

TRADE LAW 4.0: ARE WE THERE YET?

*Mira Burri**

This article explores the shift in the international economic law discourse from trade law 2.0 (as trade in goods and services online) towards trade law 4.0 (as the regulation of the data-driven economy). In this context, it traces the dynamics of digital trade rule-making over the past decade, set in a complex geopolitical landscape, by looking at some broad trends, as well as at distinct regulatory models endorsed by preferential trade agreements (PTAs) and the innovative templates of Digital Economy Agreements (DEAs). The article goes then back to the multilateral venue of the World Trade Organization (WTO) and reveals how PTAs have worked as regulatory laboratories but asks whether their results can be fully translated to the WTO. This enquiry highlights both the possibilities and the constraints of the multilateral forum. The article's final analytical strand shows that the topic of digital trade as linked to the underlying digitization processes is transforming global trade law – yet, we can observe both legal innovation as well as path dependencies that stem from pre-existing regulatory regimes and geopolitical positioning, which might ultimately prevent us from designing a regulatory framework that reflects the practical reality of trade 4.0 and the needed levels of legal certainty, technological neutrality and interoperability of rules.

I. INTRODUCTION

‘Electronic commerce’¹ or ‘digital trade’², as it is now more frequently referred to, has been one of the very few areas of international economic law where one can observe a shared willingness to engage in regulatory cooperation and new rule-making across different venues. It could be argued that electronic commerce is an old trade negotiation

* Professor of International Economic and Internet Law, University of Lucerne, Switzerland. Contact: mira.burri@unilu.ch.

¹ The WTO Work Programme on Electronic Commerce defined ‘electronic commerce’ to be ‘understood to mean the production, distribution, marketing, sale or delivery of goods and services by electronic means’. See WTO, Work Programme on Electronic Commerce, WT/L/274, 30 September 1998, at para. 1.3. The WTO continues to use ‘e-commerce’ in recent digital trade-specific developments, such as the Joint Statement Initiative. See WTO, Joint Statement Initiative on Electronic Commerce, WT/L/1056, 25 January 2019. For an overview of the different definitions of e-commerce, see e.g. A.D. Mitchell, ‘Toward Compatibility: The Future of Electronic Commerce within the Global Trading System’, *Journal of International Economic Law* (2001), 683–723, at 685–686.

² The OECD has pointed out that, while there is no single recognized and accepted definition of digital trade, there is a growing consensus that it encompasses digitally-enabled transactions of trade in goods and services that can either be digitally or physically delivered, and that involve consumers, firms, and governments. Critical is that the movement of data underpins contemporary digital trade and can also itself be traded as an asset and a means through which global value chains are organized and services delivered. See J. López González and M.-A. Jouanjean, ‘Digital Trade: Developing a Framework for Analysis’, *OECD Trade Policy Papers* 205 (2017).

topic and it is only natural that now, over two decades after the adoption of the 1998 Work Programme on Electronic Commerce by the membership of the World Trade Organization (WTO),³ there is some actual progress. Such an assumption of a linear development would however be flawed, as not only the scope and the contents of the topic for negotiation, but also how governments approach the digital economy as a set of regulatory questions that go beyond the mere liberalization of pertinent services sectors and the reduction of tariff and non-tariff barriers to trade, have profoundly changed.⁴

This article delves into this new complexity and seeks to show the transformation of the regulatory topic from trade law 2.0 (as the mere trade in goods and services online) towards trade law 4.0 (as the regulation of the data-driven economy). It further explores the dynamics of digital trade regulation in the past decade in a complex geopolitical setting by looking at some broader trends, as well as at distinct regulatory models endorsed by preferential trade agreements (PTAs) and the new templates of the Digital Economy Agreements (DEAs) that also signal room for innovation in trade law. The article goes then back to the multilateral forum of the WTO and reveals how indeed PTAs have worked as regulatory laboratories and asks whether their results can be fully translated to the WTO. The enquiry seeks to highlight both the possibilities and the constraints of the multilateral forum in this context. The article's final analytical strand shows that the topic of digital trade as linked to the underlying digitization processes is transforming global trade law – yet, we can observe both legal innovation as well as path dependencies that stem from pre-existing regulatory regimes and geopolitical positioning, which might ultimately prevent us from designing a regulatory framework that truly reflects the practical reality of trade 4.0 and the needed levels of legal certainty, technological neutrality and the interoperability of rules going forward.

II. FROM TRADE 2.0 TO TRADE 4.0

Legal adaptation in the face of technological advances, including in the area of trade law, is not a new topic.⁵ This is true also for digital technologies, as the WTO membership realized early on with the 1998 Work Programme on Electronic Commerce that all areas of trade are deeply affected by the Internet and changes in the existing rules for trade in goods, trade in services, as well as those for the protection of intellectual property (IP) rights, may be needed. This acknowledgment was accompanied with a host of studies that explored where indeed such changes were urgent and what they might look like, considering also their political feasibility.⁶ Yet,

³ WTO (1998), supra note 1.

⁴ See e.g. S.J. Evenett and J. Fritz, *Emergent Digital Fragmentation: The Perils of Unilateralism* (Brussels: CEPR Press, 2022).

⁵ See e.g. R. Brownsword and M. Goodwin (eds), *Law and the Technologies of the Twenty-First Century* (Cambridge: Cambridge University Press, 2012); R. Brownsword, E. Scotford and K. Yeung (eds), *The Oxford Handbook on Law, Regulation and Technology* (Oxford: Oxford University Press, 2017); S. Peng, H. Liu and C. Lin (eds), *Governing Science and Technology under the International Economic Order* (Cheltenham: Edward Elgar, 2018).

