

DIGITAL ECONOMY AGREEMENTS: A PATH TO DIGITAL TRADE LAW 4.0?

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Digital Economic Agreements (DEAs) have come to occupy a distinct and increasingly significant role in the regulation of digital trade. Unlike the broader and more traditional scope of Preferential Trade Agreements (PTAs) that also tackle issues of trade in goods, services, and intellectual property rights, DEAs are directed specifically at establishing rule-frameworks for the digital economy. This article situates DEAs as a new type of treaties in context – both with regard to the global landscape of digital trade rulemaking and to its evolution over time. It offers a detailed analysis of the DEAs in place, providing insights into their legal architecture, common provisions and novel features. The article pays, in addition, particular attention to the DEAs’ mechanisms to safeguard regulatory autonomy, which becomes all the more critical considering the broader set of issues that DEAs cover. The article then compares with and reveals the contrast between the DEA model and the ongoing negotiations towards an Agreement on Electronic Commerce under the umbrella of the World Trade Organization (WTO). In terms of analytical query, we highlight the advantages of DEAs as a flexible as well as a forward-oriented model of digital trade regulation that potentially is up to the challenge of keeping up with a technologically fluid environment and could pave the path towards digital trade law 4.0. This evaluation remains however nuanced, as the evidence is still out, as to whether DEAs have a real impact on the ground and whether they reduce, rather than exacerbate, the existing fragmentation in the regulation of the data-driven economy.

TABLE OF CONTENTS

- I. INTRODUCTION
- II. DEAS IN CONTEXT: ACTORS AND LEGAL ARCHITECTURE

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- A. DEAS TO DATE
- B. DEAS' EMERGING LEGAL ARCHITECTURE
- III. DEA'S SUBSTANTIVE COVERAGE
 - A. COMMON FEATURES ACROSS DEAS
 - B. DEAS' NOVEL FEATURES
- IV. DEAS AS ONGOING RECALIBRATION OF DIGITAL TRADE LIBERALIZATION AND REGULATORY AUTONOMY
- V. DEAS VIS-À-VIS THE PROPOSED WTO AGREEMENT ON ELECTRONIC COMMERCE
- VI. APPRAISAL AND OUTLOOK

I. INTRODUCTION

Over the past two decades governments have been actively constructing a global legal framework for the governance of the digital economy as it relates to international trade. Regional and bilateral preferential trade agreements (PTAs) now routinely include dedicated digital trade or electronic commerce chapters with often far-reaching rules not only on digital trade facilitation but also with commitments on cross-border data flows and data localisation – rules that clearly shape the conditions for engaging in digital trade as well as impinge on domestic regulatory frameworks.¹ This type of engagement is true for a number of countries, and not only developed ones,² and has been endorsed through influential models, such as that of the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP), that have also diffused in a number of follow-up agreements.³ The shift towards negotiating dedicated and specialised digital trade agreements (digital economy agreements or DEAs) occurred however relatively recently with the milestone signature of the Digital Economy Partnership Agreement (DEPA)

¹ For a detailed analysis, see Mira Burri et al., *The Evolution of Digital Trade Law: Insights from TAPED*, 23 *WORLD TRADE REV.* 190-207 (2024).

² See Mira Burri & María Vásquez Callo-Müller, *TAPED: Trade Agreements Provisions on Electronic Commerce and Data*, UNIV. LUCERNE, <https://unilu.ch/taped> (according to the TAPED dataset, from the 142 PTAs with digital trade chapters, which were coded for the period January 2000-September 2025, the majority of digital trade chapters have been agreed upon by developing countries, followed by developed countries. In contrast, the number of PTAs involving least developed countries is substantially lower).

³ The CPTPP is an agreement between eleven states in the Asia-Pacific region. Its origin lies in the negotiated Trans-Pacific Partnership (TPP) agreement to which the United States was party before its withdrawal with the start of the first Trump administration. The remaining eleven parties, Australia, Brunei Darussalam, Canada, Chile, Japan, Malaysia, Mexico, New Zealand, Peru, Singapore, and Vietnam concluded the CPTPP negotiations for the CPTPP in 2018. The United Kingdom joined the CPTPP in 2023 [hereinafter CPTPP].

between Chile, New Zealand, and Singapore in 2020.⁴ DEAs have ever since emerged as a new instrument of trade regulation that marks a significant progression in digital trade governance by going substantially ‘WTO-extra’ – that is, beyond any discussions on electronic commerce under the WTO,⁵ and, in many instances, even ‘CPTPP-extra’ — that is, beyond commitments in the advanced digital trade treaty templates.⁶

DEAs have therefore come to play a critical role in reshaping the present and future of digital trade law and do deserve an appropriate consideration and careful analysis. In this article, we situate DEAs in context, offering an overview of the evolution of this new type of digital economy regulatory instrument and situating it in the landscape of digital trade rulemaking. We furthermore seek to conceptualise what constitutes a DEA as a model by examining its legal architecture and scope. Given the wide range of issues addressed in DEAs, we also explore the extent of regulatory autonomy they permit – which might be critical to assess the breadth and depth of any regulatory instrument on digital trade, and important for the choices that governments face when entering into DEAs. We then situate DEAs against the backdrop of the WTO negotiations on electronic commerce, and in particular against the proposed Agreement on Electronic Commerce.⁷ We finally conclude by reflecting on what DEAs mean for the regulation of digital trade, the data-driven economy and international trade law more broadly, and whether they can truly contribute to making treaty-making in this domain more resilient and fit to anticipate technological advances, that is, a form of trade law 4.0.⁸

To this end, this article begins with an examination of the actors behind the negotiation of DEAs and looks into the legal architecture of such treaties (Part II). We then analyse the substantive scope of these treaties, highlighting commonalities and identifying some novel features (Part III), to then discuss how DEAs address the ongoing recalibration of digital trade liberalisation and regulatory autonomy (Part IV). In Part V, we compare the DEA model with the current text of the WTO

⁴ Digital Economy Partnership Agreement, Chile-N.Z.-Sing., June 12, 2020, <https://www.mfat.govt.nz/assets/Trade-agreements/DEPA/DEPA-Chile-New-Zealand-Singapore-21-Jan-2020-for-release.pdf> (entered into force Nov. 23, 2021) [hereinafter DEPA].

⁵ For an overview of these discussions, see Mira Burri, *The International Economic Law Framework for Digital Trade*, 135 ZEITSCHRIFT FÜR SCHWEIZERISCHES RECHT 10-72 (2015).

⁶ See CPTPP, *supra* note 3.

⁷ World Trade Organization, Joint Statement Initiative on Electronic Commerce, WTO Doc. INF/ECOM/87 (July 26, 2024); World Trade Organization, Incorporation of the Agreement on Electronic Commerce into Annex 4 of the WTO Agreement, Communication from the Members Parties to the Agreement on Electronic Commerce, WTO Doc. WT/GC/W/963 (Feb. 6, 2025) [hereinafter Incorporation of the Agreement].

⁸ See Mira Burri, *Trade Law 4.0: Are We There Yet?* 26 J. INT'L ECON. L. 90-100 (2023).

Agreement on Electronic Commerce to give a sense of the convergences and divergences in the different regulatory forums. We conclude with an appraisal and an outlook on the role and impact of DEAs in digital trade rulemaking and the broader landscape of the regulation of the data-driven economy (Part VI).

II. DEAS IN CONTEXT: ACTORS AND LEGAL ARCHITECTURE

While it has been observed that PTAs have become increasingly populated with dedicated digital trade provisions, they remain conventional trade agreements that cover a wide array of issues — including trade in goods, trade in services, intellectual property (IP) protection and sometimes, a variety of other issues, such as labour or environmental protection. In contrast, DEAs are monothematic. They focus specifically on the regulation of digital trade, thereby providing a targeted regulatory framework designed to address the unique challenges and opportunities presented by the digital age. DEAs thus permit parties to consider more comprehensively all trade-related dimensions of the digital economy, including a range of emerging issues, such as artificial intelligence (AI) governance frameworks. This type of regulatory cooperation also unfolds without the cross-sectoral bargaining dynamics that characterise traditional trade negotiations. This means that DEA negotiations are generally isolated from other areas traditionally covered by trade agreements, such as rules of origin or sanitary and phytosanitary measures. This likely explains why parties to these agreements cover more digital trade-related regulatory areas than traditional PTAs, since they would not have had to trade off — for example, provisions on paperless trading with the elimination or reduction of sugar quotas. Lee and Collins support this argument in the context of DEPA, which, as a stand-alone digital trade agreement, enabled more targeted and potentially deeper commitments than a conventional PTA would have allowed.⁹ By decoupling digital issues from broader trade negotiations, DEPA parties avoided the political sensitivities of unrelated sectors, such as for instance agriculture, which often impede achieving deeper commitments and equally permit swifter conclusion of the negotiations, as all DEAs, which were only adopted in the last six years, clearly show. Still, as a novel category of rulemaking venues within digital trade law, the precise nature and scope of DEAs require some clarification. For this purpose, we provide an analysis of the DEAs that have been signed to date or are currently under negotiation, before addressing their regulatory design and substantive scope.

