

Zeitschrift: Zeitschrift für schweizerisches Recht = Revue de droit suisse = Rivista di diritto svizzero = Revista da dretg svizzer : Halbband II. Referate und Mitteilungen des SJV

Herausgeber: Schweizerischer Juristenverein

Band: 134 (2015)

Artikel: The international economic law framework for digital trade

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DOI: <https://doi.org/10.5169/seals-895802>

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The international economic law framework for digital trade

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A. Introduction

I. Situating the digital trade debate

Digital trade as a critical policy topic can be construed in two ways – one narrow and one broad. In the former sense, digital trade is plainly equated to commerce in products and services delivered via the Internet.¹ The second aspect is much broader and has to do with enabling innovation and the free flow of information in the digital networked environment. We experience both dimensions in our daily lives, as digital technologies have had and continue to have profound effects on multiple facets of societal progress. The changes range from the trivial to the momentous – from online shopping, through the emergence of new global value chains to the very ways we work and write, create, distribute and access information – bringing distant geographical locations within instantaneous reach, millions of people organized within hours, and encyclopaedias and virtual libraries produced on a collaborative basis. These modifications are by no means quantitative only – pertaining, for instance, to the number of Internet users or to the contribution of online trade to gross domestic product (GDP) and economic growth² – but also have a qualitative character and significantly impact on many separate areas of society as well as on society as a whole.³ Both dimensions of digital trade are important and have been increasingly acknowledged in policy circles – in developed and developing countries alike – as a fundamental building block in future-oriented strategies for growth and innovation.

Pertinently for the present discussion, both dimensions of digital trade are dependent upon regulatory solutions in the domain of international economic law. The first in a straightforward way, as international economic law regulates

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- 1 See United States International Trade Commission (USITC), *Digital Trade in the US and Global Economies, Part 1*, Investigation No 332–531 (Washington, DC: USITC, 2013), at p. i. As there is no settled definition of ‘electronic commerce’ or ‘digital trade’, definitions differ. For an overview of the existing definitions, see e.g. Andrew D. Mitchell, ‘Toward Compatibility: The Future of Electronic Commerce within the Global Trading System’, *Journal of International Economic Law* (2001), pp. 683–723, at pp. 685–686; Lior Herman, ‘Multilateralising Regionalism: The Case of E-Commerce’, *OECD Trade Policy Working Paper* 99 (2010), at pp. 8–10.
 - 2 Organisation for Co-operation and Development (OECD), ‘Measuring the Internet Economy: A Contribution to the Research Agenda’, *OECD Digital Economy Papers* 226, 2012 (available at: <http://dx.doi.org/10.1787/5k43gig6r8jf-en> [25 April 2015]); United Nations Conference on Trade and Development (UNCTAD), *The Information Economy Report 2012* (Geneva: UNCTAD, 2013); USITC (2013), supra note 1; USITC, *Digital Trade in the US and Global Economies, Part 2*, Investigation No 332–540 (Washington, DC: USITC, 2014).
 - 3 Yochai Benkler, *The Wealth of Networks: How Social Production Transforms Markets and Freedom* (New Haven, CT: Yale University Press, 2006); Anupam Chander, *The Electronic Silk Road: How the Web Binds the World in Commerce* (New Haven, CT: Yale University Press, 2013). For a brief overview with regard to trade, see Joshua Paul Meltzer, ‘The Internet, Cross-Border Data Flows and International Trade’, *Asia and the Pacific Policy Studies* 2 (2015), pp. 90–102.

the cross-border transfer of goods and services and seeks to reduce trade barriers. While intuitively, one could argue that regulatory solutions subsumed under this category should not be too difficult to negotiate and implement, the practical reality has proven this illusive, as electronic commerce has multiple offline and online elements that appear hard to capture and regulate. Digital trade does also place particularly high demands on seamlessness and interoperability,⁴ which may be hard to satisfy as different regulatory domains are affected. The interface between rules stemming from different phases of technological advancement and often suited (or indeed created) for one particular technology is equally challenging, as the article explicates later on.

The second manner in which international economic law affects digital trade as broadly conceived may be less obvious, since it is more diverse and distributed in different, often not interlinked, legal domains. It may cover solutions with regard to infrastructure, interconnection and standards, but also more generally the regulatory choices made with regard to the freedom of firms to create and distribute new products and services globally. The question of how innovation unfolds under the idiosyncratic conditions of the digital networked environment, which are profoundly different from the conventional brick-and-mortar space,⁵ is particularly pertinent here. Overall, the multi-faceted character of the digital challenge combined with the inherent fluidity of digital technologies render the regulatory design that can adequately accommodate them complex and hard to elaborate.

In this article, we address both aspects of digital trade and focus on one essential part of the incipient governance model relating to international trade law. At the core of our enquiry are the multilateral rules in the framework of the World Trade Organization (WTO). We examine how they presently regulate digital trade, as well as where they have been challenged by newer technological advancement. We map the problematic issues and the proposals for tackling them. As legal adaptation has been protracted under the umbrella of the WTO, states have looked for solutions elsewhere, primarily in a number of bilateral and regional preferential trade agreements (PTAs). The article devotes therefore attention to the evolving body of law in PTAs and assesses its impact. Finally, the article evaluates the process of adaptation of international trade law and addresses broader governance questions of the efficacy of this adaptation and the adequacy of the chosen evolutionary path. It suggests ways in which states can

4 Urs Gasser and John Palfrey, 'Fostering Innovation and Trade in the Global Information Society: The Different Facets and Roles of Interoperability', in: Mira Burri and Thomas Cottier (eds.), *Trade Governance in the Digital Age* (Cambridge: Cambridge University Press, 2012), pp. 123–153.

5 Yochai Benkler, 'Growth-oriented Law for the Networked Information Economy: Emphasizing Freedom to Operate Over Power to Appropriation', in: Kauffman Taskforce on Law, Innovation and Growth, *Rules for Growth: Promoting Innovation and Growth through Legal Reform* (Kansas City, MO: Kauffman Foundation, 2011), pp. 313–342.

position themselves as regulatory entrepreneurs and ensure that digital trade is not hindered while there is sufficient room for the protection of important public interests. The article focuses on public international law, and does not address the myriad of private law issues related to electronic commerce, such as electronic signature and authentication, contracting and consumer protection. Nor does it tackle computer crime and taxation.⁶

II. Internet-induced transformations in governance and pertinent regulatory questions

While in the beginning of the Internet age some three decades ago, it was widely argued (albeit even then falsely), that the Internet should not and cannot be regulated,⁷ it has long been proven that (offline) regulation matters online, too.⁸ Yet, neither at the international level nor domestically has there been a comprehensive and neatly structured response to the changes brought about by digital technologies. Instead, we have observed only incremental and patchy adjustments that have affected, to varying degrees, the existing regimes for telecommunications, media and copyright, to mention but a few areas.⁹ National policies were the first to be redesigned, but because of the inherent 'globalness' of the digital environment, many of the solutions need to be situated at the international level – either framed as an add-on to existing agreements (such as the Internet Treaties adopted in 1996 under the World Intellectual Property Organization, WIPO¹⁰) or as entirely new institutional solutions (such as the Internet Corporation for Assigned Names and Numbers, ICANN¹¹).

6 For helpful guidance, see Faye Fangfei Wang, *Law of Electronic Commercial Transactions: Contemporary Issues in the EU, US and China* (Abingdon: Routledge, 2010); Rolf H. Weber, *E-Commerce und Recht: Rechtliche Rahmenbedingungen elektronischer Geschäftsformen*, 2nd edn. (Zurich: Schulthess, 2010).

7 David R. Johnson and David G. Post, 'Law and Borders: The Rise of Law in Cyberspace', *Stanford Law Review* 48 (1996), pp. 1367–1402.

8 Jack Goldsmith and Tim Wu, *Who Controls the Internet: Illusions of a Borderless World* (Oxford: Oxford University Press, 2006). See also Bertil Cottier's contribution to this volume.

9 Carlos A. Primo Braga, 'E-commerce Regulation: New Game, New Rules?', *The Quarterly Review of Economics and Finance* 45 (2005), pp. 541–558; William J. Drake and Ernest J. Wilson III (eds.), *Governing Global Electronic Networks: International Perspectives on Policy and Power* (Cambridge, MA: MIT Press, 2008), Christian Tietje and Karsten Nowrot, 'Das Internet im Fokus des transnationalen Wirtschaftsrechts: Normative Ordnungsstrukturen für den E-Commerce', *Archiv des Völkerrechts* 47 (2009), pp. 328–366.

10 The WIPO Internet Treaties comprise the WIPO Copyright Treaty (adopted 20 December 1996, WIPO Publication No. 226 [1997] 36 I.L.M. 65, entered into force 6 March 2002) and the WIPO Performances and Phonograms Treaty (adopted 20 December 1996, WIPO Publication No. 227 [1997] 36 I.L.M. 76, entered into force 20 May 2002).

11 ICANN is responsible for the management of the so-called Internet identifiers – the domain names and IP addresses – which are essential to the functioning of the Internet as a network of networks. ICANN is unique in its status and its institutional structure and decision-making, being a private non-profit organization, which engages multiple stakeholders. See e.g. Milton

It should be underscored in this context that whereas it is evident that digital technologies have had an impact on the economy as well as on social and cultural practices, they have at least equally strongly affected the law and patterns of governance in general.¹² Legal institutions face various challenges, related, amongst other things, to design and enforcement. Many of the existing rules no longer provide appropriate answers. Digital technology undermines, for instance, traditional perceptions of copyright on authorship and exclusivity.¹³ It renders classic distinctions between goods and services obsolete, as these are now commonly integrated, especially with the documented intensified trend of «servicification». It has also been observed that law in the conventional sense of acts of the legislature or treaties between sovereign nations has been challenged in many ways and supplanted by new modes of control. Prominent amongst these new models is regulation through code where diverse mechanisms controlling access and use are embedded directly into the software or the device and in effect enforce certain legal standards.¹⁴ Private ordering has also proliferated and created a new legal layer built around contractual, often asymmetrical, relationships (frequently cited examples in this regard are the end-user agreements by large online platforms such as Facebook or YouTube).¹⁵ Governance models have in general become less state-centered, and there is a proliferation of regulatory forms that involve multiple stakeholders, with varied types of supervisory and controlling functions entrusted to the state.¹⁶

We need to take notice of these developments as part of the broader governance landscape, while focusing on the specific field of international trade law and policy. Furthermore, we need to see the evolution of law in time and under-

Mueller, *Ruling the Root: Internet Governance and the Taming of Cyberspace* (Cambridge, MA: MIT Press, 2002); Laura DeNardis, *Protocol Politics: The Globalization of Internet Governance* (Cambridge, MA: MIT Press, 2009); Laura DeNardis, *The Global War for Internet Governance* (New Haven, CT: Yale University Press, 2014).

12 Patricia L. Bellia, Paul Schiff Berman, Brett Frischmann, and David J. Post, *Cyberlaw: Problems of Policy and Jurisprudence in the Information Age*, 4th edn. (St. Paul, MN: Thomson West, 2010); Mira Burri and Thomas Cottier (eds.), *Trade Governance in the Digital Age* (Cambridge: Cambridge University Press, 2012); Goldsmith and Wu, *supra* note 8.

13 See Stefan Bechtold's contribution in this volume.

14 Lawrence Lessig, *Code and Other Laws of Cyberspace* (New York: Basic Books, 1999); Lawrence Lessig, *Code: Version 2.0* (New York: Basic Books, 2006). Briefly also, Mira Burri, «Controlling New Media (without the Law)», in: Monroe Price and Stefaan Verhulst (eds.), *Handbook of Media Law* (Abingdon: Routledge, 2012), pp. 327–342.

15 See e.g. Yochai Benkler, «An Unhurried View of Private Ordering in Information Transactions», *Vanderbilt Law Review* 53:6 (2000), pp. 2063–2080.

16 Viktor Mayer-Schönberger, «The Shape of Governance: Analyzing the World of Internet Regulation», *Virginia Journal of International Law* 43 (2003), pp. 605–673; Christopher T. Marsden, *Internet Co-Regulation: European Law, Regulatory Governance and Legitimacy in Cyberspace* (Cambridge: Cambridge University Press, 2011); more briefly, Michael Latzer, Natascha Just, and Florian Saurwein, «Self- and Co-Regulation: Evidence, Legitimacy and Governance», in: Monroe Price and Stefaan Verhulst (eds.), *Handbook of Media Law* (Abingdon: Routledge, 2012).

stand the growing societal importance of digital technologies and online activities. This raises on the one hand the policy awareness and the prioritization of the digital issues in political agendas. On the other hand, as digital technologies are increasingly mobilized within nation states as key drivers of innovation and growth, there are associated risks of regulatory activism, burdensome and imbalanced interventions. This is true in general as life online is concerned, as well as in the concrete case of digital trade barriers and local industries' protectionism,¹⁷ as we show in more detail below.

To structure this article's analytical enquiry, we need to recognize that a simple mapping of the different economic sectors concerned and their matching international trade norms will not suffice. Digitization has on the one hand enabled the expression of all information (be it audio, text, still or moving images) as binary digits and has freed it from the tangible medium, making it networkable and easy to manipulate.¹⁸ On the other hand, and as a consequence of digitization, it has also triggered the erosion of the previously distinct boundaries between the media, the telecommunications and the information technology (IT) sectors, leading to a convergence of their products, services and companies.¹⁹ Companies like Google, Facebook or Yahoo! not only transcend the conventional sectoral boundaries but also clearly illustrate the power of the few in imposing certain standards worldwide, as well as the changing value of national jurisdictions of cyberspace.²⁰

Cognizant of these shifts, we need to map the effects of digital technologies and in particular the Internet differently. One ought to carefully consider all layers of the so-called <communications model>.²¹ This model is well established in the IT literature and helpfully depicts contemporary communication architecture along three layers: (i) *physical* layer consisting of the network plus the hardware attached; (ii) *logical* layer consisting of software, applications and protocols; and (iii) *content* layer, where the actual human-readable messages are placed. International trade law is directly relevant for all these layers but

17 USITC, 2013 and 2014, *supra* notes 1 and 2 respectively.

18 See e.g. Terry Flew, *New Media: An Introduction*, 2nd edn. (Oxford: Oxford University Press, 2014).

19 For a brief overview and references to the relevant literature on convergence, see Mira Burri, *EC Electronic Communications and Competition Law* (London: Cameron May, 2007), pp. 28–31.

20 See e.g. Chander, *supra* note 3; also Anupam Chander, <Facebookistan>, *North Carolina Law Review* 90 (2012), pp. 1807–1842.

21 See e.g. Tim Wu, <Application-Centered Internet Analysis>, *Virginia Law Review* 85 (1999), pp. 1163–1204; Yochai Benkler, <From Consumers to Users: Shifting the Deeper Structures of Regulation toward Sustainable Commons and User Access>, *Federal Communications Law Journal* 52 (2000), pp. 561–579; Kevin Werbach, <A Layered Model for Internet Policy>, *Journal of Telecommunications and High Technology Law* 1 (2002), pp. 37–67; Ellen P. Goodman and Anne H. Chen, <Modelling Policy for New Public Service Media>, *Harvard Journal of Law and Technology* 24 (2010), pp. 111–170. Different interpretations of the model exist. We use the basic three-layer version, as conceptualized by Benkler.

the level of its appropriateness to accommodate changes along the layers, as well as the political economy behind them may vary, as we show below.

The questions that we address with regard to these different layers throughout the article are: what is the present state of law with regard to digital trade (as conceived in its narrow and broad dimension); is the present legal design facilitating or rather hindering digital trade; what are the relevant *de lege ferenda* proposals and what is the level of urgency attached to finding different solutions.

B. Relevant multilateral institutions: The WTO Agreements

We begin our analytical journey with the World Trade Organization (WTO) as it is the multilateral forum specifically designed to regulate trade. It also marks the highest degree of institutionalizing economic globalization²² and represents an effort to constitutionalize trade regulation moving from older, diplomacy-based forms of governance towards stricter legal principles and norms.²³ International trade law comes closest to the ideal type of hard law.²⁴

The WTO was established in April 1994 as part of the final act embodying the results of the Uruguay Round of multilateral trade negotiations (1986–1994),²⁵ and building upon the General Agreement on Tariffs and Trade (GATT) 1947.²⁶ It became operational on 1 January 1995 and over the past twenty years has grown to be the most influential organization at the global level, regulating not only trade in goods, services and trade-related aspects of intellectual property rights but affecting also broader governance domains, such as health and environment.²⁷

22 John Braithwaite and Peter Drahos, *Global Business Regulation* (Cambridge: Cambridge University Press, 2000).

23 See e.g. Thomas Cottier and Maya Hertig, 'The Prospects of 21st Century Constitutionalism', in: Armin von Bogdandy and Rüdiger Wolfrum (eds.), *Max-Planck Yearbook of United Nations Law*, Vol. 7 (Leiden: Martinus Nijhoff, 2003), pp. 261–328; Thomas Cottier, 'The Constitutionalism of International Economic Law', in: Karl M. Meesen (ed.), *Economic Law as an Economic Good. Its Rule Function and its Tool Function in the Competition of Systems* (Munich: Sellier European Law Publishers, 2009), pp. 317–333. For a more nuanced account, see Joost Pauwelyn, 'The Transformation of World Trade', *Michigan Law Review* 104 (2005), pp. 1–70.

24 Gregory C. Shaffer and Mark A. Pollack, 'Hard vs. Soft Law: Alternatives, Complements, and Antagonists in International Governance', *Minnesota Law Review* 94 (2010), pp. 706–799, at p. 715.

25 Agreement Establishing the World Trade Organization with Understanding on the Rules and Procedures Governing the Settlement of Disputes and Trade Policy Review Mechanism, Marrakesh, 15 April 1994, 1867 U.N.T.S. 154; 33 I.L.M. 1144 (1994), entered into force 1 January 1995 [hereinafter *Marrakesh Agreement*].

26 General Agreement on Tariffs and Trade of 30 October 1947, annexed to the Final Act of the United Nations Conference on Trade and Employment, Havana 1947, 55 U.N.T.S. 194, entered into force 1 January 1948 [hereinafter *GATT 1947*].

27 For an introduction to the law of the WTO, see e.g. Thomas Cottier and Matthias Oesch, *International Trade Regulation* (Bern: Stämpfli Publishers/London: Cameron May, 2004); Peter van

The law of the WTO is contained in multiple agreements, attached as annexes to the Marrakesh Agreement establishing the World Trade Organization.²⁸ The GATT,²⁹ the General Agreement on Trade in Services (GATS),³⁰ and the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS)³¹ build the three essential pillars of the WTO law.³² In seeking the opening of markets and a decrease in protectionism, and in establishing a rule-based system for free trade, the WTO endorses far-reaching principles of non-discrimination: the *most-favored nation* (MFN) and the *national treatment* (NT) obligations. In essence, they ban countries from discriminating between products and services coming from different WTO Members (MFN) and from discriminating between foreign and domestic products and services (NT). These principles apply to trade in both goods and services but with some qualifications, as we show below. The critical test in finding *de jure* and *de facto* discrimination is establishing the 'likeness' of the products, or services and service suppliers at issue.³³ This test is performed on a case-by-case basis.³⁴ It essentially links legal and economic analysis and seeks to mediate between the aims of progressive trade liberalization and the regulatory autonomy of the members.³⁵

den Bossche and Werner Zdouc, *The Law and Policy of the World Trade Organization*, 3rd edn. (Cambridge: Cambridge University Press, 2013); Petros C. Mavroidis, George A. Bermann, and Mark Wu, *The Law of the World Trade Organization: Documents, Cases, and Analysis*, 2nd edn. (Eagan, MN: West Publishing, 2013).

- 28 As stated in Article II:2 of the WTO Agreement, '[t]he agreement and associated legal instruments included in Annexes 1, 2, and 3 [...] are integral parts of this Agreement, binding on all Members.'
- 29 General Agreement on Tariffs and Trade 1994, 1867 U.N.T.S. 187; 33 I.L.M. 1153 (1994), entered into force 1 January 1995 [hereinafter *GATT 1994* or *GATT*].
- 30 General Agreement on Trade in Services, 1869 U.N.T.S. 183; 33 I.L.M. 1167 (1994), entered into force 1 January 1995 [hereinafter *GATS*].
- 31 Agreement on Trade-Related Aspects of Intellectual Property Rights, 1869 U.N.T.S. 299; 33 I.L.M. 1197 (1994), entered into force 1 January 1995 [hereinafter *TRIPS*]. This article will not address intellectual property issues, as these are covered elsewhere in this volume.
- 32 See e.g. William J. Davey, 'The WTO Dispute Settlement System: The First Ten Years', *Journal of International Economic Law* 8:1 (2005), pp. 17–50; Giorgio Sacerdoti, Alan Yanovich and Jan Bohanes (eds.), *The WTO at Ten: The Contribution of the Dispute Settlement System* (Cambridge: Cambridge University Press, 2006); Thomas Bernauer, Manfred Elsig, and Joost Pauwelyn, 'The World Trade Organization's Dispute Settlement Mechanism – Analysis and Problems', in: Martin Daunton, Amrita Narlikar, and Robert M. Stern (eds.), *The Oxford Handbook on The World Trade Organization* (Oxford: Oxford University Press, 2012), pp. 487–506.
- 33 See e.g. Nicolas F. Diebold, *Non-Discrimination in International Trade in Services: 'Likeness' in WTO/GATS* (Cambridge: Cambridge University Press, 2010).
- 34 See e.g. WTO Appellate Body Report, *Japan – Taxes on Alcoholic Beverages (Japan – Alcoholic Beverages II)*, WT/DS8, WT/SD10 and WT/DS11, adopted 1 November 1996.
- 35 Diebold, *supra* note 33, at pp. 2–7.