⁶ See e.g. Mitchell, supra note 1; S. Wunsch-Vincent, *The WTO, the Internet and Digital Products: EC and US Perspectives* (Oxford: Hart, 2006); S. Wunsch-Vincent, 'Trade Rules for the Digital Age', in M.

it is fair to note that this dual mobilization of policy and scholarship was based on a wave of technological changes that were still so to speak at level 2.0, where the Internet was seen as a mere platform permitting the online sale of services and goods but failed to recognize the disruptive potential of the Internet as a general purpose technology (GPT) with far-reaching spillover effects.⁷ With the changing conditions of trade and the emergence of global value chains (GVCs) as well as intensified convergence and servicification, these effects became palpable and were considered by a series of later studies.⁸ Yet, the centrality of data remained largely ignored, as its embeddedness in the economy was at an early stage – at the phase of trade 3.0. It is only recently with the advent of the so-called ‘Fourth Industrial Revolution’ that the impact of data across all sectors of the economy and the disruptive character of digitization have been fully acknowledged.⁹ And it is only in very recent times, indeed no earlier than some 5 years ago, with the shaping of Big Data and artificial intelligence (AI) as distinct new phenomena, that both policy and academic circles, not exclusively in the area of trade, recognized the need for a change in legal design that goes beyond incremental adjustments.¹⁰

Overall, it can be maintained that we have three, albeit not neatly delineated, phases of technological advances that are immediately pertinent for the global trade law framework. At the same time, it should also be acknowledged that none of them has

Panizzon, N. Pohl and P. Sauvé (eds), *GATS and the Regulation of International Trade in Services* (Cambridge: Cambridge University Press), 497–529.

⁷ See e.g. B. Jovanovic, B. and P.L. Rousseau, ‘General Purpose Technologies’, in P. Aghion and S.N. Durlauf (eds), *Handbook of Economic Growth* (London: Elsevier), 1182–1224; R. Whitt, ‘A Deference to Protocol: Fashioning a Three-dimensional Public Policy Framework for the Internet Age’, *Cardozo Arts and Entertainment Law Journal* 31 (2013), 689–768.

⁸ M. Burri and T. Cottier, (eds), *Trade Governance in the Digital Age* (Cambridge: Cambridge University Press, 2012); Kommerskollegium, *Everybody Is in Services: The Impact of Servicification in Manufacturing on Trade and Trade Policy* (Stockholm: Swedish National Board of Trade, 2012); A. Chander, *The Electronic Silk Road: How the Web Binds the World in Commerce* (New Haven: Yale University Press, 2013); Kommerskollegium, *No Transfer, No Production: Report on Cross-border Data Transfers, Global Value Chains, and the Production of Goods* (Stockholm: Swedish National Board of Trade, 2015); R. Lanz and A. Maurer, ‘Services and Global Value Chains: Some Evidence on Servicification of Manufacturing and Services Networks’, *WTO Working Paper ERSD 3* (2015); M. Burri, ‘Designing Future-Oriented Multilateral Rules for Digital Trade’, in P. Sauvé and M. Roy (eds) *Research Handbook on Trade in Services* (Cheltenham: Edward Elgar, 2016), 331–356; P. Sauvé and M. Roy (eds), *Research Handbook on Trade in Services* (Cheltenham: Edward Elgar, 2016).

⁹ See e.g. F. Floridi, *The Fourth Revolution: How the Infosphere Is Reshaping Human Reality* (Oxford: Oxford University Press, 2014); K. Schwab, *The Fourth Industrial Revolution* (New York: Portfolio, 2017); WTO, *World Trade Report 2018: The Future of World Trade: How Digital Technologies Are Transforming Global Commerce* (Geneva: World Trade Organization, 2018); M. Burri, ‘Understanding and Shaping Trade Rules for the Digital Era’, in M. Elsig, M. Hahn and G. Spilker (eds), *The Shifting Landscape of Global Trade Governance* (Cambridge: Cambridge University Press, 2019), 73–106.

¹⁰ See e.g. J. Manyika et al., *Big Data: The Next Frontier for Innovation, Competition, and Productivity* (Washington, DC: McKinsey Global Institute 2011); V. Mayer-Schönberger and K. Cukier, *Big Data: A Revolution That Will Transform How We Live, Work, and Think* (New York: Eamon Dolan/Houghton Mifflin Harcourt, 2013); N. Henke et al., *The Age of Analytics: Competing in a Data-Driven World* (Washington, DC: McKinsey Global Institute, 2016); J. Bughin et al., *Artificial Intelligence the Next Digital Frontier?* (Washington, DC: McKinsey Global Institute, 2017); A. Renda, *Artificial Intelligence: Ethics, Governance and Policy Challenges*, A Report of the CEPS Task Force (2019); T. Wischmeyer and T. Rademacher (eds), *Regulating Artificial Intelligence* (Berlin: Springer, 2020).

been fully reflected in its rules. This is even true also the very early ‘phase 1.0’ questions – such as those about the application of the General Agreement on Tariffs and Trade [GATT] or the General Agreement on Trade in Services [GATS]) for new digital offers, or about their classification under the existing services sectors, which can trigger very different sets of obligations.¹¹ Other issues, such as the moratorium on customs duties for electronic transmissions, which appeared to be one of the ‘easy’ items from the WTO E-Commerce Programme but now faces contestation, also remain unresolved.¹² It seems at the same time that both policy and scholarship increasingly focus on the new issues, in particular around the data-driven economy.¹³ There may be good reasons for this shift: first, it can well be justified by the advanced digitization and in particular the critical importance of data to societies. In the context of trade policies, this has translated to ensuring data flows across borders, as data is embedded in a growing number of services and goods and there is a critical interdependence between cross-border data flows and digital growth and innovation – for instance, in the development of AI or the Internet of Things (IoT).¹⁴ The second reason can be linked to a new set of regulatory questions that the use of data and its borderless nature¹⁵ have opened – in particular those around data sovereignty and the protection of privacy, national security and other domestic values and interests.¹⁶ What is apparent in this context, as the article discusses in the next sections, is that the emerging digital trade law seeks to address these new regulatory issues that go beyond classic WTO topics, such as reduction of tariffs or services liberalization, and targets domestic regimes.

III. DIGITAL TRADE RULE-MAKING IN PREFERENTIAL TRADE VENUES

¹¹ For details, see e.g. R.H. Weber and M. Burri, *Classification of Services in the Digital Economy* (Berlin: Springer, 2012); S. Peng, ‘Renegotiate the WTO Schedule of Commitments? Technological Development and Treaty Interpretation’, *Cornell International Law Journal* 45 (2012), 403–430; M. Burri, ‘The International Economic Law Framework for Digital Trade’, *Zeitschrift für Schweizerisches Recht* 135 (2015), 10–72; I. Willemys, ‘GATS Classification of Digital Services – Does “the Cloud” Have a Silver Lining?’, *Journal of World Trade* 53 (2019), 59–82.