A. DEAs to Date

⁹ Joo Hyung Lee & David Collins, *The Digital Economy Partnership Agreement (DEPA): Accession to the Digital-Only Regime*, in RESEARCH HANDBOOK ON DIGITAL TRADE 96 (David Collins & Michael Geist eds., 2023).

As of November 2025, a total of ten DEAs have been concluded, with the treaty text now publicly available. Six of them have already entered into force.¹⁰ The latest DEAs, not yet in force, are the AfCFTA Digital Trade Protocol adopted in February 2024,¹¹ the EU-Singapore Digital Trade Agreement (DTA) signed in May 2025,¹² the EU-Korea DTA for which negotiations concluded in March 2025,¹³ and the European Free Trade Association (EFTA)-Singapore DEA signed on September 25, 2025.¹⁴

Chronologically, the first DEA is the US-Japan DTA, signed in 2019 and effective as of 2020, although it should be noted that this agreement, apart from one being negotiated outside of a PTA, does not fully show the features of a DEA and remains in its provisions and the commitments made under them close to a standard PTA digital trade chapter.¹⁵ This was followed by the influential DEPA in 2020, as the first plurilateral stand-alone digital trade agreement between Chile, New Zealand, and Singapore. It officially entered into force in 2021 among the founding parties. In 2023, the DEPA parties introduced the Protocol to the DEPA, which entered into force on March 19, 2024. The DEPA Protocol does not substantively alter the agreement, but, importantly, reinforces the legal certainty of key provisions, including those with regard to cross-border data flows, data localisation, source

¹⁰ Agreement Between the United States of America and Japan Concerning Digital Trade, U.S.-Japan, Oct. 7, 2019, T.I.A.S. No. 20-101.1 (entered into force Jan. 1, 2020) [hereinafter US-Japan DTA]; Australia-Singapore Digital Economy Agreement, Austl.-Sing., Aug. 6, 2020, [2020] ATS 13 (entered into force Dec. 8, 2020) [hereinafter ASDEA]; DEPA, *supra* note 4; Digital Economy Agreement Between the United Kingdom of Great Britain and Northern Ireland and the Republic of Singapore, U.K.-Sing., Feb. 25, 2022, [2023] UKTS No. 22 (entered into force June 14, 2022) [hereinafter UK-Singapore DEA]; Korea-Singapore Digital Partnership Agreement, Kor.-Sing., Nov. 21, 2022 (entered into force 14 January 2023) [hereinafter Korea-Singapore DEA]; Digital Trade Agreement Between the United Kingdom of Great Britain and Northern Ireland and Ukraine, U.K.-Ukr., Mar. 20, 2023, CP 837 (entered into force 1 September 2024) [hereinafter UK-Ukraine DTA].

¹¹ African Union, Protocol to the Agreement Establishing the African Continental Free Trade Area on Digital Trade (adopted Feb. 18, 2024) [hereinafter AfCFTA Digital Trade Protocol] (the Protocol now awaits ratification, requiring approval by 22 State Parties to enter into force 30 days thereafter); *see* AfCFTA Digital Trade Protocol, art. 47(2), read with the Agreement Establishing the African Continental Free Trade Area, arts. 23(2), (4), adopted Mar. 21, 2018 (entered into force May 30, 2019) [hereinafter AfCFTA Agreement].

¹² Agreement on Digital Trade between the European Union and the Republic of Singapore, E.U.-Sing., May 7, 2025, 2025 O.J. (L 798) annex [hereinafter EU-Singapore DTA].

¹³ Agreement on Digital Trade between the European Union and the Republic of Korea, E.U.-S. Kor., Mar. 10, 2025, 2025 O.J. (L 2465) annex [hereinafter EU-Korea DTA].

¹⁴ Digital Economy Agreement between the EFTA States and the Republic of Singapore, EFTA-Sing., Sept. 25, 2025, Fedlex no. 2025/0458 [hereinafter EFTA-Singapore DEA].

¹⁵ *See* Mira Burri et al., *Understanding Digital Economy Agreements as a New Model of Trade Governance*, 52 LEGAL ISSUES OF ECON. INTEGRATION 226, 219-250 (2025).

code, and non-discrimination of digital products, by subjecting them to dispute settlement.¹⁶ In terms of legal architecture, a notable aspect of the DEPA is its modular structure, making it possible for interested states to join the agreement as a whole,¹⁷ or to incorporate some of the DEPA's modules' into other treaties.¹⁸ In terms of accession to DEPA, South Korea was the first to complete the accession process in May 2024.¹⁹ Peru has substantially concluded negotiations to accede DEPA in January 2026, expecting to complete the official accession process soon thereafter.²⁰ Several other states have begun the accession process as well, including China and Canada in 2022, and Costa Rica in 2023. Additionally, the United Arab Emirates (UAE), El Salvador, and Ukraine have also applied for accession.²¹

A few months after DEPA was concluded, the Australia-Singapore Digital Economy Agreement (ASDEA) was signed in 2020 and entered into force the same year. Subsequent DEAs include the UK-Singapore DEA (signed and effective in 2022), the Korea-Singapore DEA (signed in 2022, effective in 2023), the UK-Ukraine DTA (signed in 2023, effective in 2024), and the AfCFTA Digital Trade Protocol (signed

¹⁶ Article 8 DEPA Protocol ceases the application of Annex 14-A (Dispute Settlement), so that Module 14 (Dispute Settlement), including Annex 14-B (Mediation Mechanism) and Annex 14-C (Arbitration Mechanism), now applies to: (a) Article 3.3 (Non-Discriminatory Treatment of Digital Products); (b) Article 3.4 (Information and Communication Technology Products that Use Cryptography); (c) Article 4.3 (Cross-Border Transfer of Information by Electronic Means); and (d) Article 4.4 (Location of Computing Facilities).

¹⁷ DEPA, *supra* note 4, art. 16.4.

¹⁸ DEPA includes the following modules: initial provisions and general definitions (module 1); business and trade facilitation (module 2); treatment of digital products and related issues (module 3); data issues (module 4); wider trust environment (module 5); business and consumer trust (module 6); digital identities (module 7); emerging trends and technologies (module 8); innovation and the digital economy (module 9); small and medium enterprises cooperation (module 10); digital inclusion (module 11); joint committee and contact points (module 12); transparency (module 13); dispute settlement (module 14); exceptions (module 15); and final provisions (module 16).

¹⁹ Press Release, Undersecretariat of Int'l. Econ. Rels., Chile et al., Joint Press Release on the Successful Accession of the Republic of Korea to the Digital Economy Partnership Agreement, (May 3, 2024), <https://www.mti.gov.sg/Newsroom/Press-Releases/2024/05/Joint-Press-Release-on-the-successful-accession-of-the-republic-of-Korea-to-the-Digital-Economy>.

²⁰ Press Release, N.Z. Foreign Affs. & Trade, Joint Press Release on the Substantive Conclusion of Discussions for the Republic of Peru's Accession to the Digital Economy Partnership Agreement, (Jan. 13, 2026), <https://www.mfat.govt.nz/en/media-and-resources/joint-press-release-on-the-substantive-conclusion-of-discussions-for-the-republic-of-perus-accession-to-the-digital-economy-partnership-agreement>.

²¹ See *Digital Economy Partnership Agreement*, MINISTRY OF TRADE & INDUS., SING. (Oct. 23, 2025), <https://www.mti.gov.sg/Trade/Digital-Economy-Agreements/The-Digital-Economy-Partnership-Agreement> (for an overview of the ongoing negotiations).

in 2024), the European Union DTAs (signed and concluded in 2025, as discussed below), and the EFTA-Singapore DEA (signed in 2025). The ASDEA, the UK-Singapore DEA, and the Korea-Singapore DEA are also accompanied by multiple Memoranda of Understandings (MOUs) to further the cooperation on specific issues.