Even at this meta-level of thinking about the law of the WTO and even though it is rarely granted direct effect³⁶ domestically,³⁷ it is evident that its impact on domestic regimes can be truly powerful and may substantially limit the possibilities that national policy-makers have, as their hands may already be «tied to the WTO mast». The WTO is also, and in contrast to any other international organization, uniquely equipped with an effective dispute settlement mechanism, which makes breaches of the obligations undertaken by the now 161 WTO Members «punishable». The decisions taken by the WTO panels and the Appellate Body not only settle the particular conflict as a matter of WTO law and contribute to legal certainty and law's evolution, but can also be enforced.³⁸ Although the ultimate remedy remains the withdrawal or amendment of the WTO-inconsistent measure by the «wrongdoing» state, the Dispute Settlement Understanding (DSU) provides for two temporary remedies – compensation and suspension of concessions or other obligations (commonly referred to as «retaliation»), which effectively ensure compliance within a reasonable period of time.

In the following, we examine in turn the WTO rules with regard to trade in goods and with regard to trade in services.

36 The legal term «direct effect» means that a private person may base a claim in the domestic courts against another private party or the state, based on the state's obligations existing under an international treaty. On the definition of «direct effect», see Helen Keller, *Rezeption des Völkerrechts: Eine rechtsvergleichende Studie zur Praxis des U.S. Supreme Court, des Gerichtshofes des Europäischen Gemeinschaften und des schweizerischen Bundesgerichts in ausgewählten Bereichen* (Berlin: Springer, 2003), at pp. 13–16.

37 WTO law neither obliges the Members to impose «direct effect» in their domestic legal system, nor elaborates upon this effect. It is for the domestic law to establish the concrete parameters of its relationship with WTO law. Most trading nations, including the EU and the US, have not given WTO rules direct effect. See *Joined Cases 21–24/72 International Fruit Company NV v. Produktschap voor groenten en fruit* [1972] ECR 1219, [1975] 2 CMLR 1, and Section 102(a) of the US Implementing Bill, The Uruguay Round Agreements Act, 103D Congress, 2nd Session, House Document 103–316, Vol. 1, 1994, 659. See also Thomas Cottier and Krista Nadakavukaren Schefer, «The Relationship between World Trade Organization Law, National and Regional Law», *Journal of International Economic Law* 1 (1998), pp. 83–122; Claus Dieter Ehlermann, «On the Direct Effect of the WTO Agreements», in: Talia Einhorn (ed.), *Spontaneous Order, Organization and the Law* (Cambridge: Cambridge University Press, 2004), pp. 413–420; Hélène Ruiz Fabri, «Is There a Case – Legally and Politically – for Direct Effect of WTO Obligations?», *European Journal of International Law* 25:1 (2014), pp. 151–173.

38 From a formal perspective, WTO law does not have independent enforcement effect. Nonetheless, the WTO panels authorize a winning party to withdraw equivalent concessions, the amount to be determined by the panel, in the event of non-compliance by the losing party. See Understanding on Rules and Procedures Governing the Settlement of Disputes, 15 April 1994, Marrakesh Agreement Establishing the World Trade Organization, Legal Instruments – Results of the Uruguay Round, 33 I.L.M. 1125 (1994), Annex 2, Article XXII.

I. Trade in digital products

1. *The General Agreement on Tariffs and Trade*

Despite the fact that the 1998 WTO Work Programme on Electronic Commerce³⁹ acknowledged early on that digital technologies affect all domains of trade – be it in goods, services or intellectual property rights – much of the debate within and outside the WTO, as well as the literature devoted to digital trade have focused on trade in services and its regulation. This is natural as digital trade is often associated with transactions that do not involve tangible products. Under the current trend of servicification, whereby there is an increase in the use, produce and sale of services,⁴⁰ this argument is only strengthened. In addition, it has been argued that many of the newer generation of information technology products (such as smartphones, music players or video games) inherently include some sort of support, continuous maintenance or new content, which transcend the purchase of the product and will more readily fall under the services category. The issue is, however, by no means settled and the line between goods and services is hard to draw, as this article explains below.

Despite the predisposition to ignore trade in goods, it is to be stressed that the development of a global communications system with sufficient traffic capacity and possibilities to connect the needed equipment as well as the trade in the equipment itself, such as computers, telephones or decoders, has been and remains critical for sustaining the physical, infrastructure layer of the communications model.⁴¹ Its proper functioning is in turn a precondition for accessing the Internet and for the other layers to develop and thrive.

With regard to trade in IT products, the WTO secures one of the most accommodating conditions for free trade. This has to do with the nature of the GATT as an older and far-reaching trade treaty. As noted earlier, the GATT's origins go back to 1947, when it was applied on a provisional basis subsequent to the failed attempt to create an International Trade Organization (ITO) as part of the Bretton Woods system.⁴² In spite of its scant institutional framework, the GATT was very successful in reducing tariffs on trade in goods. In eight nego-

39 WTO General Council, Work Programme on Electronic Commerce, WT/L/274 (1998).

40 See e.g. Swedish National Board of Trade, *Everybody Is in Services: The Impact of Servicification in Manufacturing on Trade and Trade Policy* (Stockholm: National Board of Trade, 2012); Magnus Lodefalk, 'The Role of Services for Manufacturing Firm Exports', *Review of World Economics* 150 (2014), pp. 59–82; Rainer Lanz and Andreas Maurer, 'Services and Global Value Chains – Some Evidence on Servicification of Manufacturing and Services Networks', *WTO Working Paper ERSD 3* (2015).

41 David Luff, 'Convergence: A Buzzword to Remain?', in: Mira Burri and Thomas Cottier (eds.), *Trade Governance in the Digital Age* (Cambridge: Cambridge University Press, 2012), pp. 65–90, at p. 68.

42 See e.g. John H. Jackson, 'History of the General Agreement on Tariffs and Trade', in: Rüdiger Wolfrum, Peter-Tobias Stoll, and Holger P. Hestermeyer (eds.), *WTO – Trade in Goods* (Leiden: Martinus Nijhoff Publishers, 2011), pp. 1–24.

tiation rounds between 1947 and 1994, the average level of tariffs imposed by developed countries on industrial products was brought down from over 40 % to less than 4 %.⁴³ In terms of norm creation, the GATT laid the foundations of international economic law. It sought to free trade amongst countries by prohibiting import and export quotas (Article XI GATT) and by reducing and binding the trade tariffs that countries applied. GATT signatories were banned from imposing higher tariffs than the ones they have bound in their tariff schedules (Article II GATT) and irrespective of whether tariffs were bound or not, states had to apply the same tariffs to all countries alike in a non-discriminatory manner (Article I GATT).

With the establishment of the WTO in 1995, the GATT was institutionalized and its breaches could be sanctioned through the DSU. It not only established low tariffs and freed substantial volumes of trade but also sought to address key aspects of non-tariff trade barriers – such as in the field of standards and subsidies.⁴⁴ In addition to this fairly solid legal framework for trade in goods, the Information Technology Agreement (ITA), which we review in the next section, provided for a special regime for trade in IT products and ensured that trade in communication equipment is duty free.

2. *The Information Technology Agreement*

The Information Technology Agreement (ITA) was adopted after the completion of the Uruguay Round at the Singapore Ministerial Conference in 1996,⁴⁵ largely as a result of the substantial pressure put by the US IT industry.⁴⁶ The proclaimed objectives of the ITA are to ‘achieve maximum freedom of world trade in information technology products’, to ‘encourage the continued technological development of the information technology industry on a world-wide basis’ and to ‘enhance market access opportunities for information technology products’.⁴⁷ To this effect, the ITA signatories pledged to provide zero tariffs for selected IT products, such as computers, semi-conductors, semi-conductor manufacturing equipment, telecommunication apparatus, data-storage media and software.⁴⁸ The exact product coverage stipulated in the ITA is contained in its two annexes. Annex A lists the codes of the included products pursuant

43 See e.g. Petros C. Mavroidis, *Trade in Goods*, 2nd edn. (Oxford: Oxford University Press, 2012), at pp. 1–55.

44 Mavroidis, *ibid.*

45 WTO, Ministerial Declaration on Trade in Information Technology Products, WT/MIN(96)/16 (1996).

46 On the negotiating history of the ITA, see Barbara Fliess and Pierre Sauvé, *Of Chips, Floppy Disks and Great Timing: Assessing the WTO Information Technology Agreement* (Paris: Institut Français des Relations Internationales, 1998).

47 WTO (1996), *supra* note 45, at Preamble and para. 1.

48 See WTO, *15 Years of the Information Technology Agreement: Trade, Innovation and Global Production Networks* (Geneva: World Trade Organization, 2012).

to the Harmonized System (HS), which is the international standard tariff nomenclature.⁴⁹ Annex B lists products to be covered by the agreement, which each participant country is left to classify in an appropriate HS category. «The subjective assessment [in this classification] is due to the way customs procedures work – by descriptive illustrations of products, while ITA is based on purpose or intent of the products. For example, furnaces are not generally an IT product, but those used for semiconductor manufacturing ought to be covered».⁵⁰

The ITA was adopted under the auspices of the WTO but it is a plurilateral deal, which means that it only binds the parties that have signed it. However, unlike other plurilateral agreements (such as the Government Procurement Agreement), the ITA is uniquely constructed as an open agreement that functions on an MFN basis, so that its benefits accrue to all WTO Members, including those that are not signatories. Despite the inherent danger of free-riding, the ITA has been successful in creating a «critical mass» and in attracting the major stakeholders in both the developed and the developing world. Originally signed by 29 countries (including Switzerland), the ITA currently lists 52 participants, representing 80 WTO Members (the 28 EU Member States counted as one). Together, these Members account for more than 97% of global trade in IT products.⁵¹ Some estimates maintain that the ITA is the most significant trade liberalization move that has taken place since the creation of the WTO, second only to the Uruguay Round itself in the scale of trade volumes liberated.⁵²

Yet, the ITA is by no means optimal. First, because it is solely a tariff cutting mechanism. It includes no binding commitments with regard to non-tariff barriers of any kind and the efforts under the Non-Tariff Measures Work Programme adopted by the ITA Committee in 2000⁵³ have so far remained fruitless. Another weakness of the ITA, which as we see below, is relevant for essentially all trade norms, stems from its technological bias. The ITA Members made commitments pursuant to a product classification list that stems from 1989 and is fairly rigidly structured since it is based on a narrow six or eight digit level of the HS system.

49 The Harmonized Commodity Description and Coding System, also known as the Harmonized System (HS) of tariff nomenclature is an internationally standardized system of names and numbers to classify traded products. It came into effect in 1988 and has since been developed and maintained by the World Customs Organization (WCO). See <<http://www.wcoomd.org/en/topics/nomenclature/overview.aspx>> (25 April 2015).

50 Hosuk Lee-Makiyama, «Future-Proofing World Trade in Technology: Turning the WTO IT Agreement (ITA) into the International Digital Economy Agreement (IDEA)», *ECIPE Working Paper* 4 (2011), at p. 7.

51 WTO (2012), *supra* note 48.

52 Lee-Makiyama, *supra* note 50, at p. 3.

53 Committee of Participants on the Expansion of Trade in Information Technology Products [hereinafter *ITA Committee*], The Non-Tariff Measures Work Programme, G/IT/SPEC/Q2/11/Rev.1 (2003).

The ITA is so rendered incapable of appropriately accommodating technological change – the emergence of integrated, multifunctional or entirely new products cannot be included automatically if they are assigned to new product classifications.⁵⁴ Several disputes over classification of new products have exposed the limits of these fixed, technology-based tariff schedules.⁵⁵ The decisions of the Panel and the Appellate Body interpreted the schedules in accordance with the customary rules of treaty interpretation and sought to clarify the schedules' meaning by reference to the ordinary sense of the words, in their context and in light of their object and scope.⁵⁶ Nonetheless, they could not achieve legal certainty; nor did they open the door for evolutionary interpretation of the existing classification.⁵⁷ Indeed, in a recent case the Panel confirmed a methodology based on the narrow language contained in the Member's schedule, which somewhat undermines efforts to foster harmonization of schedules on the basis of recognized multilateral rules and hinders legal adaptation.⁵⁸

Despite its flaws, the ITA can be deemed overall as truly successful and has made a real difference in trade practice. It ultimately provided for a very liberal regime for trade in IT-related hardware, which spurred competition and benefited consumers. It also boosted the emergence of global value chains for IT trade and substantially facilitated the worldwide spread and adoption of technological advances, including the Internet.

3. Standards

Standardization is critical for the communication and the Internet industries because things often need to work together – between devices as well as between

54 Lee-Makiyama, *supra* note 50, at p. 8.

55 As early as 1998, a WTO dispute arose concerning the way the European Communities (EC) classified multimedia computers and certain local area network equipment. The Panel ruled against the EC and the higher tariffs it imposed due to different classification. On appeal, the Appellate Body reversed the Panel's ruling on the ground, amongst other things, that the Panel wrongly based its reasoning on the legitimate expectations of WTO Members during the negotiations. According to the Appellate Body, Members' tariff schedules must be interpreted according to the customary rules of interpretation of treaties. While the Appellate Body did not provide the correct classification of the products concerned, it noted that the Harmonized System (HS) and the work carried out in the World Customs Organization (WCO) are the relevant context in relation to tariff classification. See WTO Panel Report, *European Communities – Customs Classification of Certain Computer Equipment (EC – Computer Equipment)*, WT/DS62/R, WT/DS67/R, WT/DS68/R, adopted 5 February 1998; Appellate Body Report, *European Communities – Customs Classification of Certain Computer Equipment (EC – Computer Equipment)*, WT/DS62/R, WT/DS67/R, WT/DS68/R, adopted 5 June 1998.

56 Article 31, Vienna Convention on the Law of Treaties, UN Doc. A/Conf.39/27; 1155 U.N.T.S. 331; 8 I.L.M. 679 (1969).

57 Shin-yi Peng, 'Renegotiate the WTO Schedule of Commitments? Technological Development and Treaty Interpretation', *Cornell International Law Journal* 45 (2012), pp. 403–430.

58 WTO Panel Report, *European Communities and Its Member States – Tariff Treatment of Certain Information Technology Products (EC – IT Products)*, WT/DS375/R, WT/DS376/R, WT/DS377/R, adopted 16 August 2010, in particular at paras 7.383, 7.443, 7.444, 7.548, 7.929, 7.1329.

devices and networks. While it is common that many of the relevant standards are agreed upon at the international level – in the forum of the International Telecommunication Union (ITU) or in dedicated standardization bodies, such as the International Organization for Standardization (ISO) or the International Electrotechnical Commission (IEC) – there are a number of diverging domestic regulations and standards; the case of the different power plugs worldwide is an often cited example in this regard but hardly the only one. This may obstruct interoperability or give advantage to certain producers who may profit from the monopoly over the said standard and the related network effects. From an economic perspective, standardization has two sides. On the one hand, it has been argued that standards harmonization as a factor of trade facilitation is largely positive – so for instance an alignment of EU standards with international norms has had a positive impact on both EU import volumes of electronic products and the propensity of import.⁵⁹ Also, as competition increases, consumer welfare is markedly increased. On the other hand, it should be clearly acknowledged that standards can be a powerful market strategy, especially in industries with strong positive network effects,⁶⁰ where companies will compete for the market and due to effects of the *de facto* established standards, winner-wins-all scenarios are viable.⁶¹ The IT markets are prominent examples in this context.⁶²

The WTO does not have a standard-setting capacity itself but its Agreement on Technical Barriers to Trade (TBT Agreement)⁶³ assesses the compatibility of domestic regulations and standards with WTO law. Pursuant to the TBT Agreement, technical regulations and standards⁶⁴ that are consistent with existing international standards are in principle presumed to comply with the agreement

59 Alberto Portugal-Perez, José-Daniel Reyes, and John S. Wilson, 'Beyond the Information Technology Agreement: Harmonization of Standards and Trade in Electronics', *World Bank Policy Research Working Paper* 4916 (2009).

60 See e.g. William H. Page and John E. Lopatka, 'Network Externalities', in: Boudewijn Bouckaert and Gerrit De Geest (eds.), *Encyclopaedia of Law and Economics* (Cheltenham: Edward Elgar, 2000), pp. 952–980.

61 See e.g. Carl Shapiro and Hal R. Varian, *Information Rules* (Cambridge, MA: Harvard Business School Press, 1999), at pp. 173–225; Nicholas Economides, 'The Economics of Networks', *International Journal of Industrial Organization* 16 (1996), pp. 673–699; Heli Koski and Tobias Kretschmer, 'Survey on Competing in Network Industries: Firm Strategies, Market Outcomes, and Policy Implications', *Journal of Industry, Competition and Trade* 4 (2004), pp. 5–31.

62 John Palfrey and Urs Gasser, *Interop: The Promise and Perils of Highly Interconnected Systems* (New York: Basic Books, 2012).

63 WTO Agreement on Technical Barriers to Trade, 15 April 1994, Marrakesh Agreement Establishing the World Trade Organization, Annex 1A [hereinafter *TBT Agreement* or *TBT*].

64 The TBT Agreement covers mandatory technical regulations and voluntary product standards. While the definitions of the two may appear similar, the key difference is that, whereas the technical regulation is adopted by governmental bodies, a standard is typically issued by private or semi-private standardizing bodies. See, also with references to the case-law, Panagiotis Delimatis, '«Relevant International Standards» and «Recognized Standardization Bodies» under the TBT Agreement', *TILEC Discussion Paper* 31 (2014).

and present no barrier to trade.⁶⁵ Article 2.4 TBT permits deviation when <international standards or relevant parts would be an ineffective or inappropriate means for the fulfilment of the legitimate objectives pursued, for instance because of fundamental climatic or geographical factors or fundamental technological problems>. The burden of proof in substantiating this presumption lies on the complaining party.⁶⁶ <In the case of communications equipment, such a demonstration could be easier than for other products, given the multiplication of existing international standards and the needs of interoperability>.⁶⁷

In the case of new domestic technical regulations and standards adopted in the absence of any agreed international standard, Members need to ensure that these are not prepared, adopted or applied with a view to or with the effect of creating unnecessary obstacles to international trade. For this purpose, technical regulations cannot be more trade-restrictive than necessary to fulfil a legitimate objective,⁶⁸ taking account of the risks non-fulfilment would create.⁶⁹

Overall, the TBT Agreement limits the regulatory space available to states to implement standards as barriers to trade. Next to encouraged subscription to international standards, it includes far-reaching non-discrimination⁷⁰ and transparency norms,⁷¹ as well as procedural safeguards.⁷² Despite the largely positive function of the TBT Agreement in this sense in facilitating global trade in information technologies, some problems and uncertainties persist. Some relate to the

⁶⁵ Article 2.5 TBT.

⁶⁶ See e.g. WTO Appellate Body Report, *European Communities – Trade Description of Sardines (EC – Sardines)*, WT/DS231/AB/R, adopted 26 September 2002, at paras 269–283.

⁶⁷ Luff, *supra* note 41, at p. 73.

⁶⁸ Article 2.2 TBT lists as possible legitimate objectives: national security requirements; the prevention of deceptive practices; protection of human health or safety, animal or plant life or health, or the environment. In assessing such risks, relevant elements of consideration can be available scientific and technical information, related processing technology or intended end-uses of products.

⁶⁹ Article 2.2 TBT. In *US – Tuna II*, the Appellate Body summed up the legal standard for assessing whether a technical regulation is <more trade-restrictive than necessary> as follows: (i) the degree of contribution made by the measure to the legitimate objective at issue; (ii) the trade-restrictiveness of the measure; and (iii) the nature of the risks at issue and the gravity of consequences that would arise from non-fulfilment of the objectives pursued by the member through the measure. In most cases, <a comparison of the challenged measure and possible alternative measures should be undertaken> and it may be relevant to consider whether the proposed alternative is less trade restrictive, whether it would make an equivalent contribution to the relevant legitimate objective, taking account of the risks non-fulfilment would create, and whether it is reasonably available. See WTO Appellate Body Report, *United States – Measures Concerning the Importation, Marketing and Sale of Tuna and Tuna Products (US – Tuna II)*, WT/DS381/AB/R, adopted 13 June 2012, at paras 301–313.

⁷⁰ Articles 2.1 and 2.2 TBT.

⁷¹ See e.g. Articles 2.9, 2.10, 2.11, 2.12 and 10 TBT.

⁷² For instance, pursuant to Article 4.1 TBT, WTO Members must ensure that their central government standardizing bodies comply with the Code of Good Practice for the Preparation, Adoption and Application of Standards in Annex 3 to the TBT Agreement.

legitimacy of standardization as a form of private governance⁷³ and its endorsement as a binding rule through the TBT Agreement.⁷⁴ Some concerns stem from the fact that there are still areas, where there is little or no international harmonization, such as in the fields of protection of public communication networks and avoidance of radio interference.⁷⁵ Furthermore, and quite importantly, while the TBT Agreement tackles standards, it is silent on the issue of proprietary rights in standard-setting. As Gibson notes, «there is a «disconnect» between TBT Agreement responsibilities to use international standards and the IP rights that are embedded in those standards, particularly in the ICT sector».⁷⁶ This missing link and the associated implications for market access and competition have been well illustrated by the case of China's WAPI standard, which was a proprietary standard diverging from the internationally agreed upon Wi-Fi standard.⁷⁷ Finally, it should be mentioned that procedural issues, such as mandatory certification and lack of recognition of foreign test results continue to pose significant barriers to trade for exporting IT products, especially in some developing countries.⁷⁸

4. Trade facilitation

As earlier noted, digital trade may also involve the delivery of a physical good, and indeed online sales platforms have proliferated and engaged both big and smaller companies. For the development of a global and competitive electronic commerce market, the cost of the product delivery may be critical and this includes not only the cost of transportation but also different charges at the border as well as the often cumbersome procedures that may delay the delivery and increase its cost. This problem has been long recognized as an important trade policy issue under the heading of «trade facilitation». Despite the so far insurmountable difficulties of completing the current Doha Round of negotiations, the Bali Ministerial Conference in December 2013 raised some hope in particular with the agreement in the field of trade facilitation.⁷⁹ The WTO Agreement

73 Walter Mattli and Tim Büthe, «Setting International Standards: Technological Rationality or Primacy of Power?», *World Politics* 56 (2003), pp. 1–42; Tim Büthe and Walter Mattli, *The New Global Rulers: The Privatization of Regulation in the World Economy* (Princeton: Princeton University Press, 2011).

