





Chapter 16

**Converging thoughts
on digital trade in
preparing for the future**

Maarten Smeets*

** The contents of this chapter are the sole responsibility of the author and are not meant to represent the position or opinions of the WTO or its members.*

Introduction

There is a growing convergence on the view that the factor having had the most significant impact on trade in recent years is the introduction of new and innovative technologies. The speed and intensity of the IT evolution are affecting trade and more generally our day-to-day lives in unprecedented ways. It has rendered interactions possible between humans, between humans and machines and between machines in ways that could not be imagined even a few years ago. The digital era is a new reality, and it is driving economic growth and development. It poses both challenges and opportunities on all levels. It offers an opportunity for developing countries to better participate in international trade, e.g. through global value chains (GVCs), but there is no prescription how to do that.

In this book, the World Trade Organization (WTO) Chairholders addressed some of the key challenges and opportunities emanating from the rapid technological evolutions and the emergence of digital trade as an enabler for economic growth and development. The case studies and analysis presented offer different perspectives in answering the question how governments can create an enabling environment and in setting the right conditions at the national, regional and global levels in support of digitalization and with a view of countries' fuller integration in world trade. Views tend to converge on several specific requirements that need to be fulfilled in order to take full advantage of the opportunities offered in the new digital trade era. This includes focusing more strongly on specific services sectors,

strengthening the infrastructure that facilitates digital trade, and further reducing transaction costs, all of which are elements conducive to a better linking to GVCs. The analysis and examples presented by the Chairs in many ways add significant value to the research undertaken by leading institutions, including the WTO, in support of inclusive economic growth and enhancing the development perspectives of developing countries. Their findings not only contribute to a fuller understanding of the complex digital trade issues affecting competition, they facilitate a better appreciation of the challenges that remain in designing policies for the future. This final chapter discusses some of the main points of convergence on suggested approaches and directions for policymaking.

The transformative effects of digital trade on the economy: key challenges

The digital economy is transforming our lives in unprecedented ways. How these changes exactly occur and the impact they have are mostly little understood. The Director-General of the WTO observed in 2018: "While technological advances are an essential enabler of international trade expansion, the capacity to manage the changes at play is equally important. Appreciating the depth and breadth of these changes is critical to help governments reap the benefits that these technologies create and address the challenges that may arise" (WTO, 2018, p. 2).

Klaus Schwab, referring to the historic changes driven by what he calls "the Fourth Industrial Revolution" in terms

of their size, speed and scope, observes that “while the profound uncertainty surrounding the development and adoption of emerging technologies means that we do not yet know how the transformations driven by this industrial revolution will unfold, their complexity and interconnectedness across sectors imply that all stakeholders of the global society – governments, business, academia, and civil society – have a responsibility to work together to better understand the emerging trends” (Schwab, 2016, p. 2).

There is a tremendous challenge to collectively appreciate and deepen our understanding of the technological developments witnessed today in the era of digitalization in order to draw the right policy conclusions addressing the implications of these rapid developments and evolution of the technology. This is ever more relevant today, with globalization under serious attack following the outbreak of COVID-19. The disruption of the supply of medical devices witnessed in many countries has put the health and well-being of citizens around the globe at risk. It also resulted in a questioning of the validity of GVCs, which may need some revisiting, for essential equipment.

Richard Baldwin analyses how information technologies are reshaping a new generation of globalization, generating a whole new set of policy

challenges for developed and developing countries alike. He refers to it as the great convergence, because of the ways all the elements are interconnected and have become inseparable (Baldwin, 2016). He explains why the fragmentation of production, the rise of GVCs and the rapid spread of knowledge and information make it ever more difficult for governments to ensure steady economic growth and social coherence. Production processes are not only increasingly fragmented, they can easily be relocated from one production centre to another location if better economic conditions can be offered, generating higher levels of efficiency. This has had significant implications for the ways trade and specialization are analysed and hence the

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validity of the classical theory. The factors driving competitive conditions have changed: a country’s comparative advantage is increasingly determined by technology, skills sets, services, access to capital, and intellectual property (IP) rights instead of labour, capital and natural resources, which are at the origin of the trade theories.