As with regard to the 2025 EU DTAs, they build upon the foundations laid out by the EU-Singapore Digital Partnership²² and the EU-Korea Digital Partnership,²³ as noted in their respective preambles. The Digital Partnerships were not conceived as trade treaties but rather as broader non-binding policy frameworks intended to increase cooperation on issues affecting the digital economy between the European Union (EU) and compatible countries.²⁴ The EU Digital Partnerships with Singapore and Korea did, however, include joint actions on digital trade and trusted data flows. Similar digital partnerships have also been launched with Japan in May 2022 and with Canada in November 2023,²⁵ in addition to the existing free trade agreements (FTAs) in place. It was announced on June 23, 2025 that the EU and Canada have agreed to begin negotiations towards a DTA.²⁶ It remains to be seen whether the Digital Partnership with Japan will also serve as the basis for a future DTA, but it can certainly be argued that the Digital Partnerships with Singapore and Korea, and the forthcoming one with Canada, have allowed the EU to approach DTAs gradually, reflecting a careful calibration of its digital trade policy. Beyond the EU, there is one upcoming DEA: the ASEAN Digital Economy Framework Agreement (DEFA), for which negotiations concluded on October 24, 2025.²⁷ For

²² See also EUR. COMM'N., EU-SINGAPORE DIGITAL PARTNERSHIP, SHAPING EUR.'S DIGITAL FUTURE (Feb. 01, 2023), <https://digital-strategy.ec.europa.eu/en/library/eu-singapore-digital-partnership>.

²³ EUR. COMM'N., REPUBLIC OF KOREA-EUROPEAN UNION DIGITAL PARTNERSHIP, SHAPING EUR.'S DIGITAL FUTURE (Nov. 28, 2022) <https://digital-strategy.ec.europa.eu/en/library/republic-korea-european-union-digital-partnership>.

²⁴ Eur. Comm'n., *Digital Partnerships*, SHAPING EUR.'S DIGITAL FUTURE (Apr. 01, 2025), <https://digital-strategy.ec.europa.eu/en/policies/partnerships> (overlapping areas for joint action in the EU-Singapore and EU-Korea digital partnership include: digital connectivity; beyond 5G; cybersecurity; supply chain resilience of semiconductors; artificial intelligence, online platforms; digital transformation of SMEs; enhancing digital education and skills critical for the digital future; digitalization in the financial sector; and standards, technical regulations and conformity assessment procedures).

²⁵ *Id.*

²⁶ EUR. COMM'N., JOINT STATEMENT FOLLOWING THE EUROPEAN UNION – CANADA 2025 SUMMIT: ENDURING PARTNERSHIP, AMBITIOUS AGENDA, (June 23, 2025), https://ec.europa.eu/commission/presscorner/detail/en/statement_25_1600.

²⁷ ASEAN Economic Community Council Statement on the Substantial Conclusion of the ASEAN DEFA Negotiations, ASEAN (Oct. 24, 2025), <https://asean.org/asean-economic>

the purpose of this article, we refer to all these treaty instruments collectively as DEAs and analyse the EU-Korea DTA based on the available textual proposal, noting that the numbering of provisions as well as other aspects may change in the final treaty version. The ASEAN DEFA does not form part of our enquiry, as of the time of writing, the text of the agreement has not been made public.

Taking a closer look at the states that are parties to DEAs, three things stand out. First, these agreements are — with one notable exception — predominantly negotiated by high-income developed countries.²⁸ This underscores these countries' proactive stance in leveraging the economic opportunities afforded by digital trade. However, this picture changes drastically with the AfCFTA Digital Trade Protocol, which brings a host of developing as well as least developed countries (LDCs) into the domain of digital trade rulemaking.²⁹ Similarly, further diversification in the parties to DEAs to include more developing countries and LDCs is expected upon the conclusion of the ASEAN DEFA.³⁰

Second, it is notable that Singapore, traditionally not a prominent rule maker on the international scene, has emerged as the leader in digital trade regulation,³¹ effectively replacing the United States (US) with its first mover advantage starting with its 2001 'Digital Agenda'.³² Singapore participates overall in six DEAs, including the recent

community-council-statement-on-the-substantial-conclusion-of-the-asean-defa-negotiations/.

²⁸ See *GDP per Capita (current US\$) – Australia, Japan, Korea, Rep., New Zealand, Singapore, United Kingdom, United States*, <https://data.worldbank.org/indicator/NY.GDP.PCAP.CD?locations=AU-JP-KR-NZ-SG-GB-US&view=chart>, WORLD BANK, <https://data.worldbank.org/indicator/NY.GDP.PCAP.CD?locations=AU-JP-KR-NZ-SG-GB-US&view=chart> (Chile and Ukraine aside, all the other countries involved in these agreements are advanced economies with GDP per capita from US\$32,254 to US\$82,807).

²⁹ See Franziska Sucker, *Navigating Economic Inequalities Alongside African Digital Market Integration: The Role of the AfCFTA Competition Protocol*, 52 LEGAL ISSUES OF ECON. INTEGRATION 5-44 (2025) (on the African digital market integration).

³⁰ The ASEAN members are Brunei Darussalam, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, Philippines, Singapore, Thailand, and Viet Nam. From these, Cambodia, Lao PDR and Myanmar are considered LDCs. See Comm. For Dev. Pol'y., List of Least Developed Countries (as of Dec. 19, 2024), U.N. DEP'T OF ECON. & SOC. AFF. (Dec. 19, 2024), https://www.un.org/development/desa/dpad/wp-content/uploads/sites/45/publication/ldc_list.pdf (ASEAN LDCs are Cambodia, Laos, and Myanmar).

³¹ See Burri et al., *supra* note 1, at 194.

³² Bipartisan Trade Promotion Authority Act of 2001, H. R. 3005, 107th Cong. (2001-2002); Sacha Wunsch-Vincent, *The Digital Trade Agenda of the U.S.*, 58 AUSSENWIRTSCHAFT 7-46 (2003); see also Henry Gao, *Regulation of Digital Trade in US Free Trade Agreements: From Trade Regulation to Digital Regulation*, 45 LEGAL ISSUES OF ECON. INTEGRATION 47-70 (2018).

EFTA–Singapore DEA,³³ and is also a member of the future ASEAN DEFA. Singapore has a clear strategy to engage in DEAs as a way to facilitate trade and foster collaboration in the digital economy and mobilises the DEAs as a new form of international cooperation.³⁴ Other than Singapore, only the EU, United Kingdom (UK), and Korea are parties to more than one DEA (see Table 1 below).

A third observation is that until 2024, the EU was missing from the list of DEA parties. However, as already alluded, this has changed now, as the EU has signed a DTA with Singapore and concluded negotiations for a DTA with Korea. This development and the inclusion of the EU in the DEA landscape are important, as this diversifies the parties involved (so far, most of the DEA parties are CPTPP parties too). It also shows that there is a real opportunity to engage in digital trade cooperation, even without sharing common positions on data governance and specifically considering in this context the EU's firm stance on personal data protection and preserving domestic policy space.³⁵ Similar conclusions can be drawn from the incorporation of EFTA into the DEA landscape, as none of the parties to the EFTA are members to the CPTPP and as the EFTA has only a few advanced digital trade treaties — notably the one with Moldova.

A fourth and final observation on the parties to these treaties concerns the absence of the US. As already noted, although the US–Japan DTA is technically the first DEA, the US has not joined the DEA trend wagon thus far, in part because of the sceptical view of the previous US administration toward digital trade commitments.³⁶ With the start of the second Trump administration, a retake of the digital trade agenda is emerging, with the inclusion of dedicated provisions in the Agreements with Malaysia and Cambodia.³⁷ However, these agreements do not

³³ The EFTA members are Iceland, Lichtenstein, Norway, and Switzerland.

³⁴ See *Digital Economy Agreements*, INFOCOMM MEDIA DEV. AUTH. (Mar. 03, 2020), <https://www.imda.gov.sg/-/media/imda/files/about/media-releases/2020/cos2020/annex-h-cos-2020---factsheet---digital-economy-agreements.pdf>.

³⁵ See e.g., Mira Burri, *Interfacing Privacy and Trade*, 53 CASE W. RES. J. INT'L L. 35–88 (2021); Anupam Chander & Paul M. Schwartz, *Privacy and/or Trade*, 90 U. CHI. L. REVIEW, 49–135 (2023); see also Mira Burri & Kholofelo Kugler, *Regulatory Autonomy in Digital Trade Agreements*, 27 J. INT'L ECON. L., 397–423 (2024).

³⁶ Katherine Tai, U.S. Trade Rep., *Fireside chat with Katherine Tai*, YOUTUBE (Dec. 07, 2023), <https://www.youtube.com/watch?v=nwT5GfbxTMY> (noting that certain provisions in digital trade agreements, including on source code, amount to a 'policy suicide').

³⁷ Agreement Between the United States of America and Malaysia on Reciprocal Trade, Malay. –U.S., Oct. 26, 2025, <https://www.whitehouse.gov/briefings-statements/2025/10/agreement-between-the-united-states-of-america-and-malaysia-on-reciprocal-trade>; Agreement Between the United States of America and the Kingdom of Cambodia on Reciprocal Trade, Cambodia–U.S., Oct. 26, 2025,

follow the DEA model, which is characterised by stand-alone and dedicated negotiations, leading to a broad scope of the data economy issues covered. In contrast, the recent US agreements with Malaysia and Cambodia only include digital trade provisions as part of a treaty package. They, moreover, only contain a selected and limited set of issues and in no way resemble, for instance, the advanced digital trade chapter of the United States-Mexico-Canada Agreement (USMCA), which is clearly both in breadth and depth a ‘CPTPP-plus’ agreement.³⁸ Further clarification on the US position on digital trade will emerge from the renegotiation of the USMCA, which is due in 2026. At the moment, however, there is no indication that the US will follow the DEA model.

Table 1. DEAs by Parties

| AGREEMENT | PARTIES |
|---|--|
| US-Japan Digital Trade Agreement | US, Japan |
| Australia-Singapore Digital Economy Agreement (ASDEA) | Australia, Singapore |
| DEPA | Chile, New Zealand, Singapore, South Korea |
| UK-Singapore DEA | UK, Singapore |
| Korea-Singapore DEA | Korea, Singapore |
| UK-Ukraine DTA | UK, Ukraine |
| AfCFTA Digital Trade Protocol | AfCFTA Member States ³⁹ |

<https://www.whitehouse.gov/briefingsstatements/2025/10/agreement-between-the-united-states-of-america-and-the-kingdom-of-cambodia-on-reciprocal-trade>.

³⁸ See Burri, *supra* note 8.

³⁹ See Status of AfCFTA Ratification, TRALAC (Jan. 20, 2026) <https://www.tralac.org/resources/infographic/13795-status-of-afcfta-ratification.html> (49 out of 55 African Union Member States have ratified the agreement and 54 have signed it. These are: Angola, Burundi, Burkina Faso, Botswana, the Central African Republic, Côte d’Ivoire, Cameroon, the Democratic Republic of the Congo, the Republic of the Congo, Comoros, Cabo Verde, Djibouti, Algeria, Egypt, Western Sahara, Ethiopia, Gabon, Ghana, Guinea, The Gambia, Guinea-Bissau, Equatorial Guinea, Kenya, Liberia, Lesotho, Morocco, Mali, Mauritania, Mauritius, Malawi, Namibia, Niger, Nigeria, Rwanda, Senegal, Sierra Leone, São Tomé and Príncipe, Eswatini, Seychelles, Chad, Togo, Tunisia, Tanzania, Uganda, South Africa, Zambia, and Zimbabwe. Eritrea is the only African country that has not signed the AfCFTA).

| | |
|--------------------|---|
| EU-Singapore DTA | EU Member States, Singapore |
| EU-Korea DTA | EU Member States, Korea |
| EFTA-Singapore DEA | Switzerland, Iceland, Liechtenstein, Norway, Singapore. |

One could arguably maintain that other existing agreements, such as the ASEAN and Mercosur E-Commerce Agreements, could qualify as DEAs. However, we find that this argument does not hold, as these agreements do not share the idiosyncratic, expansive, and innovative issue coverage of DEAs. Similarly, the proposed WTO Agreement on Electronic Commerce,⁴⁰ does not fit into the DEA model but rather resembles the conventional template of PTAs' digital trade chapters, and indeed does so only in a limited, not as far-reaching, way.

B. *DEAs' Emerging Legal Architecture*

In terms of DEAs' legal architecture, it should be noted that DEAs can either be: (1) stand-alone instruments, with no linkage to a PTA, existing independently of any other agreement between the respective parties; (2) instruments linked to a PTA that essentially replace or upgrade the PTA e-commerce or digital trade chapter; (3) instruments following the former model but also being complemented by MoUs; or (4) instruments following model (2) but complemented by detailed annexes on the implementation of key provisions. The unifying feature across all these models is the character of the treaty negotiations, which are always stand-alone and dedicated solely to addressing digital trade issues.

The first type of DEAs are stand-alone DEAs, with thus far two examples. The first, the US-Japan DTA, does not mention the 2019 US-Japan Trade Agreement nor does it contain a provision on the relationship to other agreements to which the US or Japan are parties. The second, the DEPA, is the best example of a stand-alone DEA. In contrast to the US-Japan DTA, however, the DEPA acknowledges in its Article 1.1 that it coexists with the Parties' other international agreements and affirms that each Party maintains its current rights and obligations under these treaties, including the WTO Agreements.⁴¹ Furthermore, the DEPA sets out a mechanism to be followed in case a provision is found to be inconsistent with a provision of another agreement.⁴²

⁴⁰ See, Incorporation of the Agreement, *supra* note 7.

⁴¹ DEPA, *supra* note 4, art. 1.1(1).

⁴² *Id.*, art. 1.1(2): 'If a Party considers that a provision of this Agreement is inconsistent with a provision of another agreement to which it and at least one other Party are party, on

The second category of DEAs encompasses those linked to a PTA — by far the largest group of DEAs.⁴³ Although the EU appears to conceptualise its DTAs as stand-alone agreements within a comprehensive trade package,⁴⁴ it nonetheless asserts that DTAs upgrade existing PTA provisions on digital trade issues. The EU–Singapore DTA articulated this for the first time, providing that it ‘constitutes a *specific agreement* giving effect to the trade provisions of the Partnership and Cooperation Agreement and, together with the Free Trade Agreement, forms the free trade area consistent with Article XXIV of the General Agreement on Tariffs and Trade, 1994 (GATT) and Article V of the General Agreement on Trade in Services (GATS).⁴⁵ A comparable formulation is found in the EU–Korea DTA.⁴⁶ In contrast to DEPA, however, the EU DTAs do not address potential legal frictions or inconsistencies that may emerge between the provisions of the DTAs and the commitments embedded in the respective PTAs. The remaining DEAs are all linked to preexisting PTAs between the respective parties. This is clear as these DEAs contain an introductory article on the amendment of the PTA, providing that the electronic commerce chapter or section will be replaced by the first annex of the DEA and that all digital trade-related provisions found in the rest of the treaty will be amended as set out in the second annex of the DEA.⁴⁷ It follows that as these DEAs constitute integral parts of the respective PTA, they are subject to the treaty’s horizontal provisions, including general exceptions, and if applicable, the dispute settlement chapter — a topic that we further address in Part IV of this article. Under this category, the relationship between the different PTA chapters becomes important, as in certain cases, the trade in services and the IP chapters may have primacy over the digital trade provisions.

As an example of this category, one can look to the very recent EFTA–Singapore DEA. The latter is conceptualised as an amendment to the EFTA–Singapore FTA,⁴⁸ — an older treaty, which was signed on June 26, 2002 and entered into force on

request, the relevant Parties to the other agreement shall consult with a view to reaching a mutually satisfactory solution.’

⁴³ Australia–Singapore DEA, *supra* note 10; UK–Singapore DEA, *supra* note 10; Korea–Singapore DEA, *supra* note 10; UK–Ukraine DTA, *supra* note 10; AfCFTA DTP, *supra* note 11; EU–Singapore DTA, *supra* note 12; EU–Korea DTA, *supra* note 13; EFTA–Singapore DEA, *supra* note 14.

⁴⁴ See EU–Singapore DTA, *supra* note 12, art. 41(1); EU–Korea DTA, *supra* note 13, art. 28(3).

⁴⁵ EU–Singapore DTA, *supra* note 12, art. 41(1) (emphasis added).

⁴⁶ EU–Korea DTA, *supra* note 13, art. 37(3).

⁴⁷ See ASDEA, *supra* note 10, art. 3; UK–Singapore DEA, *supra* note 10, art. 2; Korea–Singapore DEA, *supra* note 10, art. 3; UK–Ukraine DTA, *supra* note 10, art. 2; EFTA–Singapore DEA, *supra* note 14, art. 1.

⁴⁸ EFTA–Singapore DEA, *supra* note 14, art. 1.

January 1, 2003,⁴⁹ and did not contain any provisions regulating digital trade with the exception of few relevant provisions on IP protection.⁵⁰ The new EFTA-Singapore DEA amends the FTA by inserting the DEA as a new Chapter III *bis* ‘Digital Economy’ right after the chapter on services,⁵¹ and by adding a new Article 5 *bis* on the location of computing facilities for financial services in Annex VIII on financial services.⁵²

The third category of DEA is linked to a PTA but also complemented by MoUs — a model typical for DEAs involving Singapore.⁵³ The benefits of MoUs have been highlighted by Elms as creating a platform for ‘communication and cooperation between parties as circumstances evolve and change’,⁵⁴ which might be particularly suitable for the technologically and politically fluid environment of digital trade. MoUs included in DEAs so far cover the following topics: AI; data innovation; trade facilitation; electronic invoicing; certification cooperation; personal data protection; digital identities; fintech; unsolicited communications; cybersecurity; data cooperation; emerging technologies; digital government; electronic data exchange; and digital economy dialogue, although the number of MoUs and respectively the issues covered vary from treaty to treaty.⁵⁵ It should be noted that some of these topics have already become part and parcel of digital trade chapters, often with binding provisions — for instance, with regard to digital trade facilitation or electronic invoicing. A potential answer to this ‘double booking’ could again be the wish to ensure an additional channel of communication and cooperation, along with traditional treaty commitments.

⁴⁹ Agreement Between the EFTA States and Singapore, EFTA States-Sing., June 26, 2002, <https://www.efta.int/trade-relations/free-trade-network/singapore> [hereinafter EFTA-Singapore FTA].

⁵⁰ *See id.* art. 54, Annex XII.

⁵¹ EFTA-Singapore DEA, *supra* note 14, art. 1(a).

⁵² *Id.*, art. 1(b).

⁵³ DEBORAH K. ELMS, STUDY ON THE POTENTIAL IMPACTS OF A FUTURE EU–SINGAPORE DIGITAL TRADE AGREEMENT 1 (2024) [hereinafter ELMS].

⁵⁴ *Id.* at 11.

⁵⁵ *See* ASDEA, *supra* note 10 (Australia and Singapore signed nine MoUs on data innovation, cooperation on AI; trade facilitation; cooperation for electronic invoicing; electronic certification cooperation; cooperation in personal data protection; cooperation in the field of digital identity; fintech; and unsolicited communications); *see* UK-Singapore DEA, *supra* note 10 (Singapore and the UK signed seven MoUs on cybersecurity cooperation; digital trade facilitation; digital identities cooperation; data cooperation; emerging technologies; digital government; and fintech bridge); *see* Korea-Singapore DEA, *supra* note 10 (Korea and Singapore signed three MoUs on cooperation on AI; electronic exchange of data; and digital economy dialogue).

MoUs are essentially non-binding instruments in international law and, in contrast to treaties, do not create legal obligations between the parties. While soft law provisions are abundant in PTAs' digital trade chapters and especially in DEAs, these are still part of the treaty and could potentially be upgraded to binding law. MoUs are different in this sense and also enjoy certain procedural flexibility in that they do not need to go through the formalities of treaty adoption, such as ratification.⁵⁶ Beyond the virtues of MoUs as flexible cooperation forms, we agree with Elms that 'it remains unclear at this point how they might ultimately support digital trade flows between the parties'.⁵⁷

Notably departing from the previous three categories, the fourth category of DEA is the model introduced by the AfCFTA Digital Trade Protocol. While this agreement is also linked to an FTA, it is accompanied by a total of eight annexes,⁵⁸ which contain detailed provisions operationalizing the Digital Trade Protocol. Importantly, unlike MoUs, the Annexes to AfCFTA Digital Trade Protocol are an integral part of the treaty and are thus binding.⁵⁹

Overall, one can conclude that there is no uniform treaty architecture of a DEA but rather a multiplicity of models shaped according to the different needs of the parties. A defining feature of the DEAs, as mentioned earlier, appears to be that they have been negotiated separately, even when linked to a previous PTA. This in turns allowed the parties to these treaties to widen the scope of substantive commitments, which at the same time positions DEAs at the forefront of digital trade rulemaking. We discuss DEAs' substantive coverage and existing commonalities across templates in Part III below.

III. DEAS' SUBSTANTIVE COVERAGE

Although, as noted, each DEA is tailored to the specific needs and priorities of its parties, there are also several commonalities. This part examines DEAs' issue coverage by first listing DEAs' common provisions, which form their backbone and

⁵⁶ Timothy Meyer, *Alternatives to Treaty-Making: Informal Agreements*, in THE OXFORD GUIDE TO TREATIES 59-81 (Duncan B. Hollis eds.) (2020); INFORMAL INTERNATIONAL LAWMAKING (Joost Pauwelyn et al. eds., 2012).

⁵⁷ ELMS, *supra* note 53, at 11.

⁵⁸ AfCFTA Digital Trade Protocol, *supra* note 11, art. 46(1) (the annexes cover the following topics: rules of origin, digital identities, cross-border digital payments, cross-border data transfers, source code, online safety and security, emerging and advanced technologies, and financial technology); *see generally* F. Sucker, *The AfCFTA Digital Trade Protocol*, in THE ROUTLEDGE HANDBOOK ON THE AFRICAN FREE TRADE AREA (Fikremarkos Merso Birhanu et al. eds., forthcoming 2026) https://papers.ssrn.com/sol3/papers.cfm?abstract_id=5386851.

⁵⁹ AfCFTA Digital Trade Protocol, *supra* note 11, art. 46(3).

are often already known from PTA templates, such as those of the CPTPP or the USMCA. We then highlight some of the DEAs' novel features that push the current boundaries of digital trade regulation. Taking the DEPA as a benchmark, we furthermore compare in Table 2 DEPA's scope with the issue coverage of other DEAs and existing digital trade regulatory models, in particular the CPTPP/USMCA, the EU, and EFTA templates, as well as the WTO Agreement on Electronic Commerce.

A. Common Features across DEAs

Not all DEAs cover the same set of issues, as this depends on the level of ambition of the negotiating partners, as well as on their experience gathered in PTAs regulating digital trade. However, there are commonalities worth highlighting, as well as the exceptions to the rule:

- All DEAs have codified the WTO moratorium on customs duties on electronic transmissions, made it permanent and provide a carve-out for the imposition of internal taxes;⁶⁰
- Except for the EU-Korea DTA, they all contain provisions on domestic electronic transaction frameworks, which should be based on the UNCITRAL Model Law on Electronic Commerce 1996;⁶¹
- Except for the US-Japan DTA, all DEAs have provisions on paperless trading.⁶² Complementarily, all DEAs, except for DEPA, have provisions on electronic authentication and signatures;⁶³

⁶⁰ US-Japan DTA, *supra* note 10, art. 7; DEPA, *supra* note 4, art. 3.2; ASDEA, *supra* note 10, art. 5; UK-Singapore DEA, *supra* note 10, art. 8.59; Korea-Singapore DEA, *supra* note 10, art. 14.5; UK-Ukraine DTA, *supra* note 10, art. 132-B; AfCFTA Digital Trade Protocol, *supra* note 11, art. 6; EU-Singapore DTA, *supra* note 12, art. 7; EU-Korea DTA, *supra* note 13, art. 7; EFTA-Singapore DEA, *supra* note 14, art. 36-D.

⁶¹ US-Japan DTA, *supra* note 10, art. 9; DEPA, *supra* note 4, art. 2.3; ASDEA, *supra* note 10, art.8; UK-Singapore DEA, *supra* note 10, art. 8.60; Korea-Singapore DEA, *supra* note 10, art. 14.7; UK-Ukraine DTA, *supra* note 10, art. 132-C; AfCFTA Digital Trade Protocol, *supra* note 11, art. 16 (not specifically mentioning the UNCITRAL Model Law on Electronic Commerce 1996); EU-Singapore DTA, *supra* note 12, art. 20; EFTA-Singapore DEA, *supra* note 14, art. 36-G (some also mention the 2005 UN Convention on Electronic Communications).

⁶² DEPA, *supra* note 4, art. 2.2; ASDEA, *supra* note 10, art. 12; UK-Singapore DEA, *supra* note 10, art. 8.61-B; Korea-Singapore DEA, *supra* note 10, art. 14.8; UK-Ukraine DTA, *supra* note 10, art. 132-E; AfCFTA Digital Trade Protocol, *supra* note 11, art. 10; EU-Singapore DTA, *supra* note 12, art. 18; EU-Korea DTA, *supra* note 13, art. 18; EFTA-Singapore DEA, *supra* note 14, art. 36-F.

⁶³ US-Japan DTA, *supra* note 10, art. 10; ASDEA, *supra* note 10, art. 9; UK-Singapore DEA, *supra* note 10, art. 8.61; Korea-Singapore DEA, *supra* note 10, art. 14.12; UK-Ukraine DTA, *supra* note 10, art. 132-G; AfCFTA Digital Trade Protocol, *supra* note 11, arts. 8 & 9; EU-

- They all have provisions requiring the adoption of consumer protection laws;⁶⁴
- They all require the adoption of measures to control unsolicited commercial electronic messages (SPAM);⁶⁵
- They all have provisions on cross-border data flows. However, these provisions include exceptions for legitimate public policy objectives or adopt the tests under the WTO general exceptions of Article XX GATT 1994 and Article XIV GATS;⁶⁶
- They all prohibit data localisation requirements as a condition for market access or conducting business in the territory of the other party/parties;⁶⁷
- They all require the adoption of laws protecting personal information/data;⁶⁸
- They all, except for the AfCFTA Digital Trade Protocol, the EU-Singapore DTA, and the EU-Korea DTA, prohibit the disclosure of proprietary

Singapore DTA, *supra* note 12, art. 10; EU-Korea DTA, *supra* note 13, art. 10; EFTA-Singapore DEA, *supra* note 14, art. 36-E(1)-(3).

⁶⁴ US-Japan DTA, *supra* note 10, art. 14; DEPA, *supra* note 4, art. 6.3; ASDEA, *supra* note 10, art. 15; UK-Singapore DEA, *supra* note 10, art. 8.61-M; Korea-Singapore DEA, *supra* note 10, art. 14.21; UK-Ukraine DTA, *supra* note 10, art. 132-R; AfCFTA Digital Trade Protocol, *supra* note 11, art. 27; EU-Singapore DTA, *supra* note 12, art. 12; EU-Korea DTA, *supra* note 13, art. 12; EFTA-Singapore DEA, *supra* note 14, art. 36-J.

⁶⁵ US-Japan DTA, *supra* note 10, art. 16; DEPA, *supra* note 4, art. 6.2; ASDEA, *supra* note 10, art. 19; UK-Singapore DEA, *supra* note 10, art. 8.61-N; Korea-Singapore DEA, *supra* note 10, art. 14.20; UK-Ukraine DTA, *supra* note 10, art. 132-S; AfCFTA Digital Trade Protocol, *supra* note 11, art. 28; EU-Singapore DTA, *supra* note 12, art. 13; EU-Korea DTA, *supra* note 13, art. 13; EFTA-Singapore DEA, *supra* note 14, art. 36-K.

⁶⁶ US-Japan DTA, *supra* note 10, art. 11; DEPA, *supra* note 4, art. 4.3; ASDEA, *supra* note 10, art. 23; UK-Singapore DEA, *supra* note 10, art. 8.61-F; Korea-Singapore DEA, *supra* note 10, art. 14.14; UK-Ukraine DTA, *supra* note 10, art. 132-K; AfCFTA Digital Trade Protocol, *supra* note 11, art. 20 & the Annex on Cross-Border Data Transfer; EU-Singapore DTA, *supra* note 12, art. 5; EU-Korea DTA, *supra* note 13, art. 5; EFTA-Singapore DEA, *supra* note 14, art. 36-M.

⁶⁷ US-Japan DTA, *supra* note 10, art. 12; DEPA, *supra* note 4, art. 4.4; ASDEA, *supra* note 10, art. 24; UK-Singapore DEA, *supra* note 10, art. 8.61-G; Korea-Singapore DEA, *supra* note 10, art. 14.15; UK-Ukraine DTA, *supra* note 10, art. 132-L; AfCFTA Digital Trade Protocol, *supra* note 11, art. 22; EU-Singapore DTA, *supra* note 12, art. 5; EU-Korea DTA, *supra* note 13, art. 5; EFTA-Singapore DEA, *supra* note 14, art. 36-M.

⁶⁸ US-Japan DTA, *supra* note 10, art. 15; DEPA, *supra* note 4, art. 4.2; ASDEA, *supra* note 10, art. 17; UK-Singapore DEA, *supra* note 10, art. 8.61-E; Korea-Singapore DEA, *supra* note 10, art. 14.17; UK-Ukraine DTA, *supra* note 10, art. 132-J; AfCFTA Digital Trade Protocol, *supra* note 11, art. 21; EU-Singapore DTA, *supra* note 12, art. 6; EU-Korea DTA, *supra* note 13, art. 6; EFTA-Singapore DEA, *supra* note 14, art. 36-L.

information relating to cryptography for ICT as a condition to market access/doing business in the territory of the other party/parties;⁶⁹

- They all have cooperation undertakings to address cybersecurity threats;⁷⁰
- They all have provisions on open government data;⁷¹
- They all have provisions promoting the engagement of micro-, small- and medium-sized enterprises (MSMEs) in digital trade;⁷²
- Except for DEPA, all DEAs have provisions on the non-disclosure of source code as a condition for market access;⁷³

⁶⁹ US-Japan DTA, *supra* note 10, art. 21; DEPA, *supra* note 4, art. 3.4; ASDEA, *supra* note 10, art. 7; UK-Singapore DEA, *supra* note 10, art. 8.61-J; Korea-Singapore DEA, *supra* note 10, art. 14.18; UK-Ukraine DTA, *supra* note 10, art. 132-O; EFTA-Singapore DEA, *supra* note 14, art. 36-Q.

⁷⁰ US-Japan DTA, *supra* note 10, art. 19; DEPA, *supra* note 4, art. 5.1; ASDEA, *supra* note 10, art. 34; UK-Singapore DEA, *supra* note 10, art. 8.61-L; Korea-Singapore DEA, *supra* note 10, art. 14.22; UK-Ukraine DTA, *supra* note 10, art. 132-Q; AfCFTA Digital Trade Protocol, *supra* note 11, art. 25; EU-Singapore DTA, *supra* note 12, art. 22; EU-Korea DTA, *supra* note 13, art. 21; EFTA-Singapore DEA, *supra* note 14, art. 36-R.

⁷¹ US-Japan DTA, *supra* note 10, art. 20; DEPA, *supra* note 4, art. 9.5; ASDEA, *supra* note 10, art. 27; UK-Singapore DEA, *supra* note 10, art. 8.61-H; Korea-Singapore DEA, *supra* note 10, art. 14.26; UK-Ukraine DTA, *supra* note 10, art. 132-M; AfCFTA Digital Trade Protocol, *supra* note 11, art. 39; EU-Singapore DTA, *supra* note 12, art. 16; EU-Korea DTA, *supra* note 13, art. 16; EFTA-Singapore DEA, *supra* note 14, art. 36-I.

⁷² US-Japan DTA, *supra* note 10, arts. 18(1) & 20(3); DEPA, *supra* note 4, module 10; ASDEA, *supra* note 10, art. 36; UK-Singapore DEA, *supra* note 10, art. 8.61-Q; Korea-Singapore DEA, *supra* note 10, art. 14.32; UK-Ukraine DTA, *supra* note 10, art. 132-U; AfCFTA Digital Trade Protocol, *supra* note 11, art. 31; EU-Singapore DTA, *supra* note 12, art. 24; EU-Korea DTA, *supra* note 13, art. 23; EFTA-Singapore DEA, *supra* note 14, art. 36-Z.

⁷³ US-Japan DTA, *supra* note 10, art. 17; ASDEA, *supra* note 10, art. 28; UK-Singapore DEA, *supra* note 10, art. 8.61-K; Korea-Singapore DEA, *supra* note 10, art. 14.19; UK-Ukraine DTA, *supra* note 10, art. 132-P; AfCFTA Digital Trade Protocol, *supra* note 11, art. 24; EU-Singapore DTA, *supra* note 12, art. 11; EU-Korea DTA, *supra* note 13, art. 11; EFTA-Singapore DEA, *supra* note 14, art. 36-P.

- Except for the US-Japan DTA, all DEAs have provisions on AI,⁷⁴ competition policy related to the data economy,⁷⁵ and digital identities.⁷⁶ These provisions seek, among others, to foster collaboration in these areas. The EU-Singapore DTA lacks dedicated provisions on these issues but mentions some of them in the article on cooperation.⁷⁷ The EU-Korea DTA entirely lacks such provisions.
- Except for DEPA and the US-Japan DTA, all DEAs have provisions on standards and conformity assessments for digital trade,⁷⁸ in addition to stakeholder engagement provisions.⁷⁹

B. *DEAs' Novel Features*

Another defining feature of DEAs is their regulatory innovation. While the CPTPP remains an influential regulatory framework for digital trade, DEAs stand out both quantitatively and qualitatively. In the former sense, the DEPA, for instance, contains sixty-five provisions and 10,887 words, while the CPTPP has only eighteen provisions and 2,706 words. In terms of substance, more importantly, DEAs introduce a suite of novel provisions that depart from the standard PTA digital trade chapter template. They tackle some of the new challenges of the data-dependent

⁷⁴ DEPA, *supra* note 4, art. 8.2; ASDEA, *supra* note 10, art. 31; UK-Singapore DEA, *supra* note 10, art. 8.61-R; Korea-Singapore DEA, *supra* note 10, art. 14.28; UK-Ukraine DTA, *supra* note 10, art. 132-V; AfCFTA Digital Trade Protocol, *supra* note 11, art. 34 & the Annex on Emerging and Advanced Technologies; EFTA-Singapore DEA, *supra* note 14, art. 36-W.

⁷⁵ DEPA, *supra* note 4, art. 8.4; ASDEA, *supra* note 10, art. 16; UK-Singapore DEA, *supra* note 10, art. 8.61-U; Korea-Singapore DEA, *supra* note 10, art. 14.27; UK-Ukraine DTA, *supra* note 10, art. 132-X; EFTA-Singapore DEA, *supra* note 14, art. 36-T; AfCFTA Digital Trade Protocol, *supra* note 11, art. 36(d) (the AfCFTA Digital Trade Protocol limits its provision on competition policy to the ICT sector).

⁷⁶ DEPA, *supra* note 4, art. 7.1; ASDEA, *supra* note 10, art. 29; UK-Singapore DEA, *supra* note 10, art. 8.61-S; Korea-Singapore DEA, *supra* note 10, art. 14.30; UK-Ukraine DTA, *supra* note 10, art. 132-W; AfCFTA Digital Trade Protocol, *supra* note 11, art. 14 & the Annex on Digital Identities; EFTA-Singapore DEA, *supra* note 14, art. 36-U.

⁷⁷ EU-Singapore DTA, *supra* note 12, art. 14.

⁷⁸ ASDEA, *supra* note 10, art. 30; UK-Singapore DEA, *supra* note 10, art. 8.61-D; Korea-Singapore DEA, *supra* note 10, art. 14.31; UK-Ukraine DTA, *supra* note 10, art. 132-I; EU-Singapore DTA, *supra* note 12, art. 23; EU-Korea DTA, *supra* note 13, art. 22; EFTA-Singapore DEA, *supra* note 14, art. 36-X.

⁷⁹ ASDEA, *supra* note 10, art. 35; UK-Singapore DEA, *supra* note 10, art. 8.61V(d); Korea-Singapore DEA, *supra* note 10, art. 14.34; UK-Ukraine DTA, *supra* note 10, art. 132-Y; EU-Singapore DTA, *supra* note 12, art. 27; EU-Korea DTA, *supra* note 13, art. 26; EFTA-Singapore DEA, *supra* note 10, art. 2 (the AfCFTA Digital Trade Protocol does not contain a general provision on standards or stakeholder engagement; instead, it regulates these topics in paragraphs under several provisions).

economy and provide valuable platforms for exchange and cooperation on some emerging issues. Yet, the majority of these provisions are of a soft legal nature.

To begin with, *data innovation* is addressed in all DEAs except for the US-Japan DTA, the two EU DTAs, and the EFTA-Singapore DEA.⁸⁰ The DEPA distinguishes itself with a comprehensive data innovation framework, uniquely emphasising the importance of a rich and accessible public domain.⁸¹ This forward-looking approach not only fosters innovation but also encourages a collaborative environment where data is viewed as a resource. Provisions designed to regulate *competition* in the digital economy also appear widely across DEAs, with the notable exception of the US-Japan DTA and the two EU DTAs.⁸² These provisions aim to curb anti-competitive practices and foster a level playing field in digital markets. The regulation of *digital identities* is another area where DEAs expand the CPTPP template. All DEAs, except for the US-Japan DTA and the EU-Korea DTA, incorporate dedicated, that is, specific provisions on digital identities.⁸³ However, the EU-Singapore DTA only frames this as an area of mutual interest.⁸⁴

DEAs also address *digital inclusion* in far-reaching manner. They do not merely focus on integrating MSMEs in the digital economy but extend this to encompass the inclusion of women, rural populations, low socio-economic groups, disabled individuals, and indigenous people.⁸⁵ For instance, the DEPA Protocol explicitly strengthens the rights of indigenous people, particularly the Māori in New Zealand,

⁸⁰ DEPA, *supra* note 4, art. 9.4; ASDEA, *supra* note 10, art. 26; UK-Singapore DEA, *supra* note 10, art. 8.61-I; Korea-Singapore DEA, *supra* note 10, art. 14.25; UK-Ukraine DTA, *supra* note 10, art. 132-N; AfCFTA Digital Trade Protocol, *supra* note 11, art. 23.

⁸¹ DEPA, *supra* note 4, art. 9.3.

⁸² DEPA, *supra* note 4, art. 8.4; ASDEA, *supra* note 10, art. 16; UK-Singapore DEA, *supra* note 10, art. 8.61-U; Korea-Singapore DEA, *supra* note 10, art. 14.27; UK-Ukraine DTA, *supra* note 10, art. 132-X; AfCFTA Digital Trade Protocol, *supra* note 11, art. 36(d) (regarding the ICT sector); EFTA-Singapore DEA, *supra* note 14, art. 36-T.

⁸³ DEPA, *supra* note 4, art. 7.1; ASDEA, *supra* note 10, art. 29; UK-Singapore DEA, *supra* note 10, art. 8.61-S; Korea-Singapore DEA, *supra* note 10, art. 14.30; UK-Ukraine DTA, *supra* note 10, art. 132-W; AfCFTA Digital Trade Protocol, *supra* note 11, art. 14 & the Annex on Digital Identities; EFTA-Singapore DEA, *supra* note 14, art. 36-U.

⁸⁴ EU-Singapore DTA, *supra* note 12, art. 14(1).

⁸⁵ DEPA, *supra* note 4, art. 11.1; UK-Singapore DEA, *supra* note 10, art. 8.61-P; UK-Ukraine DTA, *supra* note 10, art. 132-T; AfCFTA Digital Trade Protocol, *supra* note 11, art. 30; EU-Singapore DTA, *supra* note 12, art. 25; EU-Korea DTA, *supra* note 13, art. 24; EFTA-Singapore DEA, *supra* note 14, art. 36-AA (provisions on digital inclusion are notably absent from the US-Japan DTA, the ASDEA and the Korea-Singapore DEA); *see also* María Vásquez Callo-Müller & Kholofelo Kugler, *Digital Trade, Development, and Inequality*, 117 AJIL UNBOUND 116-121 (2023).

through specific provisions.⁸⁶ Additionally, labour protection within the digital economy is specifically addressed as part of digital inclusion in both DEAs to which the UK is a party.⁸⁷ The UK-Singapore DEA is also unique in its recognition of the digital divide in other countries and the efforts to address it, so as to promote economic development and poverty reduction.⁸⁸

Additional innovations are found with regard to emerging technologies, in particular in provisions on fintech and the governance of AI. Provisions on *fintech*, which promote the innovation and regulatory cooperation essential for financial technologies, are present in most DEAs, except the US-Japan DTA, the UK-Ukraine DTA, the EU-Singapore DTA, and the EU-Korea DTA.⁸⁹ The explicit inclusion of provisions regarding AI,⁹⁰ again, except for the US-Japan DTA and the EU DEAs,⁹¹ underscores the tendency observed in DEAs to address rapidly evolving technological challenges. These AI provisions typically emphasise cooperation in the adoption of ethical and governance frameworks that support the trusted, safe, and responsible use of AI technologies. Finally, the inclusion of a provision on *lawtech* in the UK-Singapore DEA,⁹² reflects an awareness of the growing intersection between technology and legal services and aims to ensure trusted, safe and responsible use of lawtech.

One novelty thus far found only in the AfCFTA Digital Trade Protocol is the introduction of specific rules on Rules of Origin (RoO) for digital trade.⁹³ Article 5 of the AfCFTA Digital Trade Protocol mandates the development of a dedicated Annex on RoO with the objective of fostering African digital platforms and African content, in order to develop an AfCFTA digital market that promotes African firms

⁸⁶ See DEPA Protocol, *supra* note 4, art.1.1(3-3b).

⁸⁷ UK-Singapore DEA, *supra* note 10, art. 8.61-P(1); UK-Ukraine DTA, *supra* note 10, art. 132-T.

⁸⁸ UK-Singapore DEA, *supra* note 10, art. 8.61-P(4).

⁸⁹ DEPA, *supra* note 4, art. 8.1; ASDEA, *supra* note 10, art. 32; UK-Singapore DEA, *supra* note 10, art. 8.53(2); Korea-Singapore DEA, *supra* note 10, art. 14.29; AfCFTA Digital Trade Protocol, *supra* note 11, art. 35 & the Annex on Financial Technology; EFTA-Singapore DEA, *supra* note 14, art. 36-V.

⁹⁰ DEPA, *supra* note 4, art. 8.2; ASDEA, *supra* note 10, art. 31; UK-Singapore DEA, *supra* note 10, art. 8.61-R; Korea-Singapore DEA, *supra* note 10, art.14.28; UK-Ukraine DTA, *supra* note 10, art. 132-V; EFTA-Singapore DEA, *supra* note 14, art. 36-W; AfCFTA Digital Trade Protocol, *supra* note 11, art. 34 & the Annex on Emerging and Advanced Technologies (the AfCFTA Digital Trade Protocol regulates AI as one of many novel technologies).

⁹¹ See EU-Singapore DTA, *supra* note 12, art. 14(1) (the EU-Singapore DTA only mentions AI as part of their provision on cooperation on digital trade issues but refrains from dedicating a separate provision to AI governance).

⁹² UK-Singapore DEA, *supra* note 10, art. 8.61-T.

⁹³ AfCFTA Digital Trade Protocol, *supra* note 11, art. 5 & Annex on RoO.

and the use of African digital platforms. This provision is at the same time tied to Article 6 on customs duties, which otherwise promotes the duty-free movement of electronic transmissions. The corresponding Annex on RoO defines the digital products covered under its scope,⁹⁴ and establishes criteria to determine what is an African-owned enterprise,⁹⁵ an African Digital Platform,⁹⁶ African content,⁹⁷ and the criteria for eligibility for preferential treatment.⁹⁸

A novelty introduced by the EFTA-Singapore DEA is its provision on the protection of critical public infrastructure. Article 36-AD establishes that nothing in the DEA chapter restricts a Party's ability to take measures it deems necessary to protect its essential security interests in relation to 'critical public infrastructure'. It specifically identifies systems such as communications networks, power grids, water supply systems, and transportation infrastructure as examples of infrastructures that may require protection. The provision covers measures responding to deliberate attempts to disable or degrade such infrastructure, meaning cyberattacks, sabotage, or other forms of interference. Essentially, Article 36-AD of the EFTA-Singapore DEA is a carve-out confirming that the commitments under the DEA chapter do not prevent a Party from intervening to secure foundational systems that underpin the functioning of society and the economy.

In conclusion, the novel features of DEAs, despite variations across treaties (see Table 2 below), illustrate a deliberate expansion and rethinking of digital trade regulation beyond conventional PTA templates. DEAs' innovative provisions, albeit mostly in soft law form, expand the scope of digital trade law, allowing for the incorporation of new issues into the digital trade architecture, even when these issues are not yet treaty-ready, and such incorporation constitutes a form of 'issue-labelling'.⁹⁹ On the other hand, through the wide scope of issues covered under DEAs, they also recalibrate the current scope of regulatory autonomy of States — an important topic that we discuss next.

⁹⁴ *Id.*, art. 3 & Annex on RoO.

⁹⁵ AfCFTA Digital Trade Protocol, *supra* note 11, art. 4 & Annex on RoO.

⁹⁶ *Id.*, art. 5 & Annex on RoO.

⁹⁷ *Id.*, art. 6 & Annex on RoO.

⁹⁸ *Id.*, art. 7 & Annex on RoO.

⁹⁹ Robert Wolfe, *Learning about Digital Trade: Privacy and E-Commerce in CETA and TPP*, 18 WORLD TRADE REV., S63-S84, S78 (2019).

Table 2. A Comparison of the DEPA Template with the other DEAs, Selected PTA Digital Trade Chapters and the WTO Agreement on Electronic Commerce (AEC)

| DEAs | | | | | | | | PTAs | | | | | |
|--|---------------------|---------------|-------------------------|----------------------------|-----------------------|----------------------------------|-------------------------|-----------------------------|--------------|--------------|------------------|-------------------------|----------------|
| DEPA (signed 2019, updated 2023) ¹⁰⁰ | US-Japan DTA (2019) | ASD EA (2020) | UK-Singapore DEA (2022) | Korea-Singapore DEA (2022) | UK-Ukraine DTA (2023) | AFCFTA DTP (2024) ¹⁰¹ | EU-Singapore DTA (2025) | EFTA - Singapore DEA (2025) | CPTPP (2018) | USMCA (2018) | EU-NZ FTA (2023) | EFTA-Moldova FTA (2023) | WTO AEC (2024) |
| BUSINESS AND TRADE FACILITATION | | | | | | | | | | | | | |
| Paperless Trading (Art 2.2) | | ✓ (Art 12) | ✓ (Art 8.61-B) | ✓ (Art 14.12) | ✓ (Art 132-G) | ✓ (Art 10) | ✓ (Art 18) | ✓ (Art 36-F) | ✓ (Art 14.9) | ✓ (Art 19.9) | ✓ (Art 12.15) | ✓ (Art 5.7) | ✓ (Art 8) |
| Domestic Electronic Transactions Framework (Art 2.3) | ✓ (Art 9) | ✓ (Art 8) | ✓ (Art 8.60) | ✓ (Art 14.7) | ✓ (Art 132-C) | ✓ (Art 16) | ✓ (Art 20) | ✓ (Art 36-G) | ✓ (Art 14.5) | ✓ (Art 19.5) | | | ✓ (Art 4) |
| Logistics (Art 2.4) | | | ✓ (Art 8.61-C) | ✓ (Art 14.9) | ✓ (Art 132-H) | ✓ (Art 11) | | | | | | | |

¹⁰⁰ The comparison is based on a selection of substantive provisions, excluding the transparency, exceptions and definitions provisions as well as provisions regarding the functioning of the Agreement.

¹⁰¹ The information on the AfCFTA Digital Trade Protocol is based solely on the Protocol without referring to the Annexes.

| | | | | | | | | | | | | | |
|--|------------|------------|------------------------|---------------|---------------|------------|------------|--------------|--------------|--------------|---------------|--------------|------------|
| E-invoicing (Art 2.5) | | ✓ (Art 10) | ✓ (Art 8-61-A) | ✓ (Art 14.10) | ✓ (Art 132-F) | ✓ (Art 13) | ✓ (Art 17) | ✓ (Art 36-O) | | | ✓ (Art 12.10) | | ✓ (Art 7) |
| Express Shipments (Art 2.6) | | ✓ (Art 13) | | ✓ (Art 14.13) | | | | | | | | | |
| E-payments (Art 2.7) | | ✓ (Art 11) | ✓ (Annex B Art 8.54-A) | ✓ (Art 14.11) | | ✓ (Art 15) | ✓ (Art 21) | ✓ (Art 36-N) | | | | ✓ (Art 5.12) | ✓ (Art 10) |
| TREATMENT OF DIGITAL PRODUCTS AND RELATED ISSUES | | | | | | | | | | | | | |
| Customs Duties (Art 3.2) | ✓ (Art 7) | ✓ (Art 5) | ✓ (Art 8.59) | ✓ (Art 14.5) | ✓ (Art 132-B) | ✓ (Art 6) | ✓ (Art 7) | ✓ (Art 36-D) | ✓ (Art 14.3) | ✓ (Art 19.3) | ✓ (Art 12.6) | ✓ (Art 5.6) | ✓ (Art 11) |
| Non-Discriminatory Treatment of Digital Products (Art 3.3) | ✓ (Art 8) | ✓ (Art 6) | | ✓ (Art 14.6) | | ✓ (Art 7) | | | ✓ (Art 14.4) | ✓ (Art 19.4) | | | |
| ICT Products that Use Cryptography (Art 3.4) | ✓ (Art 21) | ✓ (Art 7) | ✓ (Art 8.61-J) | ✓ (Art 14.18) | ✓ (Art 132-O) | | | ✓ (Art 36-Q) | | | | | |
| DATA ISSUES | | | | | | | | | | | | | |

| | | | | | | | | | | | | | |
|---|-------------------|-------------------|----------------|-------------------------|---------------|------------|------------|--------------|---------------|---------------|---------------|--------------|------------|
| Personal Information Protection (Art 4.2) | ✓ (Art 15) | ✓ (Art 17) | ✓ (Art 8.61-E) | ✓ (Art 14.17) | ✓ (Art 132-J) | ✓ (Art 21) | ✓ (Art 6) | ✓ (Art 36-L) | ✓ (Art 14.8) | ✓ (Art 19.8) | ✓ (Art 12.5) | ✓ (Art 5.13) | ✓ (Art 16) |
| Cross-Border Data Flows (Art 4.3) | ✓ (Art 11) | ✓ (Art 23) | ✓ (Art 8.61-F) | ✓ (Art 14.14) | ✓ (Art 132-K) | ✓ (Art 20) | ✓ (Art 5) | ✓ (Art 36-M) | ✓ (Art 14.11) | ✓ (Art 19.11) | ✓ (Art 12.4) | ✓ (Art 5.11) | |
| Location of Computing Facilities (Art 4.4) | ✓ (Art 12 and 13) | ✓ (Art 24 and 25) | ✓ (Art 8.61-G) | ✓ (Art 14.15 and 14.16) | ✓ (Art 132-L) | ✓ (Art 22) | ✓ (Art 5) | ✓ (Art 36-M) | ✓ (Art 14.13) | ✓ (Art 19.12) | ✓ (Art 12.4) | | |
| WIDER TRUST ENVIRONMENT | | | | | | | | | | | | | |
| Cybersecurity Cooperation (Art 5.1) | ✓ (Art 19) | ✓ (Art 34) | ✓ (Art 8.61-L) | ✓ (Art 14.22) | ✓ (Art 132-Q) | ✓ (Art 25) | ✓ (Art 22) | ✓ (Art 36-R) | ✓ (Art 14.