74 Delimatsis, supra note 64.

75 Branislav Hazucha, «Technical Barriers to Trade in Information and Communication Technologies», in: Tracey Epps and Michael J. Trebilcock (eds.), *Research Handbook on the WTO and Technical Barriers to Trade* (Cheltenham: Edward Elgar, 2013), pp. 525–565, at p. 564.

76 Christopher S. Gibson, «Globalization and the Technology Standards Game: Balancing Concerns of Protectionism and Intellectual Property in International Standards», *Berkeley Technology Law Journal* 22 (2007), pp. 1403–1484, at p. 1475.

77 See Gibson, *ibid.* The case did not reach the WTO dispute settlement and was settled diplomatically, as China decided to forbear from mandating the WAPI standard.

78 Hazucha, supra note 75, at pp. 564–565.

79 In line with the decision adopted in Bali, WTO Members adopted on 27 November 2014 a Protocol of Amendment to insert the new Agreement into Annex 1A of the WTO Agreement. The

on Trade Facilitation will be an important customs reform that reduces the burden of administrative and customs controls at the border and makes procedures and officials more transparent, efficient and accountable. It requires, for example, WTO Members to publish information on all laws, regulations and procedures affecting trade, including transit procedures, duty rates and import fees. Most of this information must be made available on the Internet. The agreement would also speed up procedures by providing for instance for a one-stop-shop for documentation and for expedited release of goods through air cargo facilities.⁸⁰ There is, however, no WTO commitment to set a *de minimis* level of customs duties, which is critical for smaller businesses' trade. This is despite the fact that the additional revenue collected by customs administrations is often offset by the costs incurred in processing these low-value and low-risk shipments.⁸¹ As a result, online trade with goods involving shipment in another country is made more difficult. This may hurt competition, and ultimately works to the detriment of consumers.⁸²

II. Trade in digital services

1. *The General Agreement on Trade in Services*

The General Agreement on Trade in Services (GATS), similarly to the GATT, is aimed at protecting equality of competitive opportunities for companies in domestic markets, regardless of their origin and the origin of their services, and at facilitating the progressive liberalization of these markets. The approach and structure of the GATS, however, differ from those of the GATT, since the object of regulation – services – is essentially different from goods. Indeed, services were for a long time thought to be non-tradable, as it is the very nature of many services that their provision coincides with the consumption and requires the physical proximity and interaction of the producer and the consumer (hair-dressing being the textbook example). In terms of regulation, services, unlike goods, cannot be stopped at the border, so what matters is not the tariff imposed but domestic regulation.⁸³ The specificity of services as well as the novelty of the topic as a matter of international trade policy called for, on the one hand,

Trade Facilitation Agreement will enter into force once two-thirds of members have completed their domestic ratification process.

80 On trade facilitation under the WTO and the adoption of the protocol, see http://www.wto.org/english/tratop_e/tradfa_e/tradfa_e.htm (25 April 2015).

81 The International Chamber of Commerce (ICC) calls for establishing a global *de minimis* regime. ICC advocates a global baseline *de minimis* value of at least USD 200 and ideally implementing a commercially significant *de minimis* value of USD 1,000. See ICC, 'Global Baseline *De Minimis* Value Thresholds', Policy Statement, February 2015.

82 USITC (2013), *supra* note 1, at pp. 5–23.

83 See more extensively, Pierre Sauvé and Anirudh Shingal, 'Reflections on the Nature of Preferences in Services', in: Pierre Sauvé and Anirudh Shingal (eds.), *The Preferential Liberalization of Trade in Services* (Cheltenham: Edward Elgar, 2014), pp. 401–412.

international co-operation and the commitment of key stakeholders to gain critical mass at the time of GATS' adoption. On the other hand, some legal innovation was also demanded, so that diverging interests could be reconciled in the final treaty text.

The GATS is a comprehensive agreement, which covers all services sectors,⁸⁴ except for those services «supplied in the exercise of governmental authority».⁸⁵ The notion of «services» is not explicitly defined in the GATS or elsewhere in the WTO law and jurisprudence. Article I:2 GATS defines, however, «trade in services» as the supply of a service in four different «modes of supply». The modes of services supply are:

- mode 1 (cross-border): from a territory of one Member into the territory of any other Member;
- mode 2 (consumption abroad): in the territory of one Member to the service consumer of any other Member;
- mode 3 (commercial presence): by a service supplier of one Member through commercial presence in the territory of any other Member; and
- mode 4 (presence of natural persons): by a service supplier in one Member, through presence of natural persons of a Member in the territory of any other Member.

These modes of supply are not only of definitional value but are used by the WTO Members, so that they can specify their commitments for different sectors and sub-sectors, as we explain below.

The MFN is the core general obligation under the GATS and pursuant to Article II:1 GATS, each WTO Member is obliged to «accord immediately and unconditionally to services and service suppliers of any other Member treatment no less favourable than that it accords to like service and service suppliers of any other country». In contrast to the GATT, however, where the MFN principle admits no individual exemptions, the GATS allows for some flexibility. Members may specify that the MFN would not be applicable to certain measures, provided that those measures are listed in and meet the conditions of the Annex on Article II Exemptions (the so-called «opt-out» approach).⁸⁶ The exemption is

84 See Articles I:1; also Articles I:2 and I:3 GATS. For interpretation, see WTO Appellate Body Report, *European Communities – Regime for the Importation, Sale and Distribution of Bananas (EC – Bananas)*, WT/DS27/AB/R, adopted 9 September 1997; WTO Appellate Body Report, *Canada – Certain Measures Affecting the Automotive Industry (Canada – Autos)*, WT/DS139/AB/R, WT/DS142/AB/R, adopted 31 May 2000.

85 Article I:3(b) GATS. Paragraph (c) clarifies that, «a service supplied in the exercise of governmental authority» means any service which is supplied neither on a commercial basis, nor in competition with one or more service suppliers.» For interpretation, see Markus Krajewski, «Public Services and Trade Liberalization: Mapping the Legal Framework», *Journal of International Economic Law* 6 (2003), pp. 341–367; Eric H. Leroux, «What Is a «Service Supplied in the Exercise of Governmental Authority» under Article I:3(b) and (c) of the General Agreement on Trade in Services», *Journal of World Trade* 40 (2006), pp. 345–385.

86 See Article II:2 GATS.

framed as a one-off opportunity to be used only until the date of entry into force of the WTO Agreement – i.e. 1 January 1995, or for new Members, at the time of their accession to the WTO.⁸⁷ At least in principle, the exemptions should not exceed a total duration of ten years,⁸⁸ and should have thus expired by January 2005. This did not happen and it is the politically accepted status quo that exemptions can last indefinitely. This is particularly relevant for the audiovisual media sector, as we show below.

The general MFN obligation is supplemented by *specific* commitments accepted by individual Members and listed in the so-called ‘Schedules of Specific Commitments’, which are appended to the GATS. These schedules show the positive commitments (‘opting-in’) of a Member with regard to *national treatment* and *market access*, and the conditions, terms and limitations of these commitments.⁸⁹ ‘Market access’ is articulated in Article XVI GATS and addresses quantitative restrictions to services trade. In those sectors where a Member has committed itself, it must refrain from adopting or maintaining six particular types of measures, unless otherwise specified in the schedules. These are defined exhaustively in litera (a) through (f) of Article XVI:2 and encompass: (a) limitations on the number of service suppliers; (b) limitations on the total value of service transactions or assets; (c) limitations on the total number of service operations or on the total quantity of service output; (d) limitations on the total number of natural persons that may be employed; (e) measures which restrict or require specific types of legal entity or joint venture; and (f) limitations on foreign capital participation. The ‘national treatment’ obligation, articulated in Article XVII GATS, is of broader, qualitative nature and prescribes that, ‘each Member shall accord to services and service suppliers of any other Member, in respect of all measures affecting the supply of service, treatment no less favourable than that it accords to its own like services and service suppliers’. Although only a specific commitment under the GATS, the meaning of national treatment remains the same as under the GATT.⁹⁰

In practice, the schedules represent a codification of the conditions in a specific national market upon which a foreign service provider can rely in the four

87 Members can now only exempt a measure from the application of the MFN treatment under Article II:1 GATS by obtaining a waiver pursuant to Article IX:3 of the WTO Agreement (see Annex on Article II Exemptions, at para. 2).

88 Annex on Article II Exemptions, at para. 6.

89 Pursuant to Article XX GATS, each schedule specifies: (i) terms, limitations and conditions of market access; (ii) conditions and qualifications on national treatment; (iii) undertakings relating to additional commitments; (iv) where appropriate, the timeframe for implementation of such commitments; and (v) the date of entry into force of such commitments.

90 WTO Appellate Body Report, *EC – Bananas*, supra note 84, at para. 241. On the relationship between NT and market access, see WTO Panel Report, *China – Certain Measures Affecting Electronic Payment Services (China – Electronic Payment Services)*, WT/DS413/R, adopted 31 August 2012; also, Rachel Block, ‘Market Access and National Treatment in *China – Electronic Payment Services*: An Illustration of the Structural and Interpretive Problems in GATS’, *Chicago Journal of International Law* 14 (2014), pp. 652–701.

modes of services supply, as identified in Article I:2 GATS and spelled out above. These schedules provide also for legal certainty as a Member can modify or withdraw a commitment only after a three-year period from the date it entered into force and has to bear the consequences of the modifications undertaken, possibly making concessions in other areas.⁹¹

The GATS provides also for the negotiation of *additional* commitments with respect to measures affecting trade in services not subject to scheduling under Article XVI GATS (market access) or Article XVII GATS (national treatment) – regarding, for instance, qualifications, standards or licensing matters (Article XVIII GATS).

This fairly flexible regime of the GATS allows for opening of service markets but also for keeping them protected to some degree. Permitting this considerable wiggle-room for domestic policy-makers was a matter of a grand political bargain struck during the Uruguay Round of negotiations, an important part of which resulted from the long and hard-fought battle between trade and cultural values and interests, as we explain below.

In the following, we review the sectors that are most pertinent for digital trade. These are the telecommunications, the computer and related and the audiovisual services sectors, as they affect all the layers of the communications model – i.e. networks, applications and content. Before the legal analysis below, the following tables provide a picture of the sectors' breakdown and the corresponding sub-sectors. These were classified according to the services sectoral classification list (the so-called <W/120>⁹²) that was compiled in 1991 with the purpose of facilitating the Uruguay Round negotiations and ensuring cross-country comparability and consistency of the undertaken commitments. The 160 sub-sectors in the W/120 are defined as aggregate of the more detailed categories contained in the United Nations Central Product Classification (CPC) in its provisional 1991 version,⁹³ references to which are included. Services sectors included in a Member's Schedule are mutually exclusive.⁹⁴

91 Article XXI GATS.

92 WTO, Services Sectoral Classification List, WTO Doc.MTN.GNS/W/120 (1991).

93 The Central Product Classification (CPC) is a classification based on the physical characteristics of goods or on the nature of the services rendered. Each type of good or service distinguished in the CPC is defined in such a way that it is normally produced by only one activity as defined in International Standard Industry Classification of all Economic Activities (ISIC). The CPC covers products that are an output of economic activities, including transportable goods, non-transportable goods, and services. The W/120 is based on the CPC in its version of 1991: United Nations, Provisional Central Product Classification (CPC), UN Statistical Papers, Series M, No 77, Ver.1.1, E. 91.XVII.7, 1991. In *US – Gambling*, the Appellate Body determined that both the W/120 and the 1993 Scheduling Guidelines constitute supplementary means of interpretation within the meaning of Article 32 of the Vienna Convention. They can be referred to in order to confirm the meaning of specific commitments resulting from the application of Article 31, or to determine the meaning of such commitments when the interpretation according to Article 31 leaves the meaning ambiguous or obscure.

94 WTO Appellate Body Report, *US – Gambling* (WT/DS285/AB/R, 7 April 2005), at para. 180.

Table 1: Classification of communication services in W/120

2	COMMUNICATION SERVICES	CPC
A.	Postal services	7511
B.	Courier services	7512
C.	Telecommunication services	
a.	Voice telephone services	7521
b.	Packet-switched data transmission services	7523**
c.	Circuit-switched data transmission services	7523**
d.	Telex services	7523**
e.	Telegraph services	7522
f.	Facsimile services	7521** +7529**
g.	Private leased circuit services	7522** +7523**
h.	Electronic mail	7523**
i.	Voice mail	7523**
j.	On-line information and data base retrieval	7523**
k.	electronic data interchange (EDI)	7523**
l.	enhanced/value-added facsimile services, incl. store and forward, store and retrieve	7523**
m.	code and protocol conversion	n.a.
n.	on-line information and/or data processing (incl. transaction processing)	
o.	Other	
D.	Audiovisual services	
a.	Motion picture and video tape production and distribution services	9611
b.	Motion picture projection service	9612
c.	Radio and television services	9613
d.	Radio and television transmission services	7524
e.	Sound recording	n.a.
f.	Other	
E.	Other	
**	The (**) indicates that the service specified constitutes only a part of the total range of activities covered by the CPC concordance (e.g. voice mail is only a component of CPC item 7523).	

Table 2: Classification of business services in W/120

1	BUSINESS SERVICES	CPC
A.	Professional Services	
B.	Computer and Related Services	
a.	Consultancy services related to the installation of computer hardware	841
b.	Software implementation services	842
c.	Data processing services	843
d.	Data base services	844
e.	Other	845+849
C.	Research and Development Services	
D.	Real Estate Services	
E.	Rental/Leasing Services without Operators	
F.	Other Business Services	

2. Telecommunications services

Telecommunications services are similarly to contemporary Internet services in their very essence *transnational*.⁹⁵ From a governance perspective, this has demanded considerable coordination between countries over time, which has been mirrored in the telecommunications' regulation at the international level. Clear proof for this is provided by the fact that the first intergovernmental organization – the International Telegraph Union – was founded in 1865 specifically to address it.⁹⁶ The need for co-operation in the field of telecommunications is also reflected in WTO law, where the WTO Members have gone even further than simply listing extensive commitments and have provided for some regulatory safeguards that foster competition in the sector on a global scale, as this section shows.

As telecommunications sectors underwent domestic reform as of the beginning of the 1990s, privatizing and opening up for competition, this had to be reflected at the international level. Similarly to the ITA, drivers for change were major corporations, often globally positioned, that were active in the sector. Telecommunications needed to be addressed «as a distinct economic activity, a tradable service, rather than simply as a medium or a conduit for conducting trade»,⁹⁷ as it has been until then conventionally conceived since tele-

95 Ian Walden, «The International Regulatory Regime», in: Ian Walden and John Angel (eds.), *Telecommunications Law* (London: Blackstone Press, 2001), pp. 346–381, at p. 346.

96 The International Telegraph Union was transformed into the International Telecommunication Union (ITU) in 1932 combining the International Telegraph Convention of 1865 and the International Radiotelegraph Convention of 1906.

97 Walden, *supra* note 95, at p. 347.

communications were domestically bound, often state monopolized industries. The issue of market access as the emerging primary concern in international communications law could not be tackled appropriately within the realm of the ITU, and required a change of venue. The WTO provided a more apposite negotiation and regulatory forum,⁹⁸ and ultimately established a sophisticated regime for telecommunications services, also affirming the liberalization trend as a sound approach to telecommunications policy.

The process of negotiating the commitments for telecommunications services was by no means easy, however, as the sector was in a state of transition domestically and the national incumbents wanted to keep some of their privileges with regard to the so-called 'basic' telecommunications services, while liberalizing the newer, and less regulated, 'value-added' services.⁹⁹ Reflecting these difficulties, the resulting WTO law is structured in two instruments – the *Annex on Telecommunications*, which was agreed upon during the Uruguay Round, and the *Fourth Protocol on Basic Telecommunications Services*, which was the result of subsequent negotiations.

The Annex on Telecommunications defines its objective as being to elaborate 'upon the provisions of the Agreement [GATS] with respect to measures affecting access to and use of public telecommunications transport networks and services'.¹⁰⁰ In this sense, the Annex itself does not contain or lead to any market access or national treatment obligations for telecommunications services beyond the commitments that the WTO Members had already made. It comes into effect only once a Member has offered a specific commitment in a given service sector,¹⁰¹ and

98 On the reasons for the choice of the WTO as a more suitable forum for telecommunications negotiations, see Marco C.E.J. Bronckers and Pierre Larouche, 'Telecommunications Services and the World Trade Organization', *Journal of World Trade* 31:5 (1997), pp. 5–45, at pp. 6–7; Christoph Beat Graber, *Handel und Kultur im Audiovisionsrecht der WTO: Völkerrechtliche, ökonomische und kulturpolitische Grundlagen einer globalen Medienordnung* (Bern: Stämpfli Publishers, 2003), at pp. 198–199; William J. Drake, 'Introduction: The Distributed Architecture of Network Global Governance', in: William J. Drake and Ernest J. Wilson III (eds.), *Governing Global Electronic Networks: International Perspectives on Policy and Power* (Cambridge, MA: MIT Press, 2008), pp. 1–79.

99 The scheme used for negotiating and tailoring the commitments adopted in this regard a distinction made in the US in the so-called *Computer Inquiries*. It listed as basic telecommunications services: voice telephone; packet-switched data transmission; circuit-switched data transmission; telex; telegraph; facsimile and private leased circuit services and other (lit. [a] to [g] and [o]). The remaining telecommunications services of the W/120 sectoral classification list were framed as value-added services (lit. [h] to [n]). See WTO (1991), supra note 92; WTO, Draft Model Schedule of Commitments on Basic Telecommunications, Informal Note by the Secretariat, Job. No 1311 (1995), as well as Table 1 above.

100 Section 1 of the Annex on Telecommunications. Section 3 provides definitions of public telecommunications transport networks and services; Section 2(b) explicitly excludes from the scope of the Annex 'measures affecting the cable or broadcast distribution of radio or television programming'.

101 Section 2(c)(i) of the Annex on Telecommunications; also WTO Panel Report, *Mexico – Measures Affecting Telecommunications Services (Mexico – Telecommunications)*, WT/DS204/R, adopted 2 April 2004, at paras 7.290–7.294.

ensures that foreign services suppliers of services are accorded access to public telecommunications networks and services subject to reasonable and non-discriminatory terms and conditions.¹⁰²

With the benefit of hindsight, it is clear that in practice the Annex, despite being an act on telecommunications, concerned mostly liberalized non-telecommunications services (such as banking, insurance or other financial services), the effective performance of which required access to and the use of communications networks and services. The Annex was also of importance to the already mentioned <value-added> telecommunications services, since it was for these that Members had committed at the time of its adoption in 1994.¹⁰³ Overall, the Annex provided legal certainty as to the status quo¹⁰⁴ and prevented access to telecommunications from becoming a non-tariff barrier to trade.¹⁰⁵

As noted earlier, the level of liberalization for telecommunications services at the end of the Uruguay Round was not found satisfactory and intense negotiations continued. The agreement ultimately reached is generally known as the *Agreement on Basic Telecommunications* and had been annexed to the existing schedules through the Fourth Protocol, which forms an integral part of the GATS.¹⁰⁶ The Fourth Protocol entered into force on 5 February 1998. The Agreement on Basic Telecommunications consists of a series of schedules of specific commitments concerning basic telecommunications services. Such commitments were submitted initially by 69 Members, the (then) 15 EC Member States submitting one schedule. A major breakthrough of the Agreement was the adoption of the so-called *Reference Paper*, incorporated as an additional commitment into the Members' services schedules.¹⁰⁷

The Reference Paper is a unique document in the law and practice of the WTO, containing a set of regulatory principles for basic telecommunications. In terms of content, although it is only six sections long, it represents (together with the Fourth Protocol and the attached schedules of commitments) an immense step forward in the opening of telecommunications markets¹⁰⁸ and ren-

102 Section 5 of the Annex on Telecommunications.

103 It should not be concluded, however, that the scope of application of the Annex is solely directed at value-added telecommunications services. As clarified by *Mexico – Telecommunications*, the scope of the Annex also includes basic telecommunications services, when commitments for these services had been made, as is now conventionally the case. See WTO Panel Report, *Mexico – Telecommunications*, supra note 101, at paras 7.273–7.288.

104 Kelly Cameron, <Telecommunications and Audio-Visual Services in the Context of the WTO: Today and Tomorrow>, in: Damien Geradin and David Luff (eds.), *The WTO and Global Convergence in Telecommunications and Audio-Visual Services* (Cambridge: Cambridge University Press, 2004), pp. 21–33, at p. 21.