¹² The moratorium has only been temporarily extended several times. Its scope and application remain heavily contested, with in particular India and South Africa arguing against it. See WTO, Work Programme on Electronic Commerce: The Moratorium on Custom Duties on Electronic Transmissions: Need for Clarity on its Scope and Impact, WT/GC/W/833, 8 November 2021.

¹³ See e.g. M. Burri (ed), *Big Data and Global Trade Law* (Cambridge: Cambridge University Press, 2021); S. Peng, C. Lin and T. Streinz (eds), *Artificial Intelligence and International Economic Law* (Cambridge: Cambridge University Press, 2021).

¹⁴ See e.g. K. Irion and J. Williams, *Prospective Policy Study on Artificial Intelligence and EU Trade Policy* (Amsterdam: The Institute for Information Law, 2019); A. Chander, ‘AI and Trade’, in Mira Burri (ed), *Big Data and Global Trade Law* (Cambridge: Cambridge University Press, 2021), 115–127.

¹⁵ See e.g. J. Daskal, ‘The Un-territoriality of Data’, *The Yale Law Journal* 125 (2015), 326–398; K.E. Eichensehr, ‘Data Extraterritoriality’, *Texas Law Review* 95 (2017), 145–160.

¹⁶ See e.g. M. Burri, ‘Interfacing Privacy and Trade’, *Case Western Journal of International Law* 53 (2021), 35–88; A. Chander and H. Sun, ‘Sovereignty 2.0’, *Georgetown Law Faculty Publications* 2404 (2021). A. Chander and P.M. Schwartz, ‘Privacy and/or Trade’, *University of Chicago Law Review* 90 (forthcoming 2023), <http://dx.doi.org/10.2139/ssrn.4038531>

A. Overview

The regulatory environment for digital trade has been shaped by PTAs. Out of the 375 agreements signed between 2000 and June 2022, 137 contain provisions on e-commerce/digital trade and 105 have dedicated electronic commerce/digital trade chapters.¹⁷ Although the pertinent rules are highly heterogeneous and differ as to issues covered, the level of commitments and their binding nature, it is overall evident that the trend towards more and more detailed provisions on digital trade has intensified significantly over the years. The relevant aspects of digital trade governance are spread across the treaties and can be found in: (1) the specifically dedicated electronic commerce chapters; (2) the chapters on cross-border supply of services (with particular relevance of the telecommunications, computer and related, audiovisual and financial services sectors); as well as in (3) the IP chapters.¹⁸ In this article, the single focus is on the electronic commerce/digital trade chapters, which have become the bedrock of new rule-making and can arguably also provide a basis for a future multilateral or plurilateral agreement on digital trade under the WTO umbrella.

The electronic commerce chapters play a dual role in the landscape of trade rules in the digital era. On the one hand, they represent an attempt to compensate for the lack of progress in the WTO and remedy the ensuing uncertainties. These chapters directly or indirectly address many of the questions of the WTO Electronic Commerce Programme that have been discussed but still remain open. For instance, a majority of the chapters recognize the applicability of WTO rules to electronic commerce¹⁹ and establish an express and permanent duty-free moratorium on electronic transmissions.²⁰ In most of the templates tailored along the US model, the chapters also include a clear definition of ‘digital products’, which treats products delivered offline equally to those delivered online,²¹ so that technological neutrality is ensured and some of the classification dilemmas of the GATS are cast aside (in particular when combined with negative committing for services). The electronic commerce chapters also include rules that have not been treated in the context of the WTO negotiations – the so-called ‘WTO-extra’ issues. One can group these rules into two broader categories: (1) rules that seek to facilitate digital trade in general, by tackling issues such as paperless trading and electronic authentication; and (2) rules that address cross-border data, new digital trade barriers and newer issues, which can encompass questions ranging from cybersecurity to open government data. While in the first cluster of issues the number of PTAs that contain such rules is substantial, there is a greater variety in the second cluster with still

¹⁷ This analysis is based on a dataset of all data-relevant norms in trade agreements (TAPED). See M. Burri and R. Polanco, ‘Digital Trade Provisions in Preferential Trade Agreements: Introducing a New Dataset’ *Journal of International Economic Law* 23 (2020), 187–220. The cut-off date for the article’s analysis is 22 June 2022. For all data, as well as updates of the dataset, see <https://unilu.ch/taped>

¹⁸ For analysis of all relevant chapters, see M. Burri, ‘The Regulation of Data Flows in Trade Agreements’, *Georgetown Journal of International Law* 48 (2017), 408–448.

¹⁹ See e.g. US–Singapore FTA, Article 14.1; US–Australia FTA, Article 16.1.

²⁰ See e.g. US–Singapore FTA, Article 14.3(1); US–Chile FTA, Article 15.3.

²¹ See e.g. US–Singapore FTA, Article 14.3; US–Australia FTA, Article 16.4.

only few agreements with rules on data,²² as well as various conditionalities attached to them.

B. Distinct Trends and Models in Digital Trade Rule-Making

There are different ways of mapping the landscape of digital trade rule-making. Most of the existing enquiries follow a country-based approach and sketch the emergent models of the main stakeholders – the United States (US), the European Union (EU) and China, often looking in addition at the diffusion of these models across other agreements.²³ This article, also for the sake of brevity, adopts a slightly different method and starting with one basic model – that of the 2018 Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP) – traces the rule-frameworks, especially the most recent treaties that are representative of the current actors' positioning, that go beyond it ('CPTPP-plus') or diverge from it ('CPTPP-minus'). The CPTPP is a suitable starting point, as it is the first PTA with a sophisticated electronic commerce chapter²⁴; it is a mega-regional treaty with multiple signatories,²⁵ whose impact will be potentially augmented with the accession of the United Kingdom (UK) in the pipeline²⁶ and pending requests by China and Taiwan,²⁷ the final reason stems from the fact that the CPTPP digital trade model has diffused in a substantial number of subsequent agreements that bind countries to its implementation.²⁸

The CPTPP contains important provisions that seek, on the one hand, to facilitate digital trade by providing a level of interoperability between domestic regulatory regimes and on the other to curb data protectionism. Illustrative of the first category are the rules on the domestic electronic transactions framework with binding

²² Thus far only 42 PTAs have rules on data flows and 23 PTAs have rules on data localization.