The Nobel Laureate Michael Spence considers that: “Trade is shifting from a stark version of comparative advantage based on differential labor costs and labor arbitrage, toward something that more closely resembles the intra-industry model of trade among developed economies based on product and technological

differentiation. Of course, that process is far from complete, and there remain early-stage, and relatively low-income developing countries for which the growth models will continue to depend on accessing global demand via labor-intensive, process-oriented manufacturing” (Spence, 2019).

Studies by leading international institutions (the WTO, the Organisation for Economic Co-operation and Development (OECD), and the World Bank) equally underscore the role digital technologies can play in the ability of developing countries to enhance their potential growth perspectives through value-addition. The Chairholders' views largely converge on the role digital trade plays in enhancing the economic development perspectives of countries and suggest various options and ways forward to cope with the challenges emanating from that process. The fundamental question remains which policies governments need to put in place to benefit from the very same rapid technological evolutions. The policy options will naturally differ by country or region, as there is no single answer to this question and no standard recipe can be provided. Yet, there are both theoretical and practical answers to these questions, as the examples provided by the Chairs confirm. Digital technologies can be drivers of inclusivity, particularly when more attention is paid to the role services trade in the economy as a facilitator of digital trade. Governments should also

focus on the improvement of infrastructure and lowering barriers to entry and enhancing access to foreign markets.

Services exports are becoming an ever bigger part of global trade and could make up more than a quarter of total trade by 2030. The share of services imports in manufacturing gross output is also expected to rise. The market is rapidly diversifying with an increasingly predominant place given to services, such as e-medical services, the expansion of cross-border

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e-commerce, the rapid growth of social e-commerce and the development of online-offline transactions. The growth of digital trade will open up new opportunities for the provision of online services, promote export diversification, boost efficiency and growth in manufacturing, improve competition in the financial sector,

increase access to market-relevant information and increase market access for micro, small and medium-sized enterprises (MSMEs). If developing countries want to benefit from this growth, they will need to increase their services shares in their gross domestic product (GDP).

The rapid growth of internet penetration and in the use of mobile telephony, the development of mobile money services, the increased use of credit cards and increased access to bank accounts have greatly boosted financial inclusion and encouraged reliance on electronic payment, thus

establishing a strong basis for e-commerce development on the continent. Closely related to this is the interaction between technological developments such as artificial intelligence (AI), robotics, the Internet of Things (IoT), blockchain technology and services. This is an area where rule making and developing laws and regulations governing information and communications technology (ICT) services, e-commerce transactions, data protection and access to information are particularly challenging. Some countries have passed laws in these areas providing a framework and established one-stop shops for the delivery of government services to citizens and for trade logistics. Legislative actions have been taken at the national and regional levels, which can eventually inform and guide the discussions taking place at the multilateral level, as will be discussed further below.

In the current services economy, it is becoming significantly easier to trade in services, thanks in large part to digitalization. The growing cross-border tradability of services is opening new opportunities for national economies and individuals. Equally important, digital trade will ease WTO members' efforts to better connect to GVCs. Hence the recommendation to devote more effort on developing the services economy. This holds specifically for small and medium-sized enterprises (SMEs), depending on their capacity to build the supporting infrastructure. According to Michael Spence:

[T]he mobile-internet- and platform-centered open ecosystems, along with mobile payment systems and enabled financial services, have the

potential to support inclusive growth patterns and expand the channels, opportunities, and accessible markets for SMEs. ... Exploiting the international potential of these platforms to expand trade and access for SMEs requires investment and infrastructure in developing countries, but also new trade regimes that increase the openness of the ecosystems. In other words, the potential to support growth and employment in SMEs via access to global markets on digital platforms is as yet largely unexploited. (2019, p. v)

He furthermore notes that "in developing countries, especially those in the middle-income category, while the pressures on the structure of jobs and employment are similar to developed economies, the net impact of digital technology appears to have been positive for growth and for employment" (Ibid.).

David Dollar offers a similar conclusion that "small and medium-sized enterprises in general have low direct participation in international trade, compared to large enterprises. ... Yet, SMEs are underrepresented in GVCs. This may be changing, however, as access to information and communication technology (ICT) continues to grow. For example, there is evidence that the internet reduces search costs, facilitating more exchange and increasing firm productivity. Cross-border e-commerce platforms are also providing new opportunities for SMEs and even micro firms" (Dollar, 2019, p. 5).