105 Bob Joseph Mathew, *The WTO Agreements on Telecommunications* (Bern: Peter Lang, 2003), at p. 77.

106 Article XX:3 GATS.

107 Article XVIII GATS.

108 According to the United States Trade Representative (USTR) the 56 countries that committed to the Fourth Protocol and the Reference Paper and permitted foreign ownership or control of all

dered telecommunications one of the best-covered sectors under the GATS. Furthermore, it ensured that the advantages of the former monopoly operators were not used to the detriment of new entrants during the precarious process of liberalizing telecommunications markets.¹⁰⁹

– In terms of design, defining <ends> rather than <means>, the legal principles of the Reference Paper create a basic regulatory model at the global level that shapes the WTO Members' domestic regulatory environments. Another particular design feature of the Reference Paper is the inclusion of competition law-like provisions, including core concepts of competition law related to market dominance and abuse of dominant position,¹¹⁰ as well as some sector-specific rules.¹¹¹ Critical amongst the latter is the obligation on major suppliers of public telecommunications transport networks and services to enable interconnection with their networks and services <at any technically feasible point in the network>.¹¹² The other provisions (Sections 3 to 6) of the Reference Paper address universal service, licensing, regulators' independence and scarce resources, and create a fundamental framework of non-discrimination and transparency for the sector. In respect to universal service (Section 3), the Paper allows the Members to define the type of universal service obligation they wish to maintain and states that such obligations will not be regarded as anti-competitive, provided that they are administered in a transparent, non-discriminatory and competitively neutral manner and are not more burdensome than necessary. In respect to licensing (Section 4), where a license is required, all licensing criteria and the terms and conditions of individual licenses must be made publicly available, as well as the reasons for denial of a license. Further, the Reference Paper imposes an obligation upon Members to ensure that telecommunications regulators are independent from telecommunications operators (Section 5). With regard to allocation and use of scarce resources (including frequencies, numbers and rights of way), any procedure must be carried out in an objective, timely, transparent and non-discriminatory manner (Section 6).¹¹³

telecommunications services and facilities accounted for 97% of the total basic telecommunications services revenue of WTO Members. See Annex to the Statement of Ambassador Charlene Barshefsky on Basic Telecom Negotiations, USTR, 15 February 1997.

109 Bronckers and Larouche (1997), *supra* note 98, at p. 23.

110 The far-reaching effect of these competition law-like rules has been confirmed by the WTO Panel Report, *Mexico – Telecommunications*, *supra* note 101. See also Eleanor M. Fox, <The WTO's First Antitrust Case – Mexican Telecom: A Sleeping Victory for Trade and Competition>, *Journal of International Economic Law* 9:2 (2006), pp. 271–292.

111 See generally Burri, *supra* note 19.

112 Section 2 of the Reference Paper.

113 For details, see Damien Geradin and Michel Kerf, <Levelling the Playing Field: Is the WTO Adequately Equipped to Prevent Anti-Competitive Practices in Telecommunications?>, in: Damien Geradin and David Luff (eds.), *The WTO and Global Convergence in Telecommunications and Audiovisual Services* (Cambridge University Press, 2004), pp. 130–162; Mira Burri, <The Law of the World Trade Organization and the Communications Law of the European Community: On a Path of Harmony or Discord?>, *Journal of World Trade* 41:4 (2007), pp. 833–878;

To sum up, one can argue that in the field of telecommunications services, we have a uniquely deep intervention of the WTO rules, which not only open key telecommunications markets to foreign services and services suppliers but also in fact regulate important aspects of competition in the sector, seeking to ensure a level playing field. Also important, especially for network industries, is that interconnection and interoperability are ensured and new market entrants are thereby offered equal competitive opportunities. All these aspects have substantially contributed to the smooth functioning of the critical infrastructure layer and facilitated the emergence of global communication networks. While global Internet traffic developed later on independently, it did make use of the network basis and benefitted immensely from the liberalized telecommunications markets.¹¹⁴

3. *Computer and related services*

A similarly deep intervention, which may substantially limit the regulatory space available domestically comes from the WTO rules on computer and related services. Here, too, and in stark contrast to the audiovisual sector, as explained below, industrial policy considerations have prevailed over national sensitivities and liberalization has been forcefully advanced amongst WTO Members. For computer and related services, which was a fairly new sector at the time of the Uruguay Round and thus was largely devoid of domestic regulation, as well as of trade barriers,¹¹⁵ essentially all WTO Members have made far-reaching commitments for both market access and national treatment. The EU has for instance committed in all the listed subsectors: (a) consultancy services related to the installation of computer hardware; (b) software implementation services; (c) data processing services; (d) data base services; maintenance and repair; and (e) other computer services.¹¹⁶ The EU has listed no limitations for the first three modes of supply (cross-border; consumption abroad and commercial presence) but remains unbound for the presence of natural persons (mode 4).¹¹⁷ This restriction has been somewhat relaxed during the Doha round of negotiations and selected EU Member States have inserted more liberal con-

Marco C.E.J. Bronckers and Pierre Larouche, 'A Review of the WTO Regime for Telecommunications Services', in: Kern Alexander and Mads Andenas (eds.), *The World Trade Organization and Trade in Services* (Leiden: Martinus Nijhoff, 2008), pp. 319–379.

114 Dennis Weller and Bill Woodcock, 'Internet Traffic Exchange: Market Developments and Policy Challenges', *OECD Digital Economy Papers* 207 (2013).

115 Sacha Wunsch-Vincent, *The WTO, the Internet and Digital Products: EC and US Perspectives* (Oxford: Hart, 2006), at p. 118. See also WTO, Background Note by the Secretariat, Computer and Related Services, S/C/W/45 (1998).

116 See Table 2 above.

117 WTO, European Communities and their Member States, Schedule of Specific Commitments, Trade in Services, Supplement 3, GATS/SC/31/Suppl. 3 (1997).

ditions for migrant workers in the sector, especially high-skilled. Switzerland has followed suit.¹¹⁸

Overall, the computer and related services sector marks a very high level of liberalization and the wiggle-room available for domestic regulators is thus severely limited. This may become particularly problematic in the Internet age, as the distinction between audiovisual media and computer services may be blurred beyond recognition. So, for instance, social networking sites¹¹⁹ or search engines¹²⁰ may well be classified as computer and related services rather than as content platforms, and thus defy regulatory restraints.

4. *Audiovisual services*

The GATS and its malleability in design allowing different levels of commitment for different services sectors, as described above, are at least partially, the result of a pronounced and politically charged contention between trade and cultural interests. The origins of and the positions within this clash have been well documented elsewhere.¹²¹ Critical for our discussion here is the fact that on matters of culture, there is a rupture between the key negotiating parties in the WTO, as well as globally – the EU and the US. As a consequence of the diverging positions of the main stakeholders, we have seen the formation of very different regimes for content and network/application services, which appear only more radically opposed, as well as inappropriate, in the face of convergence and so pose difficult governance dilemmas.¹²²

The trade versus culture contention and the failure to reconcile the EU and the US positions have ultimately meant for the international regulation of services that, in spite of the arguably considerable economic gains to be reaped

118 WTO, Switzerland: Schedule of Specific Commitments, GATS/SC/83 (1994).

119 For a detailed analysis, see Rolf H. Weber and Mira Burri, *Classification of Services in the Digital Economy* (Bern: Stämpfli Publishers, 2012), at p. 115.

120 See Henry Gao, 'Googling for the Trade – Human Rights Nexus in China: Can the WTO Help?', in: Mira Burri and Thomas Cottier (eds.), *Trade Governance in the Digital Age* (Cambridge: Cambridge University Press, 2012), pp. 247–275.

121 The debate has to do with the dual nature of cultural products and services, which while being an object of trade can also be carriers of values and identities. The European Union, and especially France, have pushed for the exclusion of culture-related goods and services from the economically centred rules of the WTO and for their special treatment. The US, on the other hand, has favoured a trade-oriented approach that does not allow for any particular special treatment of cultural goods and services and subsumes them under the basic WTO rules. See e.g. Graber, *supra* note 98; Mira Burri, 'Trade versus Culture in the Digital Environment: An Old Conflict in Need of a New Definition', *Journal of International Economic Law* 12:1 (2008), pp. 17–62; Mira Burri, 'The EU, the WTO and Cultural Diversity', in: Evangelia Psychogiopoulou (ed.), *Cultural Governance and the European Union: Protecting and Promoting Cultural Diversity in Europe* (Basingstoke: Palgrave Macmillan, 2015), pp. 195–204.

122 Burri (2008), *ibid.*

from the liberalization of audiovisual media services,¹²³ almost all Members have made few or no commitments. For example, the EU and its Member States made no commitments¹²⁴ and tabled a number of MFN exemptions that benefit audiovisual services and providers under diverse co-production agreements and support schemes, such as the MEDIA programme.¹²⁵ The same is true for Switzerland, Canada and a number of developing countries. The exceptions to the rule of non-commitment are the US, Japan and New Zealand, as well as some recently acceded WTO Members.¹²⁶ Overall, audiovisual media is the least liberalized services sector.

What is particularly interesting when looking at the Members' commitments for audiovisual services, and most illustratively those of the EU, is that they reflect a resolute <all-or-nothing> approach. The scheduling flexibility permitting different options ranging between full liberalization and absolute non-commitment is not made use of. This is odd because for sub-sectors where government regulation and trade restrictions are uncommon, such as sound recording, there is still a ridiculously low level of commitment. In a more systemic sense, this is odd because the very goals of an international trade agreement are compromised: <Indeed, absence of commitment in a given sector, while it remains an option, means that a Member can, at any time, take whatever market-access or national treatment limitation [...]. This absence of any guarantee of openness stands in stark contrast to the economic and trade importance of the [audiovisual] sector (and in particular its intensive use of technology and creativity) as well as the importance of the predictability and stability given by commitments – i.e. the certainty that certain restrictions won't be maintained or introduced in the future>.¹²⁷

On the other hand and rather importantly for our discussion, the room for domestic policy-makers is also preserved to the fullest, and present and future actions protecting domestic media industries and/or discriminating against foreign products and services are virtually unlimited. Thus, the entire content layer of the communications model is deeply affected.

The current round of trade negotiations – the Doha Development Agenda (DDA) – launched in 2001 and originally to be completed by 2005,¹²⁸ holds no

123 Martin Roy, <Audiovisual Services in the Doha Round: Dialogue de sourds, the Sequel?>, *Journal of World Investment and Trade* 6 (2005), pp. 923–952, at p. 941; J. P. Singh, <Culture or Commerce? A Comparative Assessment of International Interactions and Developing Countries at UNESCO, WTO, and Beyond>, *International Studies Perspectives* 8 (2007), pp. 36–53.

124 WTO, European Communities and their Member States, Schedule of Specific Commitments, Trade in Services, Supplement 3, GATS/SC/31/Suppl. 3 (1997).

125 WTO, European Communities and their Member States, Final List of Article II (MFN) Exemptions, GATS/EL/31 (1994).

126 Roy, *supra* note 123; WTO, Council for Trade in Services, Audiovisual Services, Background note by the Secretariat, S/C/W/310 (2010).

127 Roy, *supra* note 123, at pp. 940–941.

128 WTO, Doha Ministerial Declaration, WT/MIN(01)/DEC/W/1 (2001).

promise of change in the status quo for audiovisual services. Although the Doha round is not stalled because of audiovisual media services, and the intensity of the trade versus culture clash within the WTO seems to have somewhat subsided since the Uruguay Round, the present state of requests and offers¹²⁹ for the sector reveals precious few new commitments and no future-oriented rules design. Despite the recognition widely shared by key WTO Members that the audiovisual sector has changed dramatically,¹³⁰ in particular due to the convergence of information technology, telecommunications and media services, companies and sectors, and the sweeping transformations caused by the Internet, there is little agreement on the best way forward. The EU is adamantly pursuing its non-committal approach,¹³¹ despite the many requests by other WTO Members to address the status quo by either full commitments in market access and national treatment, or by more targeted actions, such as binding of the current level of market opening or commitments under specific sub-headings (commonly, film production, distribution and projection services, and sometimes sound recording).¹³²

The US, on the other hand, is pushing for the deepest form of liberalization possible. Switzerland has attempted to find a middle-ground and voiced proposals on how to reconcile the existing extreme positions. It has, amongst other things, suggested that WTO Members could look for more flexible design solutions that address cultural diversity safeguards, subsidies, public service, illicit content and competition issues. Switzerland made also a cautious proposal as to the form of addressing these issues and thought that an Annex on audiovisual services may be appropriate.¹³³ Despite the sensible as well as pragmatic nature

129 Request-and-offer is a form of advancing services negotiations typical of the WTO. Individual members or a group of members may request certain concessions from specific members or from all WTO Members. Members may also offer concessions. In terms of content, requests and offers are similar and would normally address four types of issues: (i) the addition of new sectors; (ii) the removal of existing limitations or the introduction of bindings in modes that have so far been unbound; (iii) the undertaking of additional commitments under Article XVIII; and (iv) the termination of MFN exemptions. A participant would submit an offer in response to all the requests that it had received, but would not necessarily have to address each and every element contained in those requests. While requests are addressed bilaterally to negotiating partners, offers are traditionally circulated multilaterally. This is useful from a transparency point of view but also from a functional perspective, as it facilitates consultations and negotiations by all negotiating partners. Offers are in effect a signal of the real start of the advanced stage of bilateral negotiations. See WTO, Technical Aspects of Requests and Offers, Summary of presentation by the Secretariat, WTO Seminar on the GATS, 20 February 2002.

130 Christoph Beat Graber, 'Audio-visual Policy: The Stumbling Block of Trade Liberalisation', in: Damien Geradin and David Luff (eds.), *The WTO and Global Convergence in Telecommunications and Audiovisual Services* (Cambridge: Cambridge University Press, 2004), pp. 165–214, at pp. 166–170; Roy, *supra* note 123, at pp. 931–936.

131 WTO, Communication from the European Communities and its Member States, Draft consolidated GATS Schedule, S/C/W/273 (2006).

132 WTO, Council for Trade in Services, Audiovisual services, Background note by the Secretariat, S/C/W/310 (2010).

133 WTO, Communication from Switzerland, GATS 2000: Audio-visual Services, S/CSS/W/74 (2001).

of the Swiss proposals, they had little chance of altering the politically charged and astonishingly path-dependent debate on media matters. It is also fair to note that these proactive proposals and the related discussions stem from the early 2000s and since then the regulatory environment has profoundly changed – both with regard to more recent technological advances as well as with regard to the trade and culture debate, which has been perpetuated but taken out of the WTO context with the 2005 Convention on Cultural Diversity.¹³⁴

Overall, it should be noted that the openness of the telecommunications and the computer-related services sectors is in stark contrast to the well-preserved domain of audiovisual media. An important and logical question then is how these rules mix and what their actual impact is in the age of convergence and rapid Internet-induced changes. It should also already be cautioned that the confrontation originating from the debate on trade and culture, especially since it plays out between two major powers, has not remained contained within the field of audiovisual services but has had spill-overs to other domains, possibly to an extent that seriously affects the potential of the WTO as a multilateral form of international economic law to react and adapt in the digital age.

III. WTO: Unfit for the digital age or the right forum for the future?

The state of WTO law as analyzed above is the one currently valid and enforced. The WTO Agreements, adopted during the Uruguay Round in 1995, despite a few add-ons – such as the ITA and the Fourth Protocol on Basic Telecommunications Services – have so far not reacted in a forward-looking manner to the changes triggered by the advent and wide spread of digital technologies and the Internet. Naturally, one could argue that law need not change with each and every new technological invention.¹³⁵ And indeed, the law of the WTO lends credence to such an argument. Despite the lack of deliberate responses, it possesses intrinsic flexibility and resilience – both in the substance and in the procedure – that could possibly accommodate the changes brought about by burgeoning digital trade. As highlighted earlier, the WTO is based on powerful principles, such as the MFN and the NT obligations that underlie all WTO Agreements and could potentially address technological developments

134 UNESCO Convention on the Protection and Promotion of Cultural Diversity (adopted 20 October 2005; entered into force 18 March 2007). For appraisal, see Rachael Craufurd Smith, 'The UNESCO Convention on the Protection and Promotion of Cultural Expressions: Building a New World Information and Communication Order?', *International Journal of Communication* 1 (2007), pp. 24–55; Mira Burri, 'Trade and Culture in International Law: Paths to (Re)Conciliation', *Journal of World Trade* 44:1 (2010), pp. 49–80; Mira Burri, 'The UNESCO Convention on Cultural Diversity: An Appraisal Five Years after its Entry into Force', *International Journal of Cultural Property* 20 (2014), pp. 357–380.

135 See famously, Frank H. Easterbrook, 'Cyberspace and the Law of the Horse', *The University of Chicago Legal Forum* (1996), pp. 207–216.

better than new made-to-measure regulatory acts (often adopted as a reaction to strong vested interests¹³⁶). It also often tackles issues in a technologically neutral way – with regard to the application of the basic principles, with regard to standards and trade facilitation, as we discussed above, as well as with regard to areas we did not devote specific attention to, such as subsidies¹³⁷ and government procurement.¹³⁸ There are also horizontally applicable provisions, such as those regarding transparency (Article III GATS) and domestic regulation (Article VI GATS), which may have the (as yet untapped) potential to deal with many of the digital trade concerns.

Moreover, in terms of evolution of norms, it can be argued that the WTO possesses the unrivalled advantage of an effective dispute settlement system, often dubbed the ‘jewel in the crown’ of the WTO architecture. We find strong evidence in the WTO jurisprudence for both the capacity of the dispute settlement system and for the relevance of the Internet in trade conflicts.¹³⁹ The *US – Gambling*¹⁴⁰ case is illuminating in this context. Not only did this first Internet and e-commerce and second dealing with GATS case confirm that GATS com-

136 Especially in the domain of intellectual property rights protection. See e.g. Susan Sell, *Private Power, Public Law: The Globalization of Intellectual Property Rights* (Cambridge: Cambridge University Press, 2003); William Patry, *Moral Panics and the Copyright Wars* (Oxford: Oxford University Press, 2009).

137 The WTO Agreement on Subsidies and Countervailing Measures disciplines the use of subsidies, and regulates the actions countries can take to counter the effects of subsidies. Under the agreement, a country can use the WTO’s dispute settlement procedure to seek the withdrawal of the subsidy or the removal of its adverse effects. Or the country can launch its own investigation and ultimately charge extra duty (‘countervailing duty’) on subsidized imports that are found to be hurting domestic producers. There is no comparable agreement for trade in services but just a duty to negotiate under the GATS ‘built-in agenda’ (Article XV GATS).

138 The WTO Government Procurement Agreement (GPA) seeks openness of the procurement market. It is a plurilateral agreement that binds and benefits only its signatories (Switzerland as well as the EU are members). The revised GPA, which entered into force on 6 April 2014, is a further reaching effort that establishes standards of non-discrimination, transparency and procedural fairness in public procurement.

139 In fact, all major GATS cases have had a substantial Internet-related element. See WTO Panel Report, *Mexico – Telecoms*, supra note 101; WTO Panel Report, *United States – Measures Affecting the Cross-Border Supply of Gambling and Betting Services (US – Gambling)*, WT/DS285/R, adopted 10 November 2004; WTO Appellate Body Report, *United States – Measures Affecting the Cross-Border Supply of Gambling and Betting Services (US – Gambling)*, WT/DS285/AB/R, adopted 7 April 2005; WTO Panel Report, *China – Measures Affecting Trading Rights and Distribution Services for Certain Publications and Audiovisual Entertainment Products (China – Publications and Audiovisual Products)*, WT/DS363/R, adopted 12 August 2009; WTO Appellate Body Report, *China – Measures Affecting Trading Rights and Distribution Services for Certain Publications and Audiovisual Entertainment Products (China – Publications and Audiovisual Products)*, WT/DS363/AB/R, adopted 21 December 2009; WTO Panel Report, *China – Certain Measures Affecting Electronic Payment Services (China – Electronic Payment Services)*, WT/DS413/R, adopted 31 August 2012.

140 In *US – Gambling*, Antigua brought a claim against the US alleging that its restrictions on cross-border gambling services violated its obligations under the GATS. The Panel and the Appellate Body’s findings focused on the violation of the US obligations for market access under Article XVI GATS.

mitments apply to electronically supplied services but it also clarified key notions of services regulation, such as likeness and the scope of the <public morals/public order> defense under the general exceptions of Article XIV GATS.¹⁴¹

Painting such a rosy picture of the WTO's <adaptive governance>¹⁴² is, however, neither justified nor does it reflect reality. Indeed, there are many causes for worry and scepticism. Some relate to the ways WTO rules, in particular the GATS provisions, were designed, allowing WTO Members to tailor their commitments. Others relate to old (pre-Internet) classifications of goods, services and sectors, upon which these commitments were based and which are becoming increasingly disconnected from trade practices.¹⁴³ Many of the contentious issues, which often block digital trade negotiations, stem, however, from more fundamental policy and cultural divergences. To use the WTO jargon, they translate into different <trade and ...> pairs,¹⁴⁴ which render solution-finding processes hard and protracted, especially as the views of dominant actors diverge. The <trade versus culture> dilemma is the pre-eminent example in this context.

This situation has induced legal uncertainty. For instance, as the WTO law presently stands, we are unsure whether online games should be categorized as goods or services. Provided that no physical medium is involved and we decide consequently to apply the GATS,¹⁴⁵ the classification puzzle is by no means solved. Online games, as a new type of content platform, could be potentially fitted into the discrete categories of computer and related services, value-added telecommunications services, entertainment or audiovisual services.¹⁴⁶ This classification is by no means trivial,¹⁴⁷ as each category implies a completely

141 Markus Krajewski, <Playing by the Rules of the Game? Specific Commitments after *US – Gambling and Betting* and the Current GATS Negotiations>, *Legal Issues of Economic Integration* 32 (2005), pp. 417–447; Sacha Wunsch-Vincent <The Internet, Cross-Border Trade in Services, and the GATS: Lessons from *US – Gambling*>, *World Trade Review* 3 (2006), pp. 1–37; Panagiotis Delimatsis, <Don't Gamble with GATS – The Interaction between Articles VI, XVI, XVII and XVIII GATS in the Light of the *US – Gambling Case*>, *Journal of World Trade* 40 (2006), pp. 1059–1080.