²³ See e.g. M. Burri, 'The Governance of Data and Data Flows in Trade Agreements: The Pitfalls of Legal Adaptation' *UC Davies Law Review* 51 (2017), 65–132; H. Gao, 'Digital or Trade? The Contrasting Approaches of China and US to Digital Trade', *Journal of International Economic Law* 21 (2018), 297–321; I. Willemyns, 'Agreement Forthcoming? A Comparison of EU, US, and Chinese RTAs in Times of Plurilateral E-Commerce Negotiations', *Journal of International Economic Law* 23 (2020), 221–244; M. Burri, 'Data Flows and Global Trade Law', in M. Burri (ed), *Big Data and Global Trade Law* (Cambridge: Cambridge University Press, 2021), 11–41; M. Burri, 'The Impact of Digitization on Global Trade Law', *German Law Journal* 24 (forthcoming 2022).

²⁴ The chapter is identical with the negotiated electronic commerce provisions under the Trans-Pacific Partnership Agreement (TPP), so the influence of the US negotiation position on digital trade is clearly discernible.

²⁵ CPTPP parties are Australia, Brunei, Canada, Chile, Japan, Malaysia, Mexico, New Zealand, Peru, Singapore and Viet Nam. The US withdrew from the preceding TPP negotiations with the start of the Trump administration.

²⁶ On 1 February 2021, the UK formally requested to join the CPTPP and on 2 June 2021, the CPTPP commission agreed to start negotiations. See e.g. UK Department for International Trade, *UK Accession to CPTPP: The UK's Strategic Approach* (London: Department for International Trade, 2021).

²⁷ US Congressional Research Service, 'China and Taiwan Both Seek to Join the CPTPP', 24 September 2021.

²⁸ See e.g. the 2016 Chile–Uruguay FTA, the 2016 updated Singapore–Australia FTA (SAFTA), the 2017 Argentina–Chile FTA, the 2018 Singapore–Sri Lanka FTA, the 2018 Australia–Peru FTA, the 2019 Brazil–Chile FTA, the 2019 Australia–Indonesia FTA, the 2018 USMCA, 2019 Japan–US DTA, and the 2020 DEPA between Chile, New Zealand, Singapore.

obligations for the parties to follow the principles of the UNCITRAL Model Law on Electronic Commerce 1996 or the UN Convention on the Use of Electronic Communications in International Contracts.²⁹ The provisions on paperless trading and on electronic authentication and electronic signatures complement this by securing equivalence of electronic and physical forms.³⁰ Furthermore, in terms of conditioning the domestic regulatory environment, the CPTTP e-commerce chapter includes provisions, albeit in a soft law form, on consumer protection,³¹ spam control,³² net neutrality,³³ as well as on cybersecurity.³⁴ The CPTTP addresses also the new importance attached to data protection – yet, there seems to be a prioritization of trade over privacy rights.³⁵ This reflects the US stance, as the US has (at least thus far) a fragmented privacy protection regime with relatively low standards, which has also been problematic in securing transatlantic data flows.³⁶

In the second category of data-relevant rules, the CPTTP includes a clear ban on localization measures,³⁷ a ban on forced technology transfer of source code,³⁸ as well as a hard rule on free data flows, explicitly including personal information.³⁹ This is critical and may limit substantially domestic policy space. While certain restrictions are permitted if they do not amount to ‘arbitrary or unjustifiable discrimination or a disguised restriction on trade’ and ‘impose restrictions on transfers of information greater than are required to achieve the objective’,⁴⁰ the scope of the exception is unclear.⁴¹ This can be linked to legal uncertainty, as well as unworkable safeguards for domestic constituencies, as pointed out by New Zealand’s Waitangi Tribunal.⁴²

²⁹ Article 14.5 CPTTP.

³⁰ Articles 14.9 and Article 14.6 CPTTP.

³¹ Article 14.17 CPTTP.

³² Article 14.14 CPTTP.

³³ Article 14.10 CPTTP.

³⁴ Article 14.16 CPTTP.

³⁵ Article 14.8 CPTTP.

³⁶ As exemplified by the *Schrems* judgments of the Court of Justice of the European Union (CJEU), which struck down the existing schemes for transatlantic data flows negotiated under the US-EU Safe Harbour and the US-EU Privacy Shield. See Case C-362/14 *Schrems (Schrems I)*, judgment of 6 October 2015, EU:C:2015:650 and Case C-311/18, *Data Protection Commissioner v. Facebook Ireland Limited, Maximillian Schrems (Schrems II)*, judgment of 16 July 2020, ECLI:EU:C:2020:559. For a discussion, see Burri, *supra* note 16.

³⁷ Article 14.13(2) prohibits the parties from requiring a ‘covered person to use or locate computing facilities in that Party’s territory as a condition for conducting business in that territory’.

³⁸ Article 14.17 CPTTP:

³⁹ Article 14.11(2) CPTTP: ‘Each Party shall allow the cross-border transfer of information by electronic means, including personal information, when this activity is for the conduct of the business of a covered person’.

⁴⁰ Article 14.11(3) CPTTP.

⁴¹ While this language appears familiar to trade lawyers in reference to the general exception clauses of Article XIV GATS and Article XX GATT 1994, the CPTTP does not, in contrast to the WTO provisions, provide an exhaustive list of public policy objectives and simply speaks of a ‘legitimate public policy objective’. In addition, there is no GATT or GATS-like qualification of ‘between countries where like conditions prevail’.

⁴² New Zealand’s Waitangi Tribunal, Report on the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (2021), in particular at 132–142.

