum, 'The Global Competitiveness Dataset', 2016

NOTES

1. Fixed telephone subscriptions refer to the sum of active analogue fixed telephone lines, voice over IP (VoIP) subscriptions, fixed wireless local loop (WLL) subscriptions, ISDN voice channel equivalents, and fixed public payphones. It includes all accesses over fixed infrastructure supporting voice telephony using copper wire, voice services using Internet Protocol (IP) delivered over fixed (wired) broadband infrastructure (eg, DSL, fibre

optic), and voice services provided over coaxial-cable television networks (cable modem). It also includes WLL connections, which are defined as services provided by licensed fixed-line telephone operators that provide last-mile access to the subscriber using radio technology, when the call is then routed over a fixed-line telephone network (and not a mobile cellular network). In the case of VoIP, it refers to subscriptions that offer the ability to place and receive calls at any time and do not require a computer. VoIP is also known as voice-over-broadband (VoB), and includes subscriptions through fixed wireless, DSL, cable, fibre optic and other fixed broadband platforms that provide fixed telephony using IP.

2. Fixed (wired) broadband subscriptions refer to the number of subscriptions for high-speed access to the public Internet (a TCP/IP connection). High-speed access is defined as downstream speeds equal to, or greater than, 256 kilobits per second (kbit/s). Fixed (wired) broadband includes cable modem, DSL, fibre and other fixed (wired) broadband technologies, such as Ethernet LAN, and broadband over powerline (BPL) communications. Subscriptions with access to data communications (including the Internet) via mobile cellular networks are excluded.

3. Individuals using the Internet refer to people who used the Internet from any location and for any purpose, irrespective of the device and network used, in the last three months. It can be via a computer (ie, desktop computer, laptop computer or tablet, or similar handheld computer), mobile phone, games machine, digital TV, etc. Access can be via a fixed or mobile network.

4. International Internet bandwidth refers to the total used capacity of international Internet bandwidth, in megabits per second (Mbit/s). It is measured as the sum of used capacity of all Internet exchanges offering international bandwidth. If capacity is asymmetric, then the incoming capacity is used. International Internet bandwidth (kbit/s) per Internet user is calculated by converting to kilobits per second and dividing by the total number of Internet users.

5. Active mobile broadband subscriptions refer to the sum of standard mobile broadband subscriptions and dedicated mobile broadband data subscriptions to the public Internet. It covers actual subscribers, not potential subscribers, even though the latter may have broadband-enabled handsets. Standard mobile broadband subscriptions refer to active mobile cellular subscriptions with advertised data speeds of 256 kbit/s or greater that allow access to the greater Internet via HTTP and that have been used to set up an Internet data connection using IP in the past three months. Standard SMS and MMS messaging do not count as an active Internet data connection, even if the messages are delivered via IP. Dedicated mobile broadband data subscriptions refer to subscriptions to dedicated data services (over a mobile network) that allow access to the greater

Internet and that are purchased separately from voice services, either as a standalone service (eg, using a data card such as a USB modem/ dongle) or as an add-on data package to voice services that requires an additional subscription. All dedicated mobile broadband subscriptions with recurring subscription fees are included regardless of actual use. Prepaid mobile broadband plans require use if there is no monthly subscription. This indicator could also include mobile WiMAX subscriptions.

6. Mobile cellular telephone subscriptions refer to the number of sub-scriptions to a public mobile telephone service that provides access to the public switched telephone network (PSTN) using cellular technology. It includes both the number of post-paid subscriptions and the number of active prepaid accounts (ie, that have been active during the past three months). It includes all mobile cellular subscriptions that offer voice communications. It excludes subscriptions via data cards or USB modems; subscriptions to public mobile data services; and private trunked mobile radio, telepoint, radio paging and telemetry services.

7. For details about the methodology employed and the assumptions made to compute this indicator, see World Bank, Doing Business, 'Methodology', http://www.doingbusiness.org/methodologysurveys/.

8. For details about the methodology employed and the assumptions made to compute this indicator, see World Bank, Doing Business, 'Methodology', http://www.doingbusiness.org/methodologysurveys/.