142 Rosie Cooney and Andrew T. F. Lang, <Taking Uncertainty Seriously: Adaptive Governance and International Trade>, *European Journal of International Law* 18:3 (2007), pp. 523–551; also Andrew T. F. Lang and Joanne Scott, <The Hidden World of WTO Governance>, *European Journal of International Law* 20:3 (2009), pp. 575–614.

143 See Burri and Cottier, *supra* note 12.

144 See e.g. Andrew T. F. Lang, <Reflecting on «Linkage»: Cognitive and Institutional Change in the International Trading System>, *The Modern Law Review* 70:4 (2007), pp. 523–549.

145 *China – Audiovisual Products* made for the first time an attempt to draw a line between GATS and GATT, and the underlying definition of what constitutes a good and what a service. While the analysis may not be complete, the Appellate Body did define <goods> (as opposed to <services>) using the criterion of <physical tangibility>. See Joost Pauwelyn, <Squaring Free Trade in Culture with Chinese Censorship: The WTO Appellate Body Report on *China – Audiovisuals*>, *Melbourne Journal of International Law* 11 (2008), pp. 1–22, at pp. 5–14.

146 Wunsch, *supra* note 115, at p. 71.

147 See Weber and Burri, *supra* note 119.

different set of duties and/or flexibilities, as we saw above. If online platforms and the services they offer were to be classified as computer services, for example, the EU and its Member States, as well as Switzerland, would lack any wiggle-room whatsoever and would have to grant full access to foreign services and services suppliers and treat them as they treat domestic ones.¹⁴⁸ While genuinely a positive development, the evolutionary interpretation of schedules of specific commitments, as affirmed in *China – Audiovisual Products*, does not necessarily help much to achieve legal certainty in such situations.¹⁴⁹ Neither does the finding that the GATT and the GATS are not mutually exclusive and can overlap.¹⁵⁰

To confront this uncertainty and in line with its continued cultural exception strategy, the EU zealously argues that, «[e]lectronic deliveries consist of supplies of services which fall within the scope of the GATS».¹⁵¹ It seeks to ensure that all digital media fall within the category of audiovisual services, thus enabling it to retain its flexibility regarding MFN exemptions and limited commitments. The EU is of the opinion that there is a difference between content-related software and business software, and while the latter may fall under computer and related services, the former should definitely be classified as audiovisual services. If the software is delivered physically, the EU argues that the GATT applies to the import of the physical carrier medium only (i.e. the CD-ROM or DVD) on which software content is stored, but not the entertainment software's code or content itself, which should fall under the GATS. The EU maintains that GATT schedules had never covered any digitized content or information delivered by digital technology through an electronic telecommunications network, and insists that this should remain the case.¹⁵² This position of the EU has been endorsed in the context of its overall global trade and culture agenda,¹⁵³ as well as in relation to the modernization of its Audiovisual Media Services Directive, which now includes on-demand media services too

148 This is true not only because of traditional media policies but also because of newly adopted ones. The promotion of local content in digitally delivered services is not limited to Europe either. The Chinese Ministry of Culture reportedly has classified online games as «cultural products» and has intensely supported the domestic industry. See USITC (2013), *supra* note 1, at pp. 5–7.

149 In *China – Audiovisual Products* (*supra* note 139, at para. 396), the Appellate Body found that the terms in China's Schedule «are sufficiently generic that what they apply to may change over time».

150 As confirmed by *EC – Bananas* and *Canada – Autos*, both *supra* note 84.

151 WTO, Communication from the European Communities and their Member States: Electronic Commerce Work Programme, S/C/W/183 (2000); also WTO, Communication from the European Communities and its Member States, Draft consolidated GATS Schedule, S/C/W/273 (2006).

152 WTO, Work Programme on Electronic Commerce, Submission by the European Communities WT/GC/W/497 (2003), at para. 7.

153 European Commission, European Agenda for Culture in a Globalizing World, COM(2007) 242 final.

(the so-called <non-linear services>), and prescribes soft cultural quotas for them.¹⁵⁴ The US takes the opposite position and has sought in the negotiations the deepest mode of liberalization available – i.e. that of the GATT, coupled with the ITA.¹⁵⁵

So, next to the legal uncertainties stemming from technologically biased rules and classifications, there is a layer of political contention added. Taking this EU–US distributional conflict into account and applying the theoretical framework of international regime complexity,¹⁵⁶ it can be assumed that more uncertainty and fragmentation will ensue down the road. Where the interests and preferences diverge, states would block attempts to clarify the rules and ambiguity will persist, so that countries can select their preferred rule or interpretation.¹⁵⁷ The WTO as a <member-driven> organization¹⁵⁸ lacks the institutional capacity to react and steer towards an adequate multilateral solution.¹⁵⁹

The classification problematique, as particularly critical for digital trade, is an illuminating example of this state of paralysis but by far not the only one. Many other issues discussed in the framework of the 1998 WTO Work Programme on Electronic Commerce have been left without a solution or even a clarification.¹⁶⁰

– Even on simple issues, such as explicitly confirming the applicability of WTO rules and commitments to electronically traded services, no results have been achieved at the negotiation table. This failure has been somewhat compensated for by the *US – Gambling* case,¹⁶¹ as we noted earlier, but there is plenty more to be settled.¹⁶²

154 Directive 2007/65/EC of the European Parliament and of the Council of 11 December 2007 amending Council Directive 89/552/EEC on the coordination of certain provisions laid down by law, regulation or administrative action in Member States concerning the pursuit of television broadcasting activities, OJ L 332/27, 18 December 2007, commonly referred to as the Audiovisual Media Services Directive (AVMS). See e.g. Mira Burri, <The New Audiovisual Media Services Directive: Television without Frontiers, Television without Cultural Diversity>, *Common Market Law Review* 44:6 (2007), pp. 1689–1725.

155 WTO, Work Programme on Electronic Commerce: Submission by the United States, WT/COMTD/17; WT/GC/16; G/C/2; S/C/7; IP/C/16 (1999).

156 Kal Raustiala and David G. Victor, <The Regime Complex for Plant Genetic Resources>, *International Organization* 58 (2004), pp. 277–309; Karen J. Alter and Sophie Meunier, <The Politics of International Regime Complexity>, *Perspectives on Politics* 7:1 (2009), pp. 13–24. Alter and Meunier talk of <international regime complexity> to signify the presence of nested, partially overlapping, and parallel international regimes that are not hierarchically ordered and stress that the lack of hierarchy is particularly typical of the international level (ibid., at p. 13).

157 Alter and Meunier, ibid., at p. 16.

158 Thomas Cottier, <Challenges Ahead in International Economic Law>, *Journal of International Economic Law* 12:1 (2009), pp. 3–15.

159 Shaffer and Pollack, supra note 24, at p. 773.

160 Sacha Wunsch-Vincent and Arno Hold, <Towards Coherent Rules for Digital Trade: Building on Efforts in Multilateral versus Preferential Trade Negotiations>, in: Mira Burri and Thomas Cottier (eds.), *Trade Governance in the Digital Age* (Cambridge: Cambridge University Press, 2012), pp. 179–221, at p. 181.

161 See supra note 139.

162 Mitchell, supra note 1; Wunsch-Vincent, supra note 141.

- There is, for instance, still no agreement on a permanent duty-free moratorium on electronic transmissions and their content. The moratorium has only been temporarily extended several times; the last time for a period of two years following a decision taken during the Bali Ministerial Conference in 2013.¹⁶³ In addition, there is some disagreement as to the moratorium's exact coverage, in particular whether it also applies to the content of the transmissions – i.e. the songs, videos, or films that are being sold for download over the Internet.¹⁶⁴
- Furthermore, WTO Members have so far not agreed upon a clear determination of whether the electronic cross-border delivery of a service is a service supplied through GATS mode 1 (cross-border) or mode 2 (consumption abroad). While in *US – Gambling*, both parties, as well as the Panel and the Appellate Body implied the application of GATS mode 1,¹⁶⁵ the reports did not formally examine the difference between the two modes of supply.
- Another fundamental question that has been left unanswered by the WTO E-Commerce Programme and triggers controversies is the finding of 'likeness' for application of MFN obligations and national treatment commitments. The question is important because it affects the non-discriminatory treatment of offline and online services and the underlying concept of technological neutrality. In *US – Gambling*, the Panel confirmed elements of technological neutrality with regard to the different modes of supply and found that a 'prohibition on one, several or all of the means of delivery included in mode 1 [...] constitutes a limitation on the total number of service operations [...] within the meaning of Article XVI:2(c)'.¹⁶⁶ In *China – Audiovisual Products*, the Appellate Body made it clear that distribution can cover both physical delivery as well as online delivery (unless otherwise specified) and strengthened the technological neutrality stance under the GATS.¹⁶⁷ These evolutionary case-law developments need yet to be clearly acknowledged by the WTO Members and integrated in the negotiating process.

163 WTO, Ministerial Decision of 7 December 2013, Work Programme on Electronic Commerce, WT/MIN(13)/32, WT/L/907 (2013).

164 Mattoo and Schuknecht have argued that the debate on the ban on duties may be missing the point, since if a WTO Member has made a national treatment commitment for a particular sector, then all discriminatory taxes are already prohibited, and vice versa – if there is no national treatment obligation, the state remains free to impose discriminatory internal taxes other than customs duties, which again renders the value of the ban small. Mattoo and Schuknecht recommend expansion of the GATS specific commitments as a more sensible and efficient way to liberalize electronic commerce. See Aaditya Mattoo and Ludger Schuknecht, 'Trade Policies for Electronic Commerce', *World Bank Policy Research Working Paper* 2380 (2000).

165 *US – Gambling*, Panel Report, supra note 139, at paras 3.29 and 215.

166 *US – Gambling*, Panel Report, supra note 139, at paras 6.355 and 7.2(b).

167 *China – Audiovisual Products*, supra note 139, at para. 412. The most recent case *China – Electronic Payment Services* (supra note 139) also provided for a broad definition of the services at issue. See Rolf H. Weber, 'Electronic Payment Services – New Clarifications in GATS Classification Issues', *sic!* 10 (2012), pp. 601–609.

These issues are so to speak <leftovers> of the WTO Work Programme on E-Commerce that manifest themselves, on the one hand, because of clear failures to reach agreement at the negotiation table and, on the other hand, because the law of the WTO, in particular the GATS, was in some senses <unfinished business> and many rules were incomplete.¹⁶⁸ But focusing solely on these issues and recommending incrementally filling the existing gaps may in fact be out of touch with the existing reality of digital trade.

Since the Work Programme on E-Commerce was launched in 1998, the picture has changed in many critical respects. The significance of digital trade, both in its contribution to the economic growth of many countries and the pre-occupation of governments with digital trade-related policies, has grown exponentially.¹⁶⁹ On the one hand, this progress and the changing interests relate to new, previously unknown or not fully developed technological applications, such as mobile telephony or cloud computing, which have become important platforms for business.¹⁷⁰ On the other hand and more vitally, they relate to the Internet as an essential fundament for innovation with deep economic, social and cultural implications.¹⁷¹ The importance of (big) data as a key aspect to essentially all societal activities is critical in this transformation¹⁷² and is yet to gain full acknowledgement in policy circles.

The changes in the digital space have been associated also with a new palette of measures that inhibit digital trade. A recent review conducted by the United States International Trade Commission (USITC) compiled a useful taxonomy of such measures. Some of them can be grouped under the so-called <digital trade localization measures> or <localization barriers to trade> and encompass, amongst others, requirements for localization of data servers, certain local content policies, or discrimination against not locally based digital services or providers.¹⁷³ Others relate to measures of not strictly speaking trade nature – such as censorship, divergent approaches to data privacy and IP protection that different countries have adopted – all of which disrupt digital trade, increase the cost of doing business and hinder innovation.¹⁷⁴

168 See e.g. Pierre Sauvé and Robert M. Stern (eds.), *GATS 2000: New Directions in Services Liberalization* (Washington, DC: The Brookings Institution, 2000).

169 OECD (2013); USITC (2013; 2014), supra note 1 and 2 respectively.

170 See e.g. WTO, Communication from the European Union and the United States: Contribution to the Work Programme on Electronic Commerce, S/C/W/338 (2011).

171 Benkler, supra note 3.

172 Viktor Mayer-Schönberger and Kenneth Cukier, *Big Data: A Revolution That Will Transform How We Live, Work, and Think* (New York: Eamon Dolan/Houghton Mifflin Harcourt, 2013).

173 For a recent country survey, see Anupam Chander and Uyên P. Lê, <Breaking the Web: Data Localization vs. the Global Internet>, *UC Davis Legal Studies Research Paper* 378 (2014), pp. 1–50.

174 USITC (2013; 2014), supra note 1 and 2 respectively.

IV. Possible ways forward

Against the backdrop of this complex as well as rapidly changing regulatory environment, there have been a number of proposals put forward on how to address the failings of the existing WTO framework for digital trade, as well as newer challenges. In the following, we provide an overview of the different scenarios and ways to move forward, as presently discussed in various policy and academic circles.

1. *Higher levels of commitment. Continuation and reinvigoration of the WTO Work Programme on Electronic Commerce*

Despite its inability so far to «convert [...] thinking into action»,¹⁷⁵ the WTO Work Programme on E-Commerce continues to exist and inform the ongoing debates. Recently, there have been some attempts at its «reinvigoration».¹⁷⁶ Most notably, the US and the EU have put forward some general principles for e-commerce.¹⁷⁷ Without prejudice to any existing rules and commitments, these principles are intended to function as a basic harmonization framework to be applied by governments and their agencies in a technologically neutral manner and integrated into future bilateral and multilateral trade disciplines. The principles include:

1. transparency for all ICT relevant rules;
2. promotion of open networks, network access and use, including promotion of interoperability;
3. ensuring unhindered cross-border information flows;
4. no local infrastructure or local presence requirements;
5. no restriction of foreign participation in ICT services sectors, through establishment or other means;
6. efficient and non-discriminatory use of spectrum;
7. legally distinct and functionally independent regulatory authorities;
8. unrestricted and unburdensome authorization and license procedures;
9. ensuring interconnection; and
10. international co-operation, in particular for bridging the digital divide and increased digital literacy.

Subscribing to these principles can be a first and an important step in ensuring that a level of legal certainty is provided and businesses can engage in

¹⁷⁵ Wunsch-Vincent and Hold, *supra* note 160, at p. 181.

¹⁷⁶ WTO, Communication from the European Union and the United States: Contribution to the Work Programme on Electronic Commerce, S/C/W/338 (2011); WTO Communication from the United States, Work Program on Electronic Commerce: Ensuring that Trade Rules Support Innovative Advances in Computer Applications and platforms, such as Mobile Applications and the Provision of Cloud Computing Services, S/C/W/339 (2011).

¹⁷⁷ *Ibid.*

cross-border digital trade. Agreement on these principles amongst more WTO Members can provide a healthy basis for further discussions, as well as for precluding regulatory races to the bottom or to the top in regional and bilateral venues (as we discuss them below), or in unilateral state actions, which have been particularly palpable in the case of China.¹⁷⁸

WTO Members could subscribe to these principles for instance by agreeing upon a *Reference Paper for Digital Trade*, which would then be included as an additional commitment in the respective Members' schedules (Article XVIII GATS). The Reference Paper could well be coupled with an Annex or a Protocol, which specifies an increased level of commitments and how they are applied amongst the parties – as this format worked relatively well for the opening up of the telecommunications services sector.¹⁷⁹

Further-reaching specific GATS commitments could possibly address many of the questions raised in the framework of the E-Commerce Work Programme appropriately – for instance, if WTO Members broadly schedule entire services sectors at the two-digit CPC level that cover all existing services and also anticipate newly developed ones. Some of the classification battles would in this way be rendered irrelevant.¹⁸⁰ This may also reduce the existing anxiety expressed by WTO Members that any <update> or change of classification schemes may in fact reduce the level of existing commitments.¹⁸¹

This scenario may be doable for sectors, such as computer and related services, where the level of commitment is already fairly high, as exemplified by the <Understanding on the scope of coverage of CPC 84>, which stipulates that all computer and related services are to be covered within one commitment, in a single category (chapter heading CPC 84), whereas the services enabled therewith (e.g. accounting, auditing and bookkeeping services, audiovisual or educational services) are not included.¹⁸² Yet, it should be noted that, while such an agreement and higher levels of commitment appear politically feasible for some sectors, such as computer and related services, for others, such as audiovisual services, the political will is largely absent.¹⁸³

178 USITC (2013), supra note 1.

179 Bronckers and Larouche (2008), supra note 113; National Foreign Trade Council (NFTC), *A 21st Century Work Program for the Multilateral Trading System* (featuring an Analysis of WTO-consistent Approaches to Plurilateral and Non-MFN Trade Agreements, by Stuart Harbinson and Bart de Meester) (Washington, DC: National Foreign Trade Council, 2012).

180 For an analysis of the proposals on different classifications during the Uruguay Round, see Weber and Burri, supra note 119, at pp. 96–114.

181 Lee Tuthill and Martin Roy, <GATS Classification Issues for Information and Communication Technology Services>, in: Mira Burri and Thomas Cottier (eds.), *Trade Governance in the Digital Age* (Cambridge: Cambridge University Press, 2012), pp. 157–178.

182 WTO, Understanding on the Scope of Coverage of CPC 84 – Computer and Related Services, Communication from Albania, Australia, Canada, Chile, Colombia, Croatia, the European Communities, Hong Kong China, Japan, Mexico, Norway, Peru, the Separate Customs Territory of Taiwan, Penghu, Kinmen and Matsu, Turkey and the United States, TN/S/W/60, S/CSC/W/51 (2007).

183 Roy, supra note 123; Tuthill and Roy, supra note 181.

2. *Extension of the ITA*

We noted above the significance of the ITA in terms of liberalizing trade in IT products and creating of a truly global and interconnected trade in this respect. The key role of the ITA is unchanged despite the proliferation of preferential trade agreements that we sketch below. This has to do with the fact that a great bulk of IT trade today is not in finished products but in the multiple components needed for their construction. This renders IT products subject to complicated and burdensome country of origin rules that need to be assessed on the basis of existing PTAs. Under a multilateral MFN rate, which the ITA can offer, the regime is clearly simplified and made trade-friendly.¹⁸⁴

Despite the virtues of the ITA, we also noted, however, that it suffers from some deficiencies – mostly related to product scope and classification. This intrinsic fault was spotted early on and indeed, soon after its adoption, the ITA parties entered a process of negotiating its expansion. Its update appears, however, particularly urgent now that the composition of ICT trade has radically changed and significant parts of it are not covered by the ITA.¹⁸⁵ The last stretch of negotiation activities since 2012 has focused on the inclusion of approximately 200 additional products, including many new generation communication, data and medical devices. The China–US breakthrough reached at the APEC leaders' summit in November 2014 can be an important step towards a definitive deal and raises the hopes for a sooner finalization of the negotiations by all WTO Members participating in the ITA.¹⁸⁶

Making the ITA <future-proof>, however, may require more than an extension of its product coverage and the number of its signatories.¹⁸⁷ Anticipating the introduction of new IT products down the road and the related classification problems that these may cause, one should argue for an overall more flexible way of committing. Dreyer and Hindley have put forward a hybrid <negative list> approach, whereby commitments are listed by category at a higher, four-digit level (rather than on a six or eight digit level).¹⁸⁸ New products under these

184 Lee-Makiyama, *supra* note 50, at p. 4.

185 Lee-Makiyama, *supra* note 50.

186 WTO, <Azevêdo Hails Breakthrough on the WTO's Information Technology Agreement>, WTO Press Release, 11 November 2014, available at: <https://www.wto.org/english/news_e/news14_e/ita_11nov14_e.htm> (25 April 2015).

187 The list of non-participating countries includes several important emerging markets like Argentina, Brazil, South Africa, Russia, Mexico and Chile. See WTO, Committee of Participants on the Expansion of Trade in Information Technology Products, Concept Paper for the Expansion of the ITA, Communication from Canada, Japan, Korea, the Separate Customs Territory of Taiwan, Penghu, Kinmen and Matsu, Singapore and the United States, G/IT/W/36 (2012).

188 Commitments on the higher chapter-by-chapter basis would be impractical as this would include various non-IT products, such as electrical razors or vacuum cleaners (under chapter 85) and nuclear reactors (under chapter 84).

categories would then be automatically covered; unless a re-negotiation takes place.¹⁸⁹

Next to a more forward-looking product coverage, and as we signaled earlier, in a post-Internet age, the digital economy has changed and made other areas of trade policy much more relevant – notably, non-tariff barriers (NTBs) and services trade. Remaining within the scope and aim of the ITA, this may involve some minimal negative harmonization, such as in the critical field of electromagnetic compatibility and interference,¹⁹⁰ as well as including computer-related and telecommunications services, which are already substantially liberalized.¹⁹¹ As part of other feasible beneficial add-ons, one can also mention the inclusion of some mode 4 commitments for these services sectors, which will ensure the mobility of high-skilled labour that is essential for IT innovation.¹⁹²

3. *Tackling digital trade as part of the TISA*

The third possible path for moving ahead and making the WTO law a better fit for the digital age is through the currently negotiated *Trade in Services Agreement (TISA)*. The TISA is meant to provide deeper market access in the services sector, where in fact liberalization is still quite low, despite the substantial gains from trade expected.¹⁹³ TISA, launched in early 2013, can be qualified as ‘the single most significant development to have emerged in the trade negotiating arena over the last couple of years’,¹⁹⁴ at least for trade in services.