The CPTPP model has been replicated and expanded by subsequent US agreements, which also confirmed the liberal US approach to digital trade, as initiated by its 2001 ‘Digital Agenda’.⁴³ The renegotiated NAFTA, which is now referred to as the ‘United States Mexico Canada Agreement’ (USMCA) follows all critical lines of the CPTPP with regard to both the facilitation of digital trade⁴⁴ as well as with respect to ensuring unhindered data flows.⁴⁵ Beyond these similarities, the USMCA goes ‘CPTPP-plus’ in some respects: first, by including ‘algorithms’ in the ban on requirements for the transfer or access to source code;⁴⁶ second, by limiting the liability of ‘interactive computer services’ providers for third party content,⁴⁷ which in essence secures the application of Section 230 of the US Communications Decency Act⁴⁸ – a safe harbour that has been recently under attack in many jurisdictions in the face of fake news and other negative developments related to platforms’ power.⁴⁹ The third and rather liberal commitment of the USMCA parties is with regard to open government data⁵⁰ and seeks to facilitate public access to and use of government information provided ‘in a machine-readable and open format and can be searched, retrieved, used, reused, and redistributed’.⁵¹ Finally, it can be noted that the cooperation provision of the USMCA goes beyond the CPTPP and envisages an institutional setting to enable this cooperation, ‘or any other matter pertaining to the operation of this chapter’.⁵²

The US approach towards digital trade issues has been confirmed also by the recent 2019 US–Japan Digital Trade Agreement (DTA), signed alongside the US–Japan

⁴³ US Congress, Bipartisan Trade Promotion Authority Act of 2001, H. R. 3005, 3 October 2001; S. Wunsch-Vincent, ‘The Digital Trade Agenda of the US’, *Aussenwirtschaft* 1 (2003), 7–46; also H. Gao, ‘Regulation of Digital Trade in US Free Trade Agreements: From Trade Regulation to Digital Regulation’, *Legal Issues of Economic Integration* 45 (2018), 47–70.

⁴⁴ The USMCA follows the same broad scope of application (Article 19.2), bans customs duties on electronic transmissions /Article 19.3) and binds the parties for non-discriminatory treatment of digital products (Article 19.4). Furthermore, it provides for a domestic regulatory framework that facilitates online trade by enabling electronic contracts (Article 19.5), electronic authentication and signatures (Article 19.6) and paperless trading (Article 19.9).

⁴⁵ Articles 19.11 and 19.12 USMCA.

⁴⁶ Article 19.16 USMCA. On the expansion of the scope of the source code provision, see New Zealand’s Waitangi Tribunal, *supra* note 42, at 104–112.

⁴⁷ Article 19.17(2) USMCA.

⁴⁸ See e.g. E. Goldman, ‘Why Section 230 Is Better Than the First Amendment’, *Notre Dame Law Review Reflection* 95 (2019), 33–46; E. Goldman, ‘An Overview of the United States’ Section 230 Internet Immunity’, in G. Frosio (ed), *The Oxford Handbook of Online Intermediary Liability* (Oxford: Oxford University Press, 2020), 155–171.

⁴⁹ See e.g. M. Burri, ‘Fake News in Times of Pandemic and Beyond: An Enquiry into the Rationales for Regulating Information Platforms’, in K. Mathis and A. Tor (eds), *Law and Economics of the Coronavirus Crisis* (Berlin: Springer, 2022), 31–58. See also Trachtman’s contribution to this issue.

⁵⁰ Article 19.18 USMCA.

⁵¹ Article 19.18(2) USMCA. There is in addition an endeavour to cooperate, so as to ‘expand access to and use of government information, including data, that the Party has made public, with a view to enhancing and generating business opportunities, especially for small and medium-sized enterprises’ (Article 19.8(3)).

⁵² Article 19.14(2) USMCA.

Trade Agreement. The treaty replicates almost all provisions of the USMCA and the CPTPP,⁵³ including the new USMCA rules on open government data,⁵⁴ source code⁵⁵ and interactive computer services⁵⁶ but notably covering also financial and insurance services as part of its scope. It also adds a new provision regarding information and communications technology (ICT) goods that use cryptography, again in an effort to curb forced technology transfer.⁵⁷

Truly innovative in the landscape of digital trade rule-making and going substantially ‘CPTPP-plus’ has been the new generation of DEAs. So far five such agreements have been agreed upon: the aforementioned 2019 Japan–US DTA; the 2020 Singapore–Australia DEA; the 2020 Digital Economy Partnership Agreement (DEPA) between Chile, New Zealand and Singapore;⁵⁸ the 2021 Korea–Singapore DEA and the 2022 UK–Singapore DEA.⁵⁹ Despite some variations, the DEAs can be said to share a common template. On the one hand and taking here the example of the DEPA, the DEAs tend to include all rules of the CPTPP and some of the USMCA, such as the one on open government data⁶⁰ (but not source code); some of the US–Japan DTA provisions, such as the one on ICT goods using cryptography,⁶¹ have been included too. On the other hand, there are many other rules previously unknown to trade agreements that try to facilitate the functioning of the digital economy and enhance cooperation on key issues.⁶² So, for instance, DEPA’s Module 2 on business and trade facilitation includes next to the standard CPTPP-like norms⁶³ additional efforts ‘to establish or maintain a seamless, trusted, high-availability and secure interconnection of each Party’s single window to facilitate the exchange of data relating to trade administration documents’.⁶⁴ Parties have also touched upon other important issues around digital trade facilitation, such as electronic invoicing; express shipments and clearance times; logistics and electronic payments.⁶⁵ Module 8 of the DEPA on

⁵³ Article 7: Customs Duties; Article 8: Non-Discriminatory Treatment of Digital Products; Article 9: Domestic Electronic Transactions Framework; Article 10: Electronic Authentication and Electronic Signatures; Article 14: Online Consumer Protection; Article 11: Cross-Border Transfer of Information; Article 12: Location of Computing Facilities; Article 16: Unsolicited Commercial Electronic Messages; Article 19: Cybersecurity US–Japan DTA.

⁵⁴ Article 20 US–Japan DTA.

⁵⁵ Article 17 US–Japan DTA.

⁵⁶ Article 18 US–Japan DTA.

⁵⁷ Article 21 US–Japan DTA. This rule is similar to Annex 8-B, Section A.3 of the CPTPP Chapter on technical barriers to trade.

⁵⁸ With Canada, South Korea and China seeking to join.

⁵⁹ It should be noted that the DEAs are in most cases linked to an existing or in parallel adopted trade agreement; only in the case of the DEPA, we have a stand-alone agreement.

⁶⁰ Article 9.4 DEPA.

⁶¹ Article 3.4 DEPA.

⁶² For a comparison of the DEPA with existing PTAs, see M. Soprana, ‘The Digital Economy Partnership Agreement (DEPA): Assessing the Significance of the New Trade Agreement on the Block’, *Trade, Law and Development* 13 (2021), 143–169.