He then argues that SMEs face a number of additional challenges

integrating into GVCs with the digital economy. On top of lagging behind large firms in terms of overall digital technology use and capability, small businesses may also find it difficult to access e-commerce platforms and payment systems. These findings underscore the continuing need to improve the ICT environment and infrastructure as well as to expand services such as e-payment and e-commerce, all of which benefit SMEs disproportionately, but they also highlight the lack of information regarding SMEs.

Digital trade and GVCs: the role of technologies and building infrastructure

The next question then is the role of digital trade in achieving a better linkage with GVCs. An often-cited specific requirement to achieve a better linkage to the GVCs and benefit from the new digital opportunities relates to improving the infrastructure facilitating digital trade, including the internet. Equally important factors in the digital era are the need to strengthen human and institutional capacities; build new skill sets; and provide training, R&D, services, access to IP rights, investment facilitation and access to capital as drivers of economic growth and development. Developing countries stay relatively behind in these areas compared to developed countries. The shares spent in an economy on R&D are mostly positively correlated to the levels of economic development in a country. The higher the income levels, the higher the spending rates on training and education. Developing countries are mostly lacking the economic resources necessary to focus on technology, and hence

capital-intensive production, and they continue to focus more on traditional patterns, producing goods rather than services. Also, few developing countries own IP rights, whereas increasingly the value of goods is determined by the combination of goods, services and IP.

A recent study by the WTO, focusing on the role of new technologies and digital trade as drivers of the transformation of global commerce, underscores the interplay between technology and trade (WTO, 2018). It provides a qualitative analysis of the changes that are underway and quantifies the extent to which global trade may be affected in the next 15 years. As the Director-General notes in his foreword, “domestically, governments may need to look at how to tackle many of these challenges, including in areas such as investment in digital infrastructure and human capital, trade policy measures and regulation. International cooperation can also help governments derive more benefits from digital trade and help drive inclusion. At present, WTO members are trying to get to grips with these issues” (Ibid., p. 4).

The Secretariat underscores the role that technological advances play in cutting international trade costs and estimates that, between 1996 and 2014, these costs declined by 15 per cent (Ibid., p. 3). Technological innovation played an important role here, and it has the potential to do even more. Prior to the trade tensions that rose between the leading trading nations and prior to the economic crisis following COVID-19, the prediction was made that trade could grow yearly by 1.8 to 2 percentage points more until 2030 as a result of

the falling trade costs, amounting to a cumulated growth of 31 to 34 percentage points over 15 years. The report finds that the decline in trade costs can be especially beneficial for MSMEs, and for firms from developing countries, if appropriate complementary policies are put in place and challenges related to technology diffusion and regulation are addressed. While the digital trade era offers many new opportunities, the challenges should also not be underestimated, particularly the risk of a digital divide between developed and developing countries. More recent forecasts and estimations by Bekkers, Koopman, Sabbadini and Teh are presented in the first chapter of this book, showing that between now and 2030 global trade growth would be 2 percentage points per annum higher and developing countries' trade growth 2.5 percentage points per annum higher, as a result of the adoption of digital technologies and further reducing transaction costs.¹ Bekkers, Koopman, Sabbadini and Teh also find that services exports will become a bigger part of global trade, making up more than a quarter of total trade by 2030, while the share of services imports in manufacturing gross output also would rise. All figures are likely to be adjusted in view of the impact of COVID-19 on the world economy.

The reduction of transport and transaction costs is generally found to be a key factor supporting economic growth. To achieve that, the Chairs suggest that governments focus more on domestic policies, structural adjustment and innovation. The recommendations include efforts to improve domestic infrastructure for transport, roads, railways, ports and handling procedures for import and

export (the introduction of a single window), thus reducing the administrative costs and time for trade transactions. These recommendations suggest that economic efficiency, trade and the related policies are increasingly dictated by domestic policies rather than border protection. The Chairs underscore the need for governments to create an enabling, competitive environment for trade and investment in support of building productive capacity.