The TISA has been supported by the US, the EU and Switzerland, and other countries that are part of the group ‘Really good friends of services’,¹⁹⁵ and there is some progress already.¹⁹⁶ The impact of TISA can be substantial, since not only is TISA enjoying the support of most important economies,

189 Lee-Makiyama, *supra* note 50, at p. 8, referring to Iana Dreyer and Brian Hindley, ‘Trade in Information Technology Goods: Adapting the ITA to 21st Century Technological Change’, *ECIPE Working Paper* 6 (2008).

190 As suggested by the EU and Switzerland in the current non-agricultural market access (NAMA) negotiations as part of the Doha Round.

191 Lee-Makiyama, *supra* note 50.

192 Many such commitments already exist in PTAs, so including them in the ITA can be an elegant way to multilateralize these efforts, while at the same time detaching them from the general sensitivities related to the presence of natural persons under mode 4. See Lee-Makiyama, *supra* note 50, at p. 22.

193 For an overview, see Juan A. Marchetti and Martin Roy (eds.), *Opening Markets for Trade in Services: Countries and Sectors in Bilateral and WTO Negotiations* (Cambridge: Cambridge University Press, 2009).

194 Juan A. Marchetti and Martin Roy, ‘The TISA Initiative: An Overview of Market Access Issues’, *WTO Staff Working Paper ERSD-2013-11* (2013), at p. 27.

195 Current negotiating parties include: Australia, Canada, Chile, Chinese Taipei (Taiwan), Colombia, Costa Rica, Hong Kong, Iceland, Israel, Japan, Liechtenstein, Mexico, New Zealand, Norway, Pakistan, Panama, Paraguay, Peru, South Korea, Switzerland, Turkey, the US and the EU.

196 Marchetti and Roy, *supra* note 193.

which in effect cover over 70% of world services trade, but it also aims at high market access commitments and adds a layer of deeper regulatory arrangements.¹⁹⁷

If one is in search of swift solutions in digital trade, the TISA approach may make more sense than advancing under the conventional WTO negotiations, as it would bind only those states that are ready to make the concessions and may diminish the cost of bargaining across issue-areas. It may also be sensible to address services questions as a whole rather than by taking a piece-meal approach. It is, for instance, apparent from some submissions made during the Doha round that new types of barriers to digital trade, namely the lack of access to technology distribution channels and information networks, have been felt in non-IT areas, such as those of aviation, tourism and logistics.¹⁹⁸

Despite the promise of TISA, it is fair to note that we are still in the midst of the negotiations and although there have been a number of leaks,¹⁹⁹ as well as some public country's offers,²⁰⁰ we are uncertain as to the final outcome. In this sense, the thoughts that follow should be taken with a pinch of salt.

It appears so far that TISA has adopted a *hybrid* approach of committing – this entails a negative type of committing for MFN and NT but a positive for market access. Parties discuss also the inclusion of the so-called <standstill> and <ratchet> clauses. Under a standstill clause, members would agree not to create new obstacles to services trade and preserve the current level of liberalization. With the ratchet clause, in cases where one participating member improves services market access on its own, that newly liberalized access would then be accorded to other parties to the deal, and become permanent.²⁰¹

In terms of the depth of liberalization aimed at, it appears that there is an effort to reach the level of best PTA commitments in all sectors. This is ambitious. Yet, even if achieved, it may not be sufficient to address the pertinent digital trade issues, as sketched above. The reason for this is that, despite the far-reaching US PTAs that we discuss below, past PTA negotiations involving other TISA participants have not made significant progress in liberalizing sensitive sectors, such as audiovisual services. The EU and Canada are highly unlikely

197 Marchetti and Roy, *supra* note 193.

198 See e.g. WTO, Council for Trade in Service, Communication by Hong Kong, S/CSS/W/68 (2001).

199 See a leak of the US offer, as well as some of the TISA chapters, <<https://wikileaks.org/tisa>> (25 April 2015).

200 See e.g. for Switzerland, the information provided by the State Secretariat for Economic Affairs at: <<http://www.seco.admin.ch/themen/00513/00586/04996/index.html?lang=en>> (25 April 2015).

201 For a good explanation, see Submission by Switzerland: Possible Operationalization of a Hybrid Schedule, Really Good Friends – Meeting of 5 November 2012, Plurilateral Initiative on Trade in Services, 10 October 2012, as well as Submission by Switzerland: Provisions on Scheduling of Commitments, Really Good Friends – Meeting of 29 April to 3 May 2013, Agreement on Trade in Services (TISA), 30 April 2013.

to give up their policy space in these sectors,²⁰² which again brings back the <old> GATS problems. The Swiss initial offer under TISA confirms this, as Switzerland has tabled no GATS-plus commitments for audiovisual services.²⁰³

Interested stakeholders have suggested that in order to accommodate the reality of seamless digital trade flows under TISA, it would make sense to adopt a negative list type of committing, so that there is flexibility as to future innovation in the field of digital services. Provisions that relate to the data flows must also be framed as <horizontal>, and not be applied on a sector-by-sector basis, as they affect a great number of sectors as part of the networked economy.²⁰⁴ Any localization requirement, be it with regard to presence, technology or content, should be banned, so as to curb regulatory activism and protectionism. These suggestions consolidate the existing most far-reaching PTA solutions and have been reflected in the latest leak of the US proposal.²⁰⁵

With regard to the increased level of measures adopted domestically to protect key public interests, such as privacy and national security, there has been a broad recognition that some of them may be legitimate and fully justified. It is also clear, however, that others inhibit digital trade unduly. It is unfortunate that nation states are still in the process of figuring out the appropriate levels of protection and the balance between conflicting objectives, such as market innovation and protection of privacy,²⁰⁶ and there is yet no clear-cut approach even within nation states and much less so internationally on the appropriate approach to solving these dilemmas of the digital age.

The US leak on TISA included no straightforward norms on privacy but some on national security safeguards, which may in effect affect the free flow of information. Opinions diverge as to the impact of these suggested norms, as well as to their insertion in trade acts.²⁰⁷ In academic debate, it has been suggested that a <framework convention> may be an appropriate construction to deal with moving targets, such as data protection requirements, and evolving policy formulation.²⁰⁸ A <framework convention> would provide for legal cer-

202 Marchetti and Roy, *supra* note 193, at p. 18.

203 See Switzerland, Swiss Initial Offer, Really Good Friends, Trade in Services Agreement, 30 January 2014.

204 International Digital Economy Alliance (IDEA), <The Trillion Dollar Question: How Trade Agreements Can Maximise the Economic Potential of Data in the Networked Economy and Support the Internet as the World's Trading Platform>, incidental paper, *International Digital Economy Alliance* (2013).

205 See *supra* note 199, as well as Jane Kelsey and Burcu Kilic, Briefing on US TISA Proposal on E-Commerce, Technology Transfer, *Cross-border Data Flows and Net Neutrality* (Washington, DC: Public Citizen, 2014).

206 Ian Brown and Christopher T. Marsden, *Regulating Code* (Cambridge, MA: MIT Press, 2013). See Urs Gasser's contribution to this volume.

207 Nick Ashton-Hart, <Are the TISA Trade Talks a Threat to Net Neutrality, Data Protection, or Privacy?>, *CircleID*, 30 December 2014, available at: <http://www.circleid.com/posts/20141230_are_tisa_trade_talks_threat_to_net_neutrality_data_protection/> (25 April 2015).

208 IDEA, *supra* note 204.

tainty as parties would agree on some binding obligations, which can then be renegotiated over time.²⁰⁹

These debates have not, however, been taken up under the TISA so far. There has only been a concerted effort to minimize the negative effects of trade-restrictive measures. What appears also politically feasible in this context is the subscription to some IT principles. Switzerland, for instance, has submitted detailed 'Provisions on trade-related principles for Information and Communication Technology Services',²¹⁰ which go beyond the principles endorsed by the EU and the US as part of the WTO E-Commerce Programme. They seek transparency with regard to regulations, independence of regulatory agencies, as well as lighter authorization and licensing procedures without local presence requirement. The provisions on open networks, network access and use are particularly far-reaching and aim to ensure unhindered ability to supply and use of services over the Internet on a cross-border and technologically neutral basis. Localization requirements are to be avoided and interoperability of services and technologies fostered. The Swiss proposal is also liberal in terms of cross-border information flows: 'Governments should not prevent foreign ICT service suppliers, or customers of such suppliers, from electronically transferring information internally or across borders, accessing publicly available information, or accessing their own information stored abroad'. Some safeguards remain, however, as governments retain their rights to protect consumers using ICT services from fraudulent and deceptive commercial practices, as well as to enhance their enforcement capacity for data and privacy law and regulations. There is also a caveat that the ICT principles are without prejudice to the policy objectives and legislation of the Parties in areas such as the protection of intellectual property, the protection of privacy and of the confidentiality of personal and commercial data, the protection of consumers and the protection and promotion of the diversity of cultural expressions (including through public funding and assistance). Neither do the ICT principles apply to financial services.²¹¹ The latest TISA leak points towards partial adoption of these principles.

Finally, if TISA indeed materializes, it is fair to point out that it may have sizeable negative effects too, as it would in fact increase rule fragmentation. It is still unclear how TISA would relate to the WTO as a whole and to the existing specific commitments made under the GATS.²¹² While some parties, such as Switzerland, openly aim at the ultimate multilateralizing of TISA and seek to en-

209 Nele Matz-Lück, 'Framework Conventions as a Regulatory Tool', *Göttingen Journal of International Law* 1 (2009), pp. 439–458.

210 Submission by Switzerland: Provisions on Trade-related Principles for Information and Communication Technology Services (ICT Principles), Really Good Friends – Meeting of 18 March 2013, Plurilateral Initiative on Trade in Services, 13 February 2013.

211 Ibid., at para. 4.

212 Marchetti and Roy, *supra* note 193.

sure compatibility in its design with the WTO Agreements,²¹³ it is yet unclear whether there will be sufficient common political will to use the WTO forum. Overall, while there are some benefits in moving forward on better services regulation (especially against the backdrop of the stalling WTO negotiations), a club-like, positive-list-based TISA operating on a non-MFN basis is not an optimal solution. It cannot deliver a suitable framework for the digital economy, as bits are not able to discern diverging regulation while crossing borders.

4. *Creating a discrete Digital Economy Trade Agreement*

Another narrower in scope but potentially further-reaching approach would be to create a specifically dedicated *Digital Economy Trade Agreement (DETA)*. This is an undertaking, which would tackle all issues related to digital trade under a separate cover, possibly under a plurilateral design. The DETA would address the left-overs of the WTO E-Commerce Programme but also <deep integration> issues related to increased transparency, standardization, questions of data protection and localization requirements. To fully realize the benefits of digital trade, it would make sense to ensure that <critical mass> is achieved and a substantial part of trade is covered, as well as that the core MFN principle of free trade and of the WTO is preserved. Yet, it is fair to note that while some groups, such as the US National Foreign Trade Council,²¹⁴ have mentioned DETA as an option capable of addressing the challenges of digital trade, it is hard to envision at this stage that it will gain sufficient support considering the TISA negotiations running in parallel. In this sense, at this point of time, we sketch this scenario only for the sake of completeness of our mapping exercise, and despite its very low viability chances. If TISA fails to deliver however, DETA remains a fall-back to consider.

C. Regional and bilateral agreements

The lack of progress within the WTO context has driven and continues to drive countries to seek other venues that better reflect their interests and allow for speedier solutions. Global trade law and policy over the last decade reflect this regime-shifting²¹⁵ and can be characterized by the great and growing number of

213 See e.g. Submission by Switzerland: Possible Operationalization of a Hybrid Schedule, Really Good Friends – Meeting of 5 November 2012, Plurilateral Initiative on Trade in Services, 10 October 2012, as well as Submission by Switzerland: Chapter on Dispute Settlement Procedures, Really Good Friends – Meeting of 29 April 2013, Trade in Services Agreement (TISA), 13 April 2013.

214 NFTC, *supra* note 179.

215 See e.g. J. P. Singh, *Negotiation and the Global Information Economy* (Cambridge: Cambridge University Press, 2008); Laurence R. Helfer, <Regime Shifting in the International Intellectual

preferential trade agreements (PTAs), agreed upon bilaterally, regionally or between regions.²¹⁶ It is important to stress in this context that in many of these deals digital trade issues have formed an essential part of the reasoning behind seeking the PTA, as well as of the content of the PTA itself. In the following, we do not intend to disentangle and analyze the entire ‘spaghetti bowl’²¹⁷ of PTAs but look at the emergent distinct features of the used PTA templates of pertinence for digital trade – in particular those of the US and the EU.

I. US-led PTAs

The United States has endorsed – and made substantial efforts to ensure – the implementation of its so-called ‘Digital Agenda’²¹⁸ through the PTA channel. The agreements reached by the US since 2002 with Australia, Bahrain, Chile, Morocco, Oman, Peru, Singapore, the Central American countries,²¹⁹ and more recently with Panama, Colombia and South Korea, all contain critical WTO-plus provisions in the broader field of digital trade. Importantly, the diffusion of the US template is not limited to US agreements, but can be traced to other free trade agreements (FTAs) as well – such as Singapore–Australia, Thailand–Australia, Thailand–New Zealand, New Zealand–Singapore, India–Singapore, Japan–Singapore and South Korea–Singapore.

The implemented US template regulates key aspects of digital trade in: (i) specifically dedicated e-commerce chapters; (ii) the chapters on cross-border supply of services; as well as in (iii) the ICT co-operation and (iv) intellectual property chapters.²²⁰

(i) The first category of PTA chapters focusing exclusively on matters of electronic commerce represents a clear attempt to compensate for the lack of progress in the WTO and remedy the ensuing uncertainties. Many of the questions of the WTO E-Commerce Programme that have been discussed but still remain open are directly or indirectly addressed. This includes a clear definition of ‘digital products’, which treats digital products delivered offline equally as

Property System’, *Perspectives on Politics* 7:1 (2009), pp. 39–44; also the last two sections below.

216 See e.g. WTO, *World Trade Report 2011: The WTO and Preferential Trade Agreements: From Co-existence to Coherence* (Geneva: WTO, 2011).

217 The notion of ‘spaghetti bowl’ comes from Jagdish Bhagwati’s work on the negative effects of preferentialism due to, amongst other things, the lack of transparency and the increased complexity of overlapping trade rules. See e.g. Jagdish Bhagwati, *Termites in the Trading System: How Preferential Agreements Undermine Free Trade* (Oxford: Oxford University Press, 2008).

218 See Sacha Wunsch-Vincent, ‘The Digital Trade Agenda of the US: Parallel Tracks of Bilateral, Regional and Multilateral Liberalization’, *Aussenwirtschaft* 1 (2003), pp. 7–46.

219 The DR–CAFTA includes Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua and the Dominican Republic.

220 For a fully-fledged and detailed analysis of digital trade issues in PTAs, see Wunsch-Vincent and Hold, *supra* note 160.

those delivered online, so that technological neutrality is ensured. The chapters recognize furthermore the applicability of WTO rules to electronic commerce,²²¹ as well as establish an express and permanent duty-free moratorium on the importation or exportation of digital products by electronic transmission.²²² Critically, the e-commerce chapters ensure both MFN and NT for digital products trade – discrimination is banned on the basis that digital products are ‘created, produced, published, stored, transmitted, contracted for, commissioned, or first made available on commercial terms’ outside the country’s territory; or ‘whose author, performer, producer, developer, or distributor is a person of another party or a non-party’.²²³

The seemingly very far-reaching provisions of the e-commerce chapters need to be qualified, however. Firstly, and importantly, they appear legally inferior to the rest of the agreement, as they are ‘subject to any other relevant provisions, exceptions, or non-conforming measures set forth in other Chapters or Annexes of this Agreement’.²²⁴ In case of a conflict, the provisions of the e-commerce chapters will thus be overridden.

(ii) The depth of the commitments is therefore contingent on the services chapters. In most US-led PTAs, the chapters on cross-border trade in services are very liberal. Amongst other things, and pertinently for our discussion, they use a negative list approach for the undertaking of commitments. This means that no measures inconsistent with national treatment are maintained, except where specifically provided for. While the negative list approach does not in itself influence the content or the quality of the obligations undertaken,²²⁵ it indirectly tackles the problem of outdated (and politically contentious) classification issues, as well as ensures, in principle, coverage for future digital services. Procedurally, there is an advantage to this approach too, as it obliges the negotiators to regularly review (and possibly re-negotiate) services sectors. In addition, the PTAs address MFN exemptions as still existing under the WTO regime, and ensure that these exemptions are dropped. Many of the PTAs also

221 See e.g. US–Singapore FTA, Article 14.1; US–Australia FTA, Article 16.1.

222 See e.g. US–Singapore FTA, Article 14.3, para. 1; US–Chile FTA, Article 15.3. It is also clear that the zero duty obligation applies to the content of the digital transmission, namely digital products. It appears, however, that the moratorium does not apply to digitally-delivered services.

223 See e.g. US–Singapore FTA, Article 14.3; US–Australia FTA, Article 16.4. In many PTAs digital products must not be fully produced and exported through one of the contracting parties of the bilateral PTAs to benefit from the non-discrimination obligations. This is an interesting way to avoid complex rules of origin. See Wunsch-Vincent and Hold, *supra* note 160, at p. 201.

224 See e.g. US–Chile FTA, Article 15.2; US–Singapore FTA, Article 14.2.

225 Rudolf Adlung and Hamid Mamdouh, ‘How to Design Trade Agreements in Services: Top Down or Bottom Up?’, *WTO Staff Working Paper* 8 (2013). The authors suggest that what matters for the level of liberalization are not negotiating or scheduling techniques, but the political impetus that the governments concerned are ready to generate; see also in this sense, Submission by Switzerland: Possible Operationalization of a Hybrid Schedule, Really Good Friends – Meeting of 5 November 2012 Plurilateral Initiative on Trade in Services, 10 October 2012.

address and expressly ban the newer generation of digital trade barriers, which prescribe certain local content or presence elements.

(iii) In addition to the topics of market access and equal treatment that are core to trade agreements, many PTA partners have sought the conclusion of additional understandings on e-commerce – as part of the e-commerce chapters or in a discrete form. These cover on the one hand different co-operation initiatives in the broader IT policy field, such as those for telecommunications policy, IT standards and interoperability, cyber-security, electronic signatures and payments, paperless trading, self-regulation and e-government projects. On the other hand, the joint understandings try to achieve some common ground rules for the digital marketplace, where increasingly inadequate and incompatible national regulations are seen as an important digital trade barrier.²²⁶ There is no uniform format for the attainment of this objective. Some of the agreed digital trade principles are general, while others are fairly detailed and far-reaching. In particular the provisions on authentication mandating certain technological and legal requirements, interoperability and non-discrimination, work on mutual recognition and international standards, as well as on consumer protection²²⁷ and privacy standards, can be truly powerful and demand changes in domestic law and policies.

The US–South Korea FTA is perhaps the most advanced in this regard. It includes ‘Principles on Access to and Use of the Internet for Electronic Commerce’, which detail rights for the consumers to: (a) access and use services and digital products of their choice; (b) run applications and services of their choice; (c) connect their choice of devices to the Internet; and (d) have the benefit of competition among network providers, application and service providers, and content providers.²²⁸ Next to these fairly solid safeguards against censorship and other types of constrained access and use, the US–South Korea FTA provides for free cross-border information flows and obliges the parties, albeit in a non-binding manner, ‘to refrain from imposing or maintaining unnecessary barriers to electronic information flows across borders’.²²⁹

226 Wunsch-Vincent and Hold, *supra* note 160, at pp. 204–211. For comparative data, see USITC, *supra* note 1.

227 The US–Australia FTA includes for instance detailed additional obligations on cross-border consumer protection, also referring to the 2003 OECD Guidelines for Protecting Consumers from Fraudulent and Deceptive Commercial Practices across Borders (see US–Australia FTA, Chapter 14 on competition-related matters, Article 2). The same is true for the US–South Korea agreement, which next to Article 15.5 on online consumer protection includes detailed rules in its chapter on competition, at Article 16.6.

228 US–South Korea FTA, Article 15.7.

229 US–South Korea FTA, Article 15.8: ‘Recognizing the importance of the free flow of information in facilitating trade, and acknowledging the importance of protecting personal information, the Parties shall endeavor to refrain from imposing or maintaining unnecessary barriers to electronic information flows across borders’.

(iv) Many digital trade relevant provisions are to be found in the IP chapters of PTAs. These include a number of TRIPS-plus and TRIPS-extra provisions and have become over the past decade a primary venue for the implementation of IP rules to protect content online.²³⁰ The level of detail and the strength of protection have steadily increased – from the early US-led agreements, such as between Jordan and the US, to more recent ones, such as the US–South Korea FTA.²³¹

The IP chapters secure in particular adherence to or at least compliance (without formal ratification) with the WIPO Internet Treaties. Going even further than the WIPO Copyright Treaty (WCT), the bilateral and regional acts ensure the implementation of technical protection measures (TPMs) and digital rights management systems to prevent unauthorized digital copying and distribution. The flexibility in the implementation of the WCT is in many senses reduced as the PTAs demand legal remedies against the circumvention of TPMs as well as against devices used for that purpose (independent of the intended use of the device). Many of the PTAs also regulate the liability of Internet service providers (ISPs) and contain additional provisions on the enforcement of copyright online.²³²

Overall, the US PTA provisions on digital trade ensure a fairly liberal regime with substantial GATS-plus commitments²³³ and detailed rule-making of relevance to cross-border delivery of electronic services, such as strengthened transparency and domestic regulation requirements.²³⁴ In addition to this, certain non-trade issues are addressed in an attempt to achieve a basic level of harmonization or at least legal interoperability²³⁵ in the field of digital governance. This ultimately leads to the creation of a *new tailored regime for digital trade*.