⁶³ See e.g. Article 2.2: Paperless Trading; Article 2.3: Domestic Electronic Transactions Framework.

⁶⁴ Article 2.2(5) DEPA.

⁶⁵ Respectively Articles 2.5, 2.6, 2.4 and 2.7 DEPA.

emerging trends and technologies is also interesting to mention, as it highlights a range of key topics that demand attention by policy-makers, such as in the areas of fintech and AI, and discusses the adoption of ethical and governance frameworks that support the trusted, safe, and responsible use of AI technologies.⁶⁶ Again going beyond economic issues, the DEPA also deals with the importance of a rich and accessible public domain⁶⁷ and digital inclusion.⁶⁸

While the above enquiries do point to substantial CPTPP-plus developments, this is not true for all stakeholders involved. The EU, for instance, has been a relatively late mover on digital trade issues,⁶⁹ and now that it has defined its template,⁷⁰ this differs in important aspects from the provisions described above. On the one hand, the EU digital trade chapters converge with the CPTPP/USMCA model to cover issues such as software source code,⁷¹ facilitation of electronic commerce,⁷² online consumer protection,⁷³ spam⁷⁴ and open government data.⁷⁵ On the other hand, they do not include provisions on non-discrimination of digital products and, in reflection of the EU stance on trade and culture, consistently exclude audiovisual services from the scope of the application of the digital trade chapter.⁷⁶ Beyond this and critically for the regulation of the data-driven economy, the EU is willing to permit data flows only if coupled with the high data protection standards of its General Data Protection Regulation (GDPR).⁷⁷ So while the EU and its partners seek to ban data localization measures and subscribe to a free data flow, these commitments are conditioned: first, by a dedicated article on data protection, which clearly states that: ‘Each Party recognises that the protection of personal data and privacy is a *fundamental right* and that high standards in this regard contribute to trust in the digital economy and to the

⁶⁶ Article 8.2(2) and (3) DEPA.

⁶⁷ Article 9.2 DEPA.

⁶⁸ Article 11.2 DEPA.

⁶⁹ For overview of this development, see e.g. Burri (2017), *supra* note 18; Burri (2022), *supra* note 23.

⁷⁰ Representative of the new EU approach are the adopted agreements with the United Kingdom (Trade and Cooperation Agreement, TCA) and most recently with New Zealand, as well as the draft digital trade chapters of the currently negotiated deals with Australia and Tunisia.

⁷¹ See e.g. Article 207 EU–UK TCA. The commitment comes with a number of exceptions.

⁷² See e.g. Articles 205 and 206 EU–UK TCA.

⁷³ See e.g. Article 208 EU–UK TCA.

⁷⁴ See e.g. Article 209 EU–UK TCA.

⁷⁵ See e.g. Article 210 EU–UK TCA. The FTA with New Zealand curiously has no provision on open government data.

⁷⁶ See e.g. Article 197(2) TCA. On the repercussions of the trade and culture debate for EU PTAs, see e.g. M. Burri, ‘Telecommunications and Media Services in Preferential Trade Agreements: Path Dependences Still Matter’, in R. Hoffmann and M. Krajewski (eds), *European Yearbook of International Economic Law* (Berlin: Springer, 2020), 169–192.

⁷⁷ Regulation 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation), OJ 2016 L 119/1 [hereinafter GDPR].

development of trade’,⁷⁸ followed by a paragraph on data sovereignty.⁷⁹ A number of other safeguards are included too – such as a review possibility that can be linked to new restrictions,⁸⁰ as well as a broad carve-out under the ‘right to regulate’, which essentially gives the EU the leeway to restrict data flows ‘to achieve legitimate policy objectives, such as the protection of public health, social services, public education, safety, the environment including climate change, public morals, social or consumer protection, privacy and data protection, or the promotion and protection of cultural diversity’.⁸¹ It is notable that such an exception is fundamentally different than the objective necessity test under the CPTPP and the USMCA, or under WTO law, as it is subjective and fully protects the EU’s policy space.⁸²

Indeed, in the latter sense, the EU only marginally differs from China’s approach reflected in the 2020 Regional Comprehensive Economic Partnership (RCEP). There, while the RCEP electronic commerce chapter includes a ban on localization measures,⁸³ as well as a commitment to free data flows,⁸⁴ there are clarifications that give RCEP parties a lot of policy space and essentially undermine the impact of the affirmative commitments. For instance, the necessity of the implementation of a legitimate public policy measure is to be decided by the implementing party.⁸⁵ In addition, a party can take ‘any measure that it considers necessary for the protection of its *essential security interests*. Such measures shall not be disputed by other Parties’.⁸⁶

Keeping in mind these advanced PTA rule-frameworks, as well as their specificities, the following section asks whether we can go back to the multilateral forum of the WTO.

IV. CAN DIGITAL TRADE LAW BE MULTILATERALIZED?

Despite a long period of stalemate at the WTO, the Joint Statement Initiative (JSI) on Electronic Commerce⁸⁷ has been seen as a much-welcomed reinvigoration of the WTO

⁷⁸ See e.g. Article 6(1) draft EU–Australia FTA (emphasis added). The same wording is found in the EU–New Zealand FTA. The EU–UK TCA does not however refer to privacy as fundamental right; this can be however presumed, since the UK incorporates the European Convention on Human Rights (ECHR) through the Human Rights Act of 1998 into its domestic law.

⁷⁹ See e.g. Article 6(2) draft EU–Australia FTA. The same wording is found in the EU–New Zealand FTA and the EU–UK TCA.

⁸⁰ See e.g. Article 5(2) draft EU–Australia FTA. The same wording is found in the EU–New Zealand FTA and the EU–UK TCA.

⁸¹ See e.g. Article 2 draft EU–Australia FTA. The same wording is found in the EU–New Zealand and the EU–UK TCA.

⁸² S. Yakovleva, ‘Privacy Protection(ism): The Latest Wave of Trade Constraints on Regulatory Autonomy’ *University of Miami Law Review* 74 (2020), 416–519, at 496.

⁸³ Article 12.14 RCEP.

⁸⁴ Article 12.15 RCEP.

⁸⁵ Article 12.14.3(a) RCEP.

⁸⁶ Article 12.14.3(b) RCEP (emphasis added).