These findings corroborate two earlier analyses undertaken by the Chairs and by the WTO as explained in its 2015 *World Trade Report*, which specifically focused on the challenges related to the implementation of the Trade Facilitation Agreement (Teh et al., 2016; WTO, 2015). The main objectives of and key provisions in the Trade Facilitation Agreement (TFA) are all geared towards reducing transaction costs. The TFA puts several mechanisms into place and contains specific provisions to assist beneficiaries in strengthening their infrastructure to ease trade costs. The TFA does not distinguish between forms of trade, i.e. between physical goods and digital trade. Based on a review of the literature, Teh et al. argued that for physical goods, trade costs could be reduced by some 14 per cent on average and even more for developing countries. It was also argued that the trade costs for least-developed countries (LDCs) could fall as much as 17 per cent. These findings were largely confirmed by other studies presented by the OECD, the World Bank and think tanks, with the differences mainly explained by the models used and the implementation scenarios of the TFA. There was a consensus on the fact that low and

lower-middle-income countries are likely to see the biggest reductions in trade costs. This also leads to the commonly held view that developing countries should exploit all the options offered through the TFA to strengthen their infrastructure with a view to simplifying transactions and reducing costs. More specifically, developing countries should consider how the TFA can best be used to reduce their infrastructure costs for digital trade, thus preparing better for the future. Many developing countries and LDCs have indicated their need for support in building and strengthening their infrastructure, and the efforts should be particularly geared towards facilitating digital trade.

Multilateral vs regional approaches to digital trade

One area that has had the specific attention of policymakers in recent years is the relation between multilateral and regional trade liberalization. This relationship has also been analysed extensively by scholars and again had the specific attention of the Chairs as it relates to digital trade. While it was long held that the two approaches are largely incompatible, with regionalism being the exception to the multilateral trade rules, condoned under specific General Agreement on Tariffs and Trade 1994 (GATT 1994) provisions, the views have largely evolved towards a more tolerant approach. Regional trade integration can be a stepping stone for multilateral trade liberalization and in some ways be complementary (Acharya, 2016). In some areas not covered by WTO rules, regional approaches can be considered as “laboratories” and eventually provide a basis for multilateral trade rules. It holds true

for digital trade, with several Chairs and commentators specifically advocating the two as complementary approaches: in the absence of multilaterally agreed trade rules (WTO), the regional and/or bilateral approaches adopted to digital trade can ensure the free flow of digital data and information. Regional trade agreements (RTAs) increasingly include provisions referring explicitly to digital technologies and, interestingly enough, mostly in RTAs involving developing countries. The most common provisions refer to e-government, cooperation and the moratorium on customs duties on electronic transmissions.

It is found that the regulatory approaches adopted in regional integration initiatives can widely differ as explained by Gao (Chapter 15) and López, Condon and Muñoz (Chapter 10). This can be seen in Latin America with new rules on digital trade negotiated under the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP) and in the case of the United States-Mexico-Canada Free Trade Agreement (USMCA). It is also the case in trade relations between China, the European Union and the United States, reflecting different methodologies and regulatory systems. Interestingly, the agreements often follow different approaches in their regulations and coverage. The implication is that the lack of multilateral rules on the free flow of data has resulted in divergent approaches in RTAs. Hence, there is a tension not only between regional and multilateral approaches, but also within RTAs.

An in-depth review conducted by Wu, covering almost all of the RTAs that

were signed between 2001 and 2016 and notified to the WTO, led to identifying those RTAs with a standalone e-commerce chapter or with provisions specifically addressing e-commerce/digital trade (2017). He found 69 RTAs with a standalone e-commerce chapter or article(s), dating back to 2001, including a small number that had not yet entered into force. He also identified at least 21 other RTAs without a dedicated e-commerce chapter or article, but with one or more provisions specifically addressing paperless trading, digital rights management or general promotion. As he notes, due to the slow pace at which the multilateral trading system is updating trade rules for the digital era, much of the innovation is occurring in RTAs. In the absence of a wide-ranging WTO mandate for digital trade, RTAs have emerged as the primary laboratories for new rules and disciplines.

Divergences in approaches to the ways in which digital trade are addressed in RTAs are also noted in the WTO's *World Trade Report 2018*, which underscores that provisions related to digital technologies can be found in multiple chapters of RTAs (WTO, 2018, fn 10). These provisions cover a broad range of issues, including trade rules and market access commitments; telecommunications and the digital regulatory framework; intellectual property protection; management of e-government (i.e. the use of ICT to deliver services in the public administration), including paperless trading; and the cooperation and technical assistance on science and technology, ICT and e-commerce. The WTO notes that although certain provisions related to digital technology replicate or clarify a number of existing

provisions and/or commitments established under the WTO, other provisions expand commitments or specify new ones. These provisions often complement other relevant provisions found in RTAs, even though they do not make explicit reference to digital technologies. Most provisions related to digital technologies do not follow a specific, unique template, even in agreements negotiated by the same country. As a result, provisions related to digital technology remain particularly heterogeneous in terms of structure, language and scope.