This said, there are still a number of exceptions. An exception that is key for our discussion is in the field of audiovisual services. Particularly noteworthy

230 Sell, supra note 136; Neil W. Netanel, 'Why Has Copyright Expanded? Analysis and Critique', in: Fiona Macmillan (ed.), *New Directions in Copyright Law: Vol. 6* (Cheltenham: Edward Elgar, 2007), pp. 3–34.

231 Wunsch-Vincent and Hold, supra note 160, at p. 211.

232 Wunsch-Vincent and Hold, supra note 160, at pp. 211–215.

233 It should be added, however, that only a detailed look at the individual sectors and the non-conforming measures will reveal the actual depth of the market opening and the burden imposed on foreign services suppliers. In some cases, it appears that what is exempted from the commitments made may be truly substantial and in many senses this reduces the value of the trade agreement. For instance, some of the US FTAs, such as US–Australia FTA, contain a limitation, which specifies that all existing non-conforming measures of US states are exempted. See Wunsch-Vincent and Hold, supra note 160.

234 See Wunsch-Vincent and Hold, supra note 160, at p. 201; see also Aaditya Mattoo and Pierre Sauvé, 'The Preferential Liberalization of Services Trade: Economic Insights', in: Pierre Sauvé and Anirudh Shingal (eds.), *The Preferential Liberalization of Trade in Services* (Cheltenham: Edward Elgar, 2014), pp. 37–67; Martin Roy, 'Services Commitments in Preferential Trade Agreements: Surveying the Empirical Landscape', in: Sauvé and Shingal, *ibid.*, pp. 15–36.

235 On legal interoperability, see Gasser and Palfrey, supra note 4.

here is that despite its inflexible and adamant position in the WTO context, the US has shown deference to the culturally inspired measures of its PTA partners in the media and granted the policy space needed for these measures. In this sense, some PTAs specify that the parties are <not prevented from adopting or maintaining measures in the audio-visual and broadcasting sectors> and that the non-discrimination provision does not apply to measures affecting the electronic transmission of so-called linear, point-to-multipoint traditional broadcasting services. Very often, however, these measures are <frozen> at their present level,²³⁶ and could relate only to conventional <offline> technologies. It is evident also that the leeway given to the US partners with respect to trade in cultural products <reflect[s] quite accurately the negotiating capacity of the states involved> – acting under the enormous economic weight of the US, the rule of thumb is that the smaller the country, the more concessions it admits.²³⁷ Australia, as the most affluent of these states, managed to preserve existing quotas for local content in commercial broadcasting.²³⁸ It also remains free to maintain existing measures and adopt new ones in the areas of (a) multi-channelled free-to-air commercial television broadcasting services; (b) free-to-air commercial television broadcasting services; (c) subscription television broadcasting services (d) free-to-air radio broadcasting services; (e) interactive audio and/or video services (f) spectrum and licensing; and (d) subsidies or grants.²³⁹ This ample policy space is subject to certain limitations pertaining either to not exceeding the existing ceilings or to the application of certain criteria for the assessment of future measures. Despite these limitations, the freedom granted to Australia in shaping its present and future cultural policy for the media is substantial and unprecedented, especially considering the typical US position on these matters. Singapore and Chile were also able to include relatively significant reservations, as did Costa Rica, the Dominican Republic and Morocco. On the other hand, Guatemala, Honduras, El Salvador and Nicaragua left their audiovisual sectors in practice open to imports. Policy space is thus often significantly reduced and some countries (especially the poorer ones) may not be able to cater appropriately for diverse public interests in the field of media, and may in fact be completely helpless in the field of digital media.

236 Wunsch-Vincent, *supra* note 218, at pp. 15–16. Tania Voon, <A New Approach to Audiovisual Products in the WTO: Rebalancing GATT and GATS>, *UCLA Entertainment Law Review* 14:1 (2007), 1–32, at 25–26.

237 Ivan Bernier, <The Recent Free Trade Agreements of the United States as Illustration of Their New Strategy Regarding the Audiovisual Sector>, April 2004, at p. 15, available at: <http://www.diversite-culturelle.qc.ca/fileadmin/documents/pdf/conf_seoul_ang_2004.pdf> (25 April 2015).

238 US–Australia FTA, at Annex I.

239 US–Australia FTA, at Annex II.

II. EU PTAs

Apart from the generic differences between the EU and the US approaches to PTAs, the EU template with regard to digital trade is not as coherent as that of the United States.²⁴⁰ It has also developed and changed over time – both with regard to dedicated provisions on electronic commerce, as well as with regard to services and IP rules of relevance to digital trade. This can be explained by the EU's newly put stress on digital technologies as part of its innovation and growth strategy and with its new foreign policy orientation subsequent to the Lisbon Treaty, which includes PTAs as an essential strategic element.²⁴¹

The agreement with Chile (signed in 2002) was the first to include substantial e-commerce provisions but the language was still cautious and limited to soft co-operation pledges in the services chapter²⁴² and in the fields of information technology, information society and telecommunications.²⁴³ In more recent agreements, such as the EU–South Korea FTA (signed in 2009), the language is much more concrete and binding. It imitates some of the US template provisions and confirms the applicability of the WTO Agreements to measures affecting electronic commerce, as well as subscribes to a permanent duty-free moratorium on electronic transmissions. The EU, as particularly insistent on data protection policies, has also sought commitment of its PTA partners to compatibility with the international standards of data protection.²⁴⁴ Co-operation is also increasingly framed in more concrete terms and includes mutual recognition of electronic signatures certificates, coordination on Internet service providers' liability, consumer protection, and paperless trading.²⁴⁵

The most recent EU agreement with Canada – the Comprehensive Economic and Trade Agreement (CETA)²⁴⁶ – goes a step further. The CETA provisions concern commitments ensuring (a) clarity, transparency and predictability in their domestic regulatory frameworks; (b) interoperability, innovation and competition in facilitating electronic commerce; as well as (c) facilitating the use of

240 EU PTAs tend, for instance, to cover more WTO-plus areas but have less liberal commitments. For detailed analysis, see Henrik Horn, Petros C. Mavroidis, and André Sapir, *Beyond the WTO? An Anatomy of EU and US Preferential Trade Agreements* (Brussels: Bruegel Print, 2009).

241 David Kleimann (ed.), *EU Preferential Trade Agreements: Commerce, Foreign Policy, and Development Aspects* (Florence: European University Institute, 2013).

242 EU–Chile FTA, Article 102. The agreement states that '[t]he inclusion of this provision in this Chapter is made without prejudice of the Chilean position on the question of whether or not electronic commerce should be considered as a supply of services'.

243 EU–Chile FTA, Article 37.

244 EU–South Korea FTA, Article 7.48.

245 EU–South Korea FTA, Article 7.49.

246 CETA was signed in 2014 but has not yet entered into force pending an approval by the Council of the European Union and the European Parliament. CETA's consolidated text is available at: <http://ec.europa.eu/trade/policy/in-focus/ceta/> (25 April 2015). The text is not yet official and the numbering incomplete.

electronic commerce by small and medium sized enterprises.²⁴⁷ The EU has succeeded in deepening the privacy commitments and the CETA has a specific norm on trust and confidence in electronic commerce, which obliges the parties to adopt or maintain laws, regulations or administrative measures for the protection of personal information of users engaged in electronic commerce in consideration of international data protection standards.²⁴⁸

With regard to cross-border trade in services, the EU's traditional approach has been to follow the GATS model and list only positively (and relatively conservatively) commitments. The level of commitments largely mirrors the offers made by the EU during the Doha Round. For telecommunications services, there is an additional commitment on number portability included.²⁴⁹ For the computer services sector, the provisions foresee deep liberalization of all computer and related services at the two-digit CPC 84 level, while excluding core content services delivered electronically (e.g. financial or audiovisual services).²⁵⁰ The EU experimented with a negative list of commitments for the first time with the CETA. This marks a new turn in the EU's PTAs strategies and it remains to be seen whether this will be a continued effort or was merely suitable for Canada as a trading partner with similar priorities and sensitivities. It should be stressed that even in this case and as a reflection of Canada's and EU's continuing pro-cultural stance, some sectors are a priori excluded. For the EU, these are audiovisual services.²⁵¹ For Canada, the caveat relates to its 'cultural industries', which are defined as (a) the publication, distribution or sale of books, magazines, periodicals or newspapers in print or machine-readable form; (b) the production, distribution, sale or exhibition of film or video recordings; the production, distribution, sale or exhibition of audio or video music recordings; the publication, distribution or sale of music in print or machine-readable form; or (c) radio-communications in which the transmissions are intended for direct reception by the general public, and all radio, television and cable broadcasting undertakings and all satellite programming and broadcast network services.²⁵² In addition and quite interestingly, there is an Annex

247 CETA, Article X-04.

248 CETA, Article X-03.

249 Number portability has been a common commitment in all PTAs, while missing from the WTO Reference Paper on Basic Telecommunications Services.

250 EU-South Korea FTA, Article 7.25, this is identical to the EU's Doha round offer; see WTO, Understanding on the Scope of Coverage of CPC 84 – Computer and Related Services, *supra* note 182.

251 Some air transport and air transport related services, as well as financial services are also excluded.

252 CETA, Chapter 32 'Exceptions'. If we compare with the W/120 classification for audiovisual services (see Table 1 above; includes motion picture and video tape production and distribution services; motion picture projection service; radio and television services; radio and television transmission services and sound recording), the scope of 'cultural industries' is somewhat broader.

attached to the services chapter,²⁵³ which sets out an understanding on *new services* not classified in the UN Provisional Central Product Classification (CPC) in its 1991 version as used during the Uruguay Round negotiations. The Understanding specifies that the commitments made do not apply in respect to any measure relating to a new service that cannot be classified under the CPC. Parties have an obligation to notify such new services and enter into negotiations to incorporate the new service into the scope of the Agreement, at the request of one of the Parties.²⁵⁴ This is a fairly cautious approach to future innovation and the new services that it may involve, as it prevents automatism in the coverage and may also relate to a burdensome and costly administration of the FTA. It also diverges from the current US practice.

The convergence between the EU and the US templates is most pronounced with regard to the chapters on intellectual property protection. Since the EU–Chile FTA and in particular with EU–CARIFORUM and EU–South Korea, the EU has included a number of TRIPS-plus provisions. Digital copyright norms (compliance with the WIPO Internet Treaties; provisions on technological protection measures and ISP liability) have become an intrinsic element of the EU deals too.²⁵⁵

III. Switzerland's PTAs

In addition to the European Free Trade Association (EFTA) Convention and the Free Trade Agreement with the EU of 1972, Switzerland has a network of 28 PTAs with some 38 partners. Most of its agreements have been concluded together with its EFTA partners (Norway, Iceland and Liechtenstein). Switzerland has also entered in its own right bilateral agreements – so far with Japan and China. It can be broadly maintained that Switzerland has followed the EU model in most essential aspects, but in application of its own policy agenda. Yet, there are some clear differences, too. The most striking one is that Switzerland has not formulated and implemented in all its PTAs a distinct strategy with regard to digital trade.

Many of the existing agreements have no discrete e-commerce chapters; neither is co-operation on information technology and Internet matters expli-

253 CETA, Annex X.

254 It is clarified that this regime does not apply to an existing service that could be classified under the CPC but that could not previously be provided on a cross-border basis due to lack of technical feasibility.

255 Wunsch-Vincent and Hold, *supra* note 160; also Henning Grosse Ruse-Khan, 'Access to Knowledge under the International Copyright Regime, the WIPO Development Agenda and the European Communities' New External Trade and IP Policy', in: Estelle Derclaye (ed.), *Research Handbook on the Future of EU Copyright* (Cheltenham: Edward Elgar, 2009), pp. 574–612; Josef Drexl, Henning Grosse Ruse-Khan, and Souheir Nadde-Phlix (eds.), *EU Bilateral Trade Agreements and Intellectual Property: For Better or Worse?* (Berlin: Springer, 2014).

citly formulated (except in the field of telecommunications services). Even in the IP chapters, while there is a reference to the WIPO Internet Treaties, no obligations with regard to the application of technological protection matters and/or the liability of ISPs are spelled out – this is true also for recent FTAs, such as those with Hong Kong and with Bosnia and Herzegovina (in force since 2012 and 2015 respectively). One explanation for this may be that these deals are the result of the joint negotiations with the EFTA partners and must reflect their common stance. This is contrasted with Switzerland's agreement with Japan (in force since 2009²⁵⁶), which contains a detailed chapter on electronic commerce.²⁵⁷ It is framed along the EU model – however, with a few specificities. The common features relate to the provisions on electronic signatures, paperless trade administration, consumer protection online, as well as the protection of personal data. The non-discrimination obligation included may have a broader scope, however, as it is linked to a liberal definition of 'digital products' as products such as computer programs, texts, plans, designs, videos, images and sound recordings or any combinations thereof, that are digitally encoded and transmitted electronically.²⁵⁸ Finally, the e-commerce chapter includes a comprehensive co-operation pledge that encompasses (a) data privacy; (b) fight against unsolicited commercial messages; (c) consumer confidence in electronic commerce; (d) cyber-security; (e) intellectual property; (f) electronic government; and (g) public morals, in particular ethics for young generations. It also makes reference to the need to include multistakeholder approaches in the governance of digital trade, as well as co-operation on efforts to develop the international framework for electronic commerce.²⁵⁹ This is an innovative feature of the Swiss FTA with Japan, which relates to broader issues of Internet governance. The more recent agreement with China entirely lacks such an e-commerce chapter.

In terms of services commitments, Switzerland has used both positive and negative list approaches. For instance, while with China the committed sectors are expressly listed, the FTAs with Hong Kong and Japan follow a negative list model. In these cases, Switzerland has secured that its regulatory space in some digital trade domains – notably audiovisual services – is well preserved. It not only lists all excluded sub-sectors in a detailed manner that mirrors the current situation in Switzerland but secures some wiggle-room for the adoption of measures in the future too. These may be defined, on the one hand, in a discrete category 'new services'; there may be also diverse additional qualifications in a

256 Abkommen über Freihandel und wirtschaftliche Partnerschaft zwischen der Schweizerischen Eidgenossenschaft und Japan vom 19. Februar 2009 (SR 0.946.294.632).

257 Switzerland–Japan FTA, Chapter 8.

258 Switzerland–Japan FTA, Article 72(a). An additional note specifies that for the purposes of this Chapter, digital products do not include those that are fixed on a carrier medium. These are covered by Chapter 2 on trade in goods.

259 Switzerland–Japan FTA, Article 82.

number of sectors. So, for instance, Switzerland has reserved the right to maintain, modify or adopt any measures restricting market access and national treatment with respect to broadcasting services.²⁶⁰ There is also a new generic category introduced – that of ‘Internet-based services’ – for which Switzerland reserves its right to introduce measure with respect to the protection of youth or to the prevention of addiction or compulsive behavior and other mental health hazards.²⁶¹

IV. The ‘mega-regionals’

Preferential trade policies have exponentially expanded in the last two decades. Next to the dense web of bilateral and regional trade agreements, there is a new drive to agree upon more comprehensive deals that, if adopted, would cover the bulk of global trade – the so-called ‘mega-regionals’. Presently, and next to TISA, there are two important trade deals²⁶² being negotiated that may radically change both global trade flows, as well as their regulation. The *Trans-Atlantic Trade and Investment Partnership Agreement (TTIP)* and the *Trans-Pacific Partnership Agreement (TPP)* are currently underway – respectively between the EU and the US, and between the US and eleven countries in the Asia-Pacific region.²⁶³ As these agreements are not yet agreed upon, it is unfitting and premature to analyze their possible implications on the basis of leaked pieces of information and hearsay.

We could nonetheless signal that under both fora, deeper liberalization as well as higher regulatory harmonization are anticipated. A key cross-cutting trade issue, next to comprehensive and robust market liberalization, has been the quest for *regulatory coherence* that promotes more seamless and efficient trade amongst the partners and ensures competitiveness and business facilitation. The TTIP, as negotiated between advanced industrialized parties that are at the same time the world’s key trade actors, is particularly ambitious. It aims at opening both the EU and the US markets to an unprecedented extent by eliminating all tariffs on trade, improving market access for services, and by tackling ‘behind the border’ non-tariff barriers that impede the flow of goods. In the pursuit of higher levels of regulatory coherence, parties seek to reduce the

260 EFTA–Hong Kong FTA, Annex X, List of Reservations and Commitments: Switzerland, at Section 31.

261 Ibid., at Section 100.

262 One could also mention the Regional Comprehensive Economic Partnership (RCEP), which is a negotiation led by the Association of Southeast Asian Nations (ASEAN) aiming to enhance economic integration and co-operation between the ten members of ASEAN and six countries with which ASEAN has PTAs (Australia, China, India, Japan, Korea and New Zealand).

263 Australia, Brunei Darussalam, Canada, Chile, Japan, Malaysia, Mexico, New Zealand, Peru, Singapore, the United States and Vietnam are presently negotiating the TPP. See <<http://www.ustr.gov/tpp>> (25 April 2015).

differences in regulations and standards by promoting greater compatibility, transparency and co-operation, while maintaining high levels of health, safety and environmental protection; they wish to develop rules, principles and new modes of co-operation on issues of global concern, including intellectual property and market-based disciplines addressing state-owned enterprises and discriminatory localization barriers to trade.

Digital trade is an essential part of the agenda of both deals but apart from the conventional PTA template on customs duties, authentication of electronic transactions and consumer protection, it is yet unclear how the treaty texts would look like and what they would cover. Key topics to follow will certainly be network neutrality, free information flows and data protection. The latter topic has been a source of intense contestation between the US and the EU, as these have diverging approaches towards the protection of privacy that are hardly reconcilable.²⁶⁴ Another TTIP battlefield to be watched out is certainly audiovisual services. These (including online media services) are presently excluded from the negotiating mandate of the European Commission under the sizeable pressure of the EU Parliament – in order to safeguard the ‘cultural exception’ and protect the cultural and linguistic diversity of the EU countries.²⁶⁵ Public services in general have been a major source of preoccupation in recent debates in Europe. But by far the most discussed and contentious topic facing intense civil society objection clearly is intellectual property rights. The fear is that the IP maximalist agenda of the Anti-Counterfeiting Trade Agreement (ACTA),²⁶⁶ as well as that of domestically unsuccessful US legislative initiatives, SOPA and PIPA,²⁶⁷ will in many aspects be replicated (or even ratcheted) in both the TPP and the TTIP.²⁶⁸ Digital copyright is part of these efforts and it remains to be seen how far-reaching the adopted rules will be and whether in-

264 For a detailed analysis, see Gasser’s contribution to this volume.

265 European Parliament, Resolution on EU Trade and Investment Negotiations with the United States of America (2013/2558[RSP]), paras 11–12.

266 Peter K. Yu, ‘ACTA and its Complex Politics’, *The WIPO Journal* 3 (2011), pp. 1–16; Daniel Gervais, ‘Country Clubs, Empiricism, Blogs and Innovation: The Future of International Intellectual Property Norm Making in the Wake of ACTA’, in: Mira Burri and Thomas Cottier (eds.), *Trade Governance in the Digital Age* (Cambridge: Cambridge University Press, 2012), pp. 323–343; David S. Levine, ‘Bring in the Nerds: Secrecy, National Security and the Creation of International Intellectual Property Law’, *Cardozo Arts and Entertainment Law Journal* 30:2 (2012), pp. 105–151.

267 Stop Online Piracy Act (SOPA), H.R. 3261 and Protect IP Act (Preventing Real Online Threats to Economic Creativity and Theft of Intellectual Property Act, or PIPA), S. 968. The SOPA/PIPA legislation aimed in essence to expand the ability of US law enforcement to fight online trafficking, also beyond the US national jurisdiction. After strong opposition by academics, corporations and civil society representatives, both bills were dropped. See e.g. Mark A. Lemley, David S. Levine, and David G. Post, ‘Don’t Break the Internet’, *Stanford Law Review* 64 (2012), pp. 34–38.

268 Sean M. Flynn, Brook K. Baker, Margot E. Kaminski, and Jimmy Koo, ‘The U.S. Proposal for an Intellectual Property Chapter in the Trans-Pacific Partnership Agreement’, *American University International Law Review* 28:1 (2013), pp. 105–202.

deed they will undermine existing user rights in reversal of more friendly and balanced national legislation and jurisprudence.²⁶⁹

D. Appraisal of the state of international economic law on matters of digital trade

In the preceding sections, we explored in some detail the state of international economic law with regard to digital trade issues. We mapped the law of the World Trade Organization as one of the mainstays of global economic rule-making for trade in goods and trade in services. While examining the rules and so as to evaluate their effects, we thought it helpful to think of the three layers of the contemporary communications model that underlies the Internet – a physical, a logical and a content layer. We saw that the WTO Agreements have fairly comprehensive rules affecting all these layers and digital trade can well be subsumed under the law of the GATT and the GATS. And this despite the fact that the WTO rule-making has not deliberately reacted to the changes brought about by digital technologies in general and the Internet in particular. It could indeed in a different causal order be argued that the highly institutionalized and rule-based framework of the WTO has facilitated the spread and adoption of the Internet as a global communication network, especially thanks to the liberal regime for trade in IT products, as well as that in telecommunications services. At the same time, we need to underline that there is a mismatch between the holistic picture of a digital environment and the rigid classifications into goods or services, under different tariff classifications and different services sectors and subsectors. They fail to reflect not only the changed reality of the convergence of media, telecommunications and IT sectors, markets, companies and products but also the actual ways in which the Internet functions in general and serves as a platform for trade and enabler of other services specifically.