⁸⁷ See WTO, Joint Statement on Electronic Commerce, WT/MIN(17)/60, 13 December 2017; WTO, Joint Statement on Electronic Commerce, WT/L/1056, 25 January 2019; WTO, WTO Electronic

negotiation arm in general and in particular of its effort to address contemporary digital trade issues.⁸⁸ The JSI negotiations can be directly linked to the advanced rule-making on digital trade in preferential venues and this comes with both certain advantages and a great number of setbacks. In the former sense, it appears that PTAs have indeed worked as regulatory laboratories – not only in terms of mapping the relevant issues but also in terms of treaty language. Yet, the stakeholder positioning, as reflected in the PTAs discussed above, has also been clearly translated in the JSI negotiations. This has been helpful with regard to agreeing on multiple digital trade facilitation issues and progress has been made in particular on open government data, electronic contracts and online consumer protection;⁸⁹ some other issues in this context, such as e-invoicing, cybersecurity, open Internet access and paperless trading, can also be marked as ‘doable’, although with varying levels of normative value.⁹⁰ While these developments hint at some important lines of convergence as to the creation of an enabling environment for digital trade, there are also major points of divergence, in particular on the critical issues of cross-border data flows. In the latter context, while a number of countries align with Japan’s proposal for data flows with trust,⁹¹ and Members acknowledge the importance of the free flow of data across borders, the policy choices regarding data governance vary widely amongst the JSI participants and reflect their existing divergent PTA approaches. In this sense, the US seeks to endorse its USMCA template combined with the extended scope of the US–Japan DTA;⁹² the EU aims for a full protection of privacy as a fundamental right with a number of additional carve-outs and safeguards from data flow commitments;⁹³ and China engages even less than

Commerce Negotiations, Consolidated Negotiating Text, INF/ECOM/62/Rev.1, 14 December 2020 (a more recent consolidated negotiating text was circulated on 8 September 2021; however, it is not public). The JSI negotiations are co-convened by Australia, Japan and Singapore. Currently, 86 WTO Members representing over 90% of global trade, all major geographical regions and levels of development are participating in these negotiations.

⁸⁸ On the development of the JSI negotiations, see e.g. M. Burri, ‘A WTO Agreement on Electronic Commerce: An Enquiry into its Substance and Viability’, *Trade Law 4.0 Working Paper* No 1/2021 (forthcoming *Georgetown Journal of International Law* 53 (2022)); P. Kerneis, ‘The Landing Zone in Trade Agreements for Cross-Border Data Flows’, *Jean Monnet Network TIISA Working Paper* No 2021-12 (2021).

⁸⁹ WTO, ‘E-Commerce Negotiations Advance, Delve Deeper into Data Issues’, WTO news item, 20 May 2021, https://www.wto.org/english/news_e/news21_e/jsec_20may21_e.htm; WTO, ‘E-Commerce Talks: Two “Foundational” Articles Cleaned; Development Issues Discussed’, WTO news item, 13 September 2021, https://www.wto.org/english/news_e/news21_e/jsec_12sep21_e.htm

⁹⁰ Kerneis; Burri, both supra note 88.

⁹¹ G20 Osaka Leaders’ Declaration, https://www.gov.br/cgu/pt-br/assuntos/articulacao-internacional/arquivos/g20/declaracao-dos-lideres/2019_g20_declaracao-dos-lideres-cupula-de-osaka.pdf; G7, G7 Trade Ministers’ Digital Trade Principles, <https://www.gov.uk/government/news/g7-trade-ministers-digital-trade-principles>

⁹² See WTO, Joint Statement on Electronic Commerce, Communication from the United States, INF/ECOM/5, 25 March 2019; WTO, Joint Statement on Electronic Commerce, Communication from the United States, INF/ECOM/23, 26 April 2019.

⁹³ See WTO, Joint Statement on Electronic Commerce, Communication from the European Union, INF/ECOM/13, 25 March 2019; WTO, Joint Statement on Electronic Commerce, EU Proposal for WTO Disciplines and Commitments Relating to Electronic Commerce, Communication from the European Union, INF/ECOM/22, 26 April 2019.

under the RCEP, with a focus on electronic commerce as trade in *goods* enabled by the Internet and a solid protection of its ‘essential security interests.’⁹⁴

Against the backdrop of these contestations, there is a vivid academic and policy debate as to whether a ‘thin’ agreement on electronic commerce will be of much use.⁹⁵ In the negotiation context, the JSI co-convenors warn that a provision on enabling and promoting data flows is ‘key to an ambitious and commercially meaningful outcome’, and suggest that both the development aspect, such as the digital divide and capacity building needs, as well as leaving policy space that can accommodate the different circumstances of the participating Members, are important in securing the adoption of such a provision.⁹⁶ Yet, as under the PTAs, the design of such exceptions is not easy and again may include unilateral self-judging exemptions, which undermine the normative value of the commitments made and trigger legal uncertainty. The general and the security exceptions (under Articles XX GATT and XIV GATS; Articles XXI GATT and XIV*bis* GATS) could be a viable model to follow, as they operate under objective requirements – but here still not all elements of the legal tests have been clarified in the WTO jurisprudence.⁹⁷

The dilemma around reconciling economic and non-economic interests and values can be linked to one of the long-standing discussions in international trade law about the boundaries of the WTO and what it can do or not.⁹⁸ The JSI negotiations have clearly exposed the tensions in this context – first, as a strictly-speaking legal question, as to whether and how plurilateral initiatives can be incorporated into the WTO architecture.⁹⁹ Secondly and in a broader context, as to how to reconcile deeper

⁹⁴ WTO, Joint Statement on Electronic Commerce, Communication from China, INF/ECOM/19, 24 April 2019, at section 3 (China Communication 1). See also H. Gao, ‘Across the Great Wall: E-commerce Joint Statement Initiative Negotiation and China’, in S. Peng, C. Lin and T. Streinz (eds), *Artificial Intelligence and International Economic Law* (Cambridge: Cambridge University Press, 2021), 295–318.

⁹⁵ See e.g. Burri, *supra* note 88; R. Wolfe, ‘Learning about Digital Trade: Privacy and E-Commerce in CETA and TPP’, *World Trade Review* 18 (2019), s63–s84.