According to the WTO (2018), the most common types of provisions related to digital technologies found in RTAs refer to e-government management, as well as cooperation on e-commerce issues and the moratorium on customs duties on electronic transmissions. An increasing number of RTAs also cover the general domestic legal framework of e-commerce and more specific issues, such as electronic authentication, consumer protection and intellectual property. Other issues addressed in a limited number of relatively more recent RTAs include the cross-border electronic transfer of information, data localization and cybersecurity. Given the dynamic nature of RTAs and the current trends, provisions related to digital technologies are likely to keep evolving with new and more comprehensive types of provisions.

All of these elements provide useful inputs into the policy discussions held at the WTO on e-commerce and show the complexity of establishing rules and regulations that could eventually govern digital trade. As Wu concludes based on his in-depth review of the key elements contained in RTAs on digital

trade, “While a sizeable number of WTO members have agreed to some provisions related to digital trade in one or more of their RTAs, significant challenges exist in terms of extending these provisions into any form of a future WTO multilateral agreement” (2017, p. 29).

Conclusion

There is a clear convergence in thinking on the elements that need to be given priority attention in order to benefit from digital trade and prepare the future. Many of those elements are closely interlinked and re-enforce each other, including services, infrastructure, innovation, R&D, skill sets, connections to GVCs and IP to name a few.

It is also clear that given the absence of multilateral trade rules covering digital trade, WTO members tend to focus on their domestic and regional policies to cover the key elements related to digital trade. Even if all the “right” policies are put in place, there is no guarantee that the expected benefits

will materialize, as many other factors will influence the outcome and trade has become more dynamic than ever before. This also explains why WTO members are reflecting on the reforms to be conducted in order to update the rules of the WTO multilateral trading system. However, the pandemics caused by COVID-19, the dramatic decline in trade, the significant slowdown of the world economy, and the many trade restrictions applied by WTO members are adding new

pressures to develop rules that address trade issues in the digital trade era.

There also is a convergence on the view that while digital trade offers opportunities, there is a risk as it can also exacerbate inequality and limit inclusiveness. Developed-country policymakers tend to stress the importance of the free transmission of data across borders, while some developing-country policymakers have advocated for a digital industrialization strategy to limit competition from the large technology firms to encourage the growth of local digital capabilities. Developing countries that lack the tools to compete in the new digital environment are in danger of being left

even further behind. The challenge is to achieve inclusive growth to the benefit of all, with no member being left out and not deepening the economic divide. What to regulate, how to regulate and at what level? Multilaterally, regionally or bilaterally?

These are some of the questions before the policymakers and that

are at the heart of the WTO’s discussions with members with a view of deepening and strengthening the rules of the WTO multilateral trading system and making it rise to the challenges of 21st century trade. The Chairholders address these topical issues from their national, regional and/or subregional perspectives. What is clearly evidenced from the analysis and case studies presented in this book is that governments have a significant role to play domestically regardless

“While digital trade offers opportunities, there is a risk as it can also exacerbate inequality and limit inclusiveness.”

of what will or can be agreed multilaterally. International trade is increasingly determined by the competitive and enabling environment created by countries at the national level, i.e. domestically. Of critical importance is the need to put the right infrastructure in place, facilitate IT and reduce transaction costs, thus allowing a better connection to markets, and linking to the GVC. This requires adequate domestic regulatory systems as well as harmonization and coordination of such policies at the international level.

Endnote

¹ The authors of Chapter 1 also made the calculations for the WTO *World Trade Report*.

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Adapting to the digital trade era: challenges and opportunities looks at how the rapid adoption of digital technologies could help developing countries increase their participation in world trade. It also reviews the role that domestic policies and international co-operation can play in creating a more prosperous and inclusive future for these countries. This publication marks the conclusion of the second phase of the WTO Chairs Programme (WCP). It brings together contributions from the WCP Chairholders of Phases I and II, Advisory Board members, the WCP team at the WTO and other WTO Secretariat staff. The WCP is an important part of the WTO's efforts to build trade capacity and to work jointly with academic institutions in developing countries.

ISBN 978-92-870-4303-0



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