We did not analyze the need for or the dimensions of a complete overhaul of the WTO rules (elements of such an analysis follow in the next section), but focused rather on the discussed so far and politically feasible channels of adaptation. As a first step in this enquiry we exposed the various grey zones, uncertainties and inadequacies of the existing rules, in particular under the GATS, which appear critical for digital trade. The example of an almost absolute non-committal for audiovisual services (i.e. essentially for the content layer) is strik-

269 See e.g. Henning Grosse Ruse-Khan, 'Criminal Enforcement and International IP Law', in: Christophe Geiger (ed.), *Criminal Enforcement of Intellectual Property: A Handbook of Contemporary Research* (Cheltenham: Edward Elgar, 2012), pp. 171–190; Peter K. Yu, 'Six Secret (and Now Open) Fears of ACTA', *SMU Law Review* 64 (2011), pp. 975–1094; Peter K. Yu, 'The Alphabet Soup of Transborder Intellectual Property Enforcement', *Drake Law Review Discourse* 1 (2012), pp. 16–33.

ing as well as illuminating as to the vital importance of value and interest conflicts, such as in the field of trade and culture. This conflict, especially as played out between the major negotiation drivers of the EU and the US, has led to multiple lock-ins and hindered adjustments through active rule-making. The political economy picture is of course much more complex, as we need to consider the domestic dynamics, as well as the heavy burden of negotiating within the WTO as a single undertaking (i.e. an agreement has to be reached on all issues amongst all members to allow the completion of the negotiation round²⁷⁰). The institutional constraints of the WTO as a member-driven organization should also be taken into account. Overall, legal adaptation under the auspices of the WTO has suffered.

Still, the dispute settlement mechanism remains a forceful channel of change as well as of legal certainty. Not only as it disciplines WTO Members, contains protectionism and ensures continued conformity with the WTO principles and obligations but also as it clarifies and further develops the WTO rules. The potency of this quasi-judicial mechanism is unprecedented. Indeed, it has been argued that the broad non-discrimination principles of the WTO combined with its effective enforcement can go beyond the mandate of the WTO as a trade governance forum.²⁷¹ In particular in this context, it has been maintained that they can limit censorship – also in the Internet age – and thus foster the free flow of information. As Joost Pauwelyn puts it: ‘If prying open markets is a way to pry open minds, WTO trade obligations can be used to limit censorship’.²⁷²

Despite this possibility and the overall utility of the WTO’s dispute settlement, judicial transplants cannot replace political consensus on the substance, particularly in a complex and highly technical domain, such as digital trade. We saw that as the Doha negotiations continue to make little progress, the multilateral venue of legal rule-making has been seriously undermined and this has triggered forum-shopping – bilaterally, regionally or through plurilateral initiatives, such as the TISA.

We saw that much has happened in bilateral and regional venues – not only in terms of liberalizing trade but also in overcoming analogue–digital disparities and creation of new rules. The PTAs have directly taken up most of the leftovers of the WTO Work Programme on E-Commerce and added new commit-

270 See e.g. Cottier, *supra* note 158.

271 Tim Wu, ‘The World Trade Law of Censorship and Internet Filtering’, *Chicago Journal of International Law* 7 (2006), pp. 263–287; Brian Hindley and Hosuk Lee-Makiyama, ‘Protectionism Online: Internet Censorship and International Trade Law’, *ECIPE Working Paper* 12 (2009).

272 Pauwelyn, *supra* note 145, at p. 5. See also Anupam Chander, ‘International Trade and Internet Freedom’, *Proceedings of the Annual Meeting of the American Society of International Law* 102 (2008), pp. 37–49. It should be noted that in *China – Audiovisual Products*, China was ultimately allowed to pursue its censorship regime under the ‘public morals’ exception, albeit in a less trade-restrictive manner.

ments – some of them build upon the existing WTO rules, others, however, address completely new and in essence, not strictly speaking <trade> issues, such as consumer protection, mutual recognition and safeguards for the free flow of data. In essence, PTAs create a tailored regime for digital trade.

PTA partners do benefit from the deeper, as well as often clearer, provisions.²⁷³ It appears that PTAs work better (albeit not always) for reconciling diverging interests – on long-standing trade topics, such as classification, and in politically charged domains, such as audiovisual services. PTAs are also in a better position to address the new generation of trade barriers, such as localization measures. Despite these virtues of PTAs, next to the generic ones of moving faster and easier forward, it should be stressed that the developments with regard to digital trade can overall be viewed as incremental – only catching up with technological advances in discrete fields (especially where business interests were pressing), and permitting so far little room for innovative legal design. The mega-regionals, currently under negotiation, may challenge this finding and create a new template for the governance of digital trade, but their results remain to be seen and the chance that they may merely add a layer of PTA-plus commitments seems at this moment high.

PTAs' benefits may also be offset by the fact that a patchwork of multiple and overlapping PTAs exacerbates world's asymmetric wealth distribution and rule fragmentation, and does not contribute to the free cross-border flow of information on a global scale. In addition, PTAs may be substantially undermining the value and impact of multilateral venues²⁷⁴ and the role of international law in the general.²⁷⁵

While it is beyond this article's aim and scope to engage in the debate of preferentialism versus multilateralism, purely from the perspective of digital trade and its demands on seamlessness and interoperability, the multilateral forum of the WTO does make more sense. In this sense, states acting as legal entrepreneurs need to contemplate ways of testing the usefulness of discrete rules and arrangements with regard to digital trade in PTAs and of multilateralizing the progress made.²⁷⁶

273 See e.g. Horn, Mavroidis and Sapir, *supra* note 240.

274 See generally Richard Baldwin and Patrick Low (eds.), *Multilateralizing Regionalism: Challenges for the Global Trading System* (Cambridge: Cambridge University Press, 2009); Andrew G. Brown and Robert M. Stern, <Free Trade Agreements and Governance of the Global Trading System>, *The World Economy* (2011), pp. 331–354.

275 See e.g. Nico Krisch, <The Decay of Consent: International Law in an Age of Global Public Goods>, *American Journal of International Law* 108 (2014), pp. 1–40.

276 Herman (*supra* note 1) suggests <bottom-up multilateralization>, whereby PTAs' e-commerce undertakings and provisions are extended to a larger number of partners, and <top-down multilateralization>, which advances e-commerce provisions, commitments and common learning to the WTO level.

E. Broader innovation governance questions

The Internet has been on various occasions and on different grounds heralded as a revolutionary technological development. Warschauer and Matuchniak frame it as the <fourth revolution in the means of production of knowledge>, following the three prior revolutions of language, writing, and print.²⁷⁷ They argue that its emergence and spread are idiosyncratic and particularly swift as they occur simultaneously with the transition from an industrial to an informational economy.²⁷⁸ Another way of thinking about the multiple and multifaceted effects of the Internet, as well as of conceptualizing its nature, is to refer to it as a <general purpose technology>.²⁷⁹ Such technologies are widely adopted, have many uses, as well as many spill-over effects. As such a technology, it has been argued that the Internet generates enormous value and serves as an engine of innovation and economic growth, and a conduit for the free flow of information.²⁸⁰ These benefits of the Internet as an enabling platform are, however, not given and have to do with its openness, messiness, unpredictability and generativity embedded in its original design.²⁸¹ As Benkler aptly sums up, innovation in the networked environment is typified by: change and complexity, rather than predictability and <well behaved> change; innovation and growth, rather than efficiency and optimization; <scruffy>, adaptive learning systems that do better than slower-moving, optimized systems; and open systems, which emphasize freedom to operate on standardized interfaces among different actors and components that do better than closed systems that emphasize control and well-ordered interaction among components and actors.²⁸² The innovation policy literature has explored different aspects of how innovation occurs and evolves under such conditions, the related causality effects and, ultimately, the policy framework that can best accommodate them.²⁸³

Trade policy, be it domestic or international, has so far not (or rarely²⁸⁴) been linked to these debates, except for discussions in the field of intellectual prop-

277 Mark Warschauer and Tina Matuchniak, <New Technology and Digital Worlds: Analyzing Evidence of Equity in Access, Use, and Outcomes>, *Review of Research in Education* 34:1 (2010), pp. 179–225, at p. 179, referring to Stevan Harnad, <Post-Gutenberg Galaxy: The Fourth Revolution in the Means of Production and Knowledge>, *Public-Access Computer Systems Review* 2:1 (1991), pp. 39–53, at p. 39.

278 See also Manuel Castells, *The Rise of the Network Society* (Malden, MA: Blackwell, 1996).

279 See e.g. Boyan Jovanovic and Peter L. Rousseau, <General Purpose Technologies>, in: Philippe Aghion and Steven N. Durlauf (eds.), *Handbook of Economic Growth* (Amsterdam: Elsevier, 2005), pp. 1182–1224.

280 Richard S. Whitt, <A Deference to Protocol: Fashioning a Three-dimensional Public Policy Framework for the Internet Age>, *Cardozo Arts and Entertainment Law Journal* 31 (2013), pp. 689–768, at pp. 717–729.

281 Jonathan L. Zittrain, *The Future of the Internet – and How to Stop It* (New Haven, CT: Yale University Press, 2008).

282 Benkler, *supra* note 5, at p. 314.

283 For a good overview and references to the important sources, see Whitt, *supra* note 280.

284 For an exception, see e.g. Gasser and Palfrey, *supra* note 4.

erty rights protection.²⁸⁵ One can argue that while such a discourse disconnect is not infrequent in complex fields of policy-making with different origins and actors,²⁸⁶ it is unfortunate. Especially since, at the same time, policy-makers have highly prioritized innovation as the key driver of economic growth and global welfare and made digital trade an important item in these agendas.

The question is how these aspirations can be reconciled with the analogue and offline core of international economic law, which despite the wish to foster free trade and strengthen it institutionally, despite the acknowledged need for co-operation in various areas and the strived balance between containing protectionism and giving possibilities for safeguarding public interests of importance to domestic constituencies, still very much *thinks* in terms of trade crossing borders through brick-and-mortar customs houses and incremental innovation through protected investments in production.

Sceptics have argued that the failure of world trading rules to keep abreast with the contemporary global marketplace that is non-territorial, defined by global supply chains and private businesses as key actors, lies deep. It stems from the mercantilist nature of the WTO, its monolinear conception of production and trading patterns, and its state-centric, top-down paradigm of rule-making.²⁸⁷ *These three factors combine to create a system that officially claims to embrace free trade, yet still pits one political interest against another in a quest to seize protectionist rents. Powerful lobbies, such as domestic producers, capture trade negotiators and replace national interests with those of their own.*²⁸⁸ We saw these trends, albeit perhaps in not such a black-and-white pattern, reflected in many ways in the evolution of digital trade rules in the WTO, as well as in the ever denser web of plurilateral trade treaties.

To understand and address the innovation governance challenge, however, we need to go beyond the trade venues. While, for this article's sake, it was useful to focus on the international trade fora and the relevant rules they produce, we need to account for the practical reality of contemporary governance, for its complexity and profound fragmentation. Indeed, digital trade issues, as any others, can no longer be neatly subordinated and dealt with under one exclusive regime but lie at the intersection of multiple regimes, where non-hierarchical,

285 See e.g. Peter K. Yu, *Trade Agreement Cats and Digital Technology Mouse*, in: Brian Mercurio and Ni Kuei-Jung (eds.), *Science and Technology in International Economic Law: Balancing Competing Interests* (Abingdon: Routledge, 2014), pp. 185–211; also Bechtold's contribution to this volume.

286 Rostam J. Neuwirth, *Global Market Integration and the Creative Economy: The Paradox of Industry Convergence and Regulatory Divergence*, *Journal of International Economic Law* 18 (2015), pp. 21–50.

287 Sungjoon Cho and Claire R. Kelly, *Are World Trading Rules Passé?*, *Virginia Journal of International Law* 53 (2013), pp. 623–666.

288 Cho and Kelly, *ibid.*, at p. 626, referring also to Chris Brummer, *How International Financial Law Works (and How It Doesn't)*, *Georgetown Law Journal* 99 (2011), pp. 257–327.

often overlapping institutions interact.²⁸⁹ This changes the dynamics of the game as actors can engage in «regime-shifting», whereby they «relocate rule-making processes to international venues whose mandates and priorities favor their concerns and interests».²⁹⁰ It has also changed the nature of the actors as states no longer have the monopoly on power. As Burris, Kempa and Shearing succinctly put it: «States exist today as one nodal assemblage among many in an increasingly complex field of governance relationship and practices. In the context of the fragmentation of sovereignty in times of progressing globalization, the reach of [...] non-state actors extends beyond any type of clearly delimited private sphere into a wide variety of areas of collectivization that have broad impact on the social and physical environment. Governance is a multilevel affair, and therefore we can expect to see the proliferation in involvement of non-state actors in processes of governance at the local, national, and inter/supra-national levels».²⁹¹

So, against this backdrop, the question of how to reconcile the strive for facilitating and fostering innovation in the Internet age – in general as well as specifically through digital trade, entails several sub-questions that need to be addressed. The first is how the state as a global governance actor reacts and positions itself in this fluid environment; the second asks how the state can enable innovation that is global and decoupled from the nation state, while at the same time cater for the essential interests of its citizenry; the third question relates to the appropriate decision-making processes of bringing about these changes and of moving forward towards an apt and sustainable legal design for digital trade. There is some urgency attached to this endeavor, as even in seemingly technical decision-making – such as for classification, localization requirements for foreign companies or demands on interoperability – essential rights and values, such as freedom of expression, fairness, equality of opportunity and justice are affected.²⁹²

States' record so far has not been great in appropriately answering (or even asking) these questions. The original and in many aspects libertarian nature of the Internet has increasingly been challenged by assertions of power and jurisdiction or the development of rules that restrict the ability of companies and individuals to access and use the Internet and for data to freely move across borders.²⁹³ States may have also been erring in their ways to approach digital trade

289 Raustiala and Victor, *supra* note 156, at p. 279.

290 Helfer, *supra* note 215, at p. 39.

291 Scott Burris, Michael Kempa, and Clifford Shearing, «Changes in Governance: A Cross-Disciplinary Review of Current Scholarship», *Akron Law Review* 41:1 (2008), pp. 1–66, at p. 19.

292 See e.g. Anupam Chander and Uyên P. Lê, «Free Speech», *UC Davis Legal Studies Research Paper* 351 (2013), pp. 1–51.

293 See e.g. Laura DeNardis, «Internet Points of Control as Global Governance», in: Mark Raymond and Gordon Smith (eds.), *Organized Chaos: Reimagining the Internet* (Waterloo, ON: Centre for International Governance Innovation, 2014).

and online creativity, as they settle for incremental rule adjustment, often driven by the vested interests of incumbent stakeholders: <The benefits of crisply defined and enforced appropriation models [may be] outweighed by the fact that in order to secure that appropriability, the law has set up a set of rules that, in protecting yesterday's actors, limits to too great an extent the freedom of new innovators to operate today>.²⁹⁴

This does not mean that simply by embracing the Internet's <utopian> open design, innovation will unfold and policy challenges will be miraculously solved.²⁹⁵ Governments do have the right as well as the responsibility to protect interests and values important to their citizens, amongst other things, privacy and data protection. But, at the same time, they also have a variety of tools available to achieve these goals and many of them are congruent with the functional nature of the Internet. As Chander and Lê convincingly argue: <We must insist on data protection without data protectionism. A better, safer Internet for everyone should not require breaking it apart>.²⁹⁶

Overall, states should strive to adhere to the deferential principle of respecting the functional integrity of the Internet, and combine this with appropriate institutional and organizational forms, which can ultimately <help ensure that any potential regulation of Internet-based activities enables, rather than hinders, tangible and intangible benefits for end users>.²⁹⁷ To be sure, the design of this distributed governance architecture in a <shared environment>²⁹⁸ is hard to pinpoint and there is a need for more research that maps existing models in different regimes seeking apt solutions, as well as maps power relations in different institutional settings, which are ultimately important for the feasibility of any proposed design.²⁹⁹ While states grapple to formulate their coherent roles in the broad Internet governance landscape, they should subscribe to a <do no harm> principle. In this sense, policy-makers should not adopt regulations that violate the Internet's end-to-end, interconnected and agnostic nature and give way to the comparative wisdom and efficacy of polycentric processes and outcomes.³⁰⁰

Against the backdrop of the complexity of issues affected by digital trade and the complexity of the governance mechanisms, while the WTO may be the appropriate forum to center the global legal framework for trade in the Internet age, the procedures for achieving this may need to change. Cho and Kelly have

294 Benkler, *supra* note 5, at p. 314.

295 Whitt, *supra* note 280, at p. 730.

296 Chander and Lê, *supra* note 173, at p. 50; also Zittrain, *supra* note 281.

297 Whitt, *supra* note 280, at p. 689.

298 Vinton G. Cerf, Patrick Ryan, and Max Senges, <Internet Governance Is Our Shared Responsibility>, *I/S: A Journal of Law and Policy for the Information Society* 10 (2014), pp. 1–41.

299 See e.g. Urs Gasser, Ryan Budish, and Sarah Myers West, <Multistakeholder as Governance Groups: Observations from Case Studies>, *Berkman Center for Internet and Society Research Publication* 1 (2015).

300 Whitt, *supra* note 280, at pp. 766–767.

convincingly argued for the use of hybrid private and public trade networks formed amongst issue-specific experts and policy-makers who work on a variety of trade problems. <Based on shared knowledge and beliefs on particular technical issues, these networkers may generate certain regulatory prototypes (soft law) that can both reflect and guide their future behaviors in this area.>³⁰¹ In the longer term, these network activities may pave the way for future treaty amendments that will be appropriate and well embedded in the practical reality of the particular issue-area.³⁰²

F. Conclusions

In the short- to mid-term, it appears that those engaged in cyber-trade will continue to face hindrances, as the regulatory framework at all levels of governance has not yet been <digitized>, and as policy-makers struggle to lay the foundations of a sound regulatory environment. This requires grappling with both the remnants of the analogue/offline rules structure and with the creation of new rules that appropriately address digital technologies and their effects on how individuals and communities communicate, how markets and sectors develop, and how innovation unfolds.

In the WTO, changes are bound to be fewer and less far-reaching than on the national and on the regional level. Although the WTO is the obvious organization to advance the digital trade agenda that mobilizes multilateral disciplines, and although it certainly has the potential to do so, in the short-term, the WTO is unable to deliver swift results with respect to e-commerce. Its main contribution at this stage concerns conventional market access and involves expanded GATS commitments, possibly with some finer and more precise scheduling, and comprehensive liberalization in selected sectors, such as telecommunications and computer-related services.³⁰³ As the possibility of cross-border Internet-related disputes has significantly increased, we may also gain from interpretative insights and clarifications offered by the WTO panels and the Appellate Body. The WTO will also certainly continue to be a major force of disciplining unitary protectionist measures. As more regulatory experiments pertinent to digital trade unfold at the regional level in the multiplying PTAs and in the more ambitious and potentially more innovative mega-regional trade deals, these are likely to inform both the judicial and the non-judicial WTO governance. There may be ways of multilateralizing the achieved progress and updating the WTO rules and commitments.

301 Cho and Kelly, *supra* note 287, at p. 627.

302 Ibid. See also Bernard Hoekman, *Supply Chains, Mega-Regionals and Multilateralism: A Road Map for the WTO* (London: CEPR Press, 2014). *

303 Carlos A. Primo Braga, <E-commerce Regulation: New Game, New Rules?>, *The Quarterly Review of Economics and Finance* 45 (2005), pp. 541–558.

In the long-term, the source of change is two-pronged. On the one hand and quite naturally, it has to do with the ever more sophisticated technologies, which have always been a key driving force in the process of globalization of the economy and thus of the adaptation of law. For digital technologies, it was submitted that the changes may be truly disruptive as they impact on every single facet of society and enable a type of innovation that is open, messy and different from conventional models of incremental adaptation. The second source of transformations ensues from the tectonic shifts in global governance. We observe complex and fragmented governance structures in the information and communication environment, with an increased level of unitary state action in many interlinked regulatory domains, but also with multiple non-state actors' interventions, all of which have global spill-over. In addition, regulation through technologies and regulation through intermediaries proliferate, making the whole system opaque and less subject to conventional checks and balances. As well as paying attention to the quality of rules, such developments force us to rethink the structures and processes of international rule-making in the interests of preserving long-term legitimacy, of facilitating innovation over the Internet and of protecting global public goods in an interdependent world.³⁰⁴ States will need to reposition themselves in this new and fluid environment.

Finally, if some <blue-sky> thinking is permitted, it could be that trade 3.0 and the related transformative processes may be so profoundly different that their influence upon trade policy formulation and negotiations will force thinking outside the box and ultimately lead to a new design of WTO governance, at least in those core fields affected by the Internet.

304 Keith E. Maskus and Jerome H. Reichman (eds.), *International Public Goods and Transfer of Technology under a Globalized Property Regime* (Cambridge: Cambridge University Press, 2005); Eric Brousseau, Tom Dedeurwaerdere, and Bernd Siebenhüner (eds.), *Reflexive Governance for Global Public Goods* (Cambridge, MA: MIT Press, 2012).