TABLE A2 PROPOSED FRAMEWORK

	HOW IS E-COMMERCE DEFINED	MEASURING E-COMMERCE	
		IS E-COMMERCE BEING RECORDED	IS DISTINCTION BEING MADE BETWEEN TYPES OF TRANSACTIONS (B2B | B2C | C2C)
Demand side	OECD definition, three principles: • Sales/purchase transaction • Orders are 'automated' • Not to include orders made by telephone calls, facsimile or manually typed e-mail *DTPS ECCT, 2002: 'Automated transactions'* *SARS Regulation R221: 'Electronic services'*	Data for placing and processing orders (buying and selling online) are collected through enterprise surveys by most developed countries and by selected developing and transition economies	Could be based on the OECD functional split, which distinguishes between 'web e-commerce' and 'EDI e-commerce' *Refer to the OECD, 'Guide to Measuring the Information Society 2011 ANNEX 5.A1 OECD Model survey of ICT use by businesses', pp. 86–110, http://www.keepeek.com/Digital-Asset-Management/oecd/science-and-technology/oecd-guide-to-measuring-the-information-society-2011_9789264113541-en#page86*
Supply side			
Institutional arrangements	• DTPS • SARS • Department of Communications (DoC) • E-Commerce Advisory Committee (ECAC) • Financial Services Board (FSB) • BRICS • WTO	• International organisations (OECD, UNCTAD) • State departments (Statistics SA, SARS, DTPS)	

	ENABLING FACTORS			
	INTERNET ACCESS/ICT INFRASTRUCTURE	PAYMENT SYSTEMS	DELIVERY SYSTEMS/ORDER FULFILMENT	E-COMMERCE RELATED CONSUMER PROTECTION LAWS
Demand side	**Demand-side considerations** include the prevalence of ICT technology and the extent of absorption thereof into enterprises and adoption by citizens **Supply-side considerations** include the quality and cost of ICT infrastructure and could potentially include the level of and regulation on competition in terms of supply *Indicator sources:* • *WEF GCI reports;* • *International Telecommunication Union, World Telecommunication/ICT Indicators 2015*	**Demand-side considerations:** What are the administrative and transactional costs associated with each type of payment solution? Are there options to effect international payment and are there currency controls? Are there any guarantees and protection on capital? **Supply-side consideration:** Level of sophistication of the domestic financial sector *Possible payment solutions include:* • *merchant bank account with connected card facilities;* • *direct payment processing by online marketplace;* • *payment processing via a third-party payment gateway*	**Supply-side considerations:** What is the state of physical infrastructure, are storage and warehousing facilities available, are street names and number available, what is the operational state of the national postal service? Are there restrictive regulations on third-party delivery services (on price, weight etc.)? *Possible order fulfilment solutions:* • *availability of third-party market places (global e-commerce platforms);* • *national postal service.* • *Traditional international trade barriers (for cross-border order fulfilment)*	Various, depends on platform being used *Electronic Communications and Transactions Act 2002 (provides legal framework for electronic transactions – cryptography, cybercrime, protection of privacy)*
Supply side				
Institutional arrangements	• DoC (ICASA) • DTPS • Competition Commission	• South African Reserve Bank	• DTPS (POSA)	• DoC • DTPS

LAW OR REGULATIONS	COUNTRY A (South Africa used as an example)	COUNTRY B	COUNTRY C
Law on electronic communications	Yes, Electronic Communications and Transactions Act 2002 (provides legal framework for electronic transactions – cryptography, cybercrime, protection of privacy)		
Law on online consumer protection	Yes		
Law on non-discriminatory treatment of digital products			
Law on electronic authentication and electronic signatures	Yes		
Law on protection of personal information	Yes		
Free flow of cross-border transfer of information by electronic means			
Data localisation requirements proscribed			
Access to source code as pre-condition for doing business proscribed			
Laws on unsolicited commercial electronic messages	Yes		
Law against cybercrime	Yes		
Laws on cross-border co-operation on cyber-security			

GEGAFRICA

GLOBAL ECONOMIC GOVERNANCE