⁹⁶ WTO, ‘E-Commerce Negotiations Advance, Delve Deeper into Data Issues’, WTO news item, 20 May 2021, https://www.wto.org/english/news_e/news21_e/jsec_20may21_e.htm

⁹⁷ For instance, with regard to the privacy protection justifications under Article XIV GATS. There has been a discussion in the literature that the EU data protection law, especially the high standards and extraterritorial effects of the 2018 EU General Data Protection Regulation might fail the Article XIV test. For an overview of the debates, see Burri (2021), *supra* note 16; on the uncertainties around legal interpretation of the exceptions, see also New Zealand’s Waitangi Tribunal, *supra* note 42.

⁹⁸ See e.g. Symposium, ‘The Boundaries of the WTO’, *American Journal of International Law* 96 (2002); A. Bradford, ‘When the WTO Works, and How It Fails’, *Virginia Journal of International Economic Law* 51 (2010), 1–56.

⁹⁹ For an overview of the current debates and options, see e.g. Burri, *supra* note 88; also F. Angeles, R. Roy and Y. Yarina, *Shifting from Consensus Decision-Making to Joint Statement Initiatives: Opportunities and Challenges* (Geneva: Graduate Institute Geneva, 2020); B. Hoekman and C. Sabel, ‘Plurilateral Cooperation as an Alternative to Trade Agreements: Innovating One Domain at a Time’, *Global Policy* 12 (2021), 49–60; J. Kelsey, ‘The Illegitimacy of Joint Statement Initiatives and Their Systemic Implications for the WTO’, *Journal of International Economic Law* 25 (2022), 1–23; A.B.

regulatory cooperation with individual state sovereignty, especially as datafication has, in a sense, also extended the scope of trade-related issues and created newer fields of contestation¹⁰⁰ – so, for instance, data protection has now turned into a key trade regulation topic, as it directly links to permitting cross-border data flows¹⁰¹ and we have seen the erection of new trade barriers, such as data localization measures,¹⁰² that seek to keep the data within the territorial boundaries of the sovereign state.¹⁰³ In this context, the question of whether trade forums are at all suitable to address the issues of the data-driven economy has also been raised, as they tend to be top-down, state-centred and opaque rule-making venues¹⁰⁴ and are still ‘analog’ in nature, conceptualizing trade in terms of crossing borders through brick-and-mortar customs houses and incremental innovation through protected investments in production.¹⁰⁵

V. CONCLUDING REMARKS: TRADE LAW 4.0 – NOT THERE YET

This article’s enquiry reveals the critical importance of digital trade as a negotiation topic in both preferential and multilateral forums and the substantial efforts made, in particular in recent years, to create an adequate rule-framework. The achievements made in some PTAs and the DEAs are remarkable and there is a strand of legal innovation that seeks to tackle not only the ‘old’ issues raised under the WTO Electronic Commerce Programme but also the newer issues in the context of a global data-driven economy. Yet, although all major stakeholders have become active in digital trade rule-making, the different approaches followed by China, the EU and the US are manifest and bar the adoption of a deep agreement that adequately reflects contemporary digital trade practices. The issues around cross-border data flows remain especially highly contentious, as they impact states’ policy space and the ability to adopt a variety of measures, particularly in the areas of national security and privacy protection. In this context, the venues of PTAs provide a good platform for experimentation and evidence-gathering¹⁰⁶ on the economic but also, and perhaps more importantly, on the broader societal effects of such commitments. Whereas enhanced regulatory cooperation in the striving to attain a seamless global data-driven economy

Zampetti, P. Low and P.C. Mavroidis, ‘Consensus Decision-Making and Legislative Inertia at the WTO: Can International Law Help’, *Journal of World Trade* 56 (2022), 1–26.

¹⁰⁰ See e.g. G. Shaffer, ‘Trade Law in a Data-Driven Economy: The Need for Modesty and Resilience’, in S. Peng, C. Lin and T. Streinz (eds), *Artificial Intelligence and International Economic Law* (Cambridge: Cambridge University Press, 2021), 29–53.

¹⁰¹ See e.g. Burri (2021); Chander and Schwarz, both *supra* note 16.

¹⁰² See e.g. F. Casalini and J. López González, ‘Trade and Cross-Border Data Flows’, *OECD Trade Policy Papers* No. 220 (2019).

¹⁰³ See e.g. A. Chander and U.P. Lê, ‘Data Nationalism’, *Emory Law Journal* 64 (2015), 677–739; United States Trade Representative (USTR), *2022 National Trade Estimate Report on Foreign Trade Barriers* (Washington, DC: USTR, 2022).

¹⁰⁴ See e.g. S. Cho and C. R. Kelly, ‘Are World Trading Rules Passé?’, *Vanderbilt Journal of International Law* 53 (2013), 623–666.

¹⁰⁵ T.J. Bollyky and P.C. Mavroidis, ‘Trade, Social Preferences, and Regulatory Cooperation: The New WTO-Think’, *Journal of International Economic Law* 20 (2017), 1–30; see also N. Mishra, ‘Building Bridges: International Trade Law, Internet Governance, and the Regulation of Data Flows’, *Vanderbilt Journal of Transnational Law* 52 (2019), 463–509.

¹⁰⁶ On the evidence gap, see Evenett and Fritz, *supra* note 4.

is clearly needed, there must be sufficient safeguards for the protection of non-economic interests and values, and here too we do not know much on how the existing reconciliation mechanisms work on the ground yet and whether they are adequately designed to tread the fine line between curbing data protectionism and protecting legitimate public interests. Until we reach a state of trade law 4.0 that properly interfaces international and national regimes and can operate in a fluid technological environment, more ‘learning’ time and accordingly a level of modesty and humility of policy-makers, as rightly stressed by Shaffer,¹⁰⁷ will be needed.

¹⁰⁷ Shaffer, *supra* note 100; see also L. Toohey, ‘Trade Law Architecture after the Fourth Industrial Revolution’, in S. Peng, C. Lin and T. Streinz (eds), *Artificial Intelligence and International Economic Law* (Cambridge: Cambridge University Press, 2021), 337–352; E. Ganne, ‘Blockchain’s Practical and Legal Implications for Global Trade and Global Trade Law’, in M. Burri (ed), *Big Data and Global Trade Law* (Cambridge: Cambridge University Press, 2021), 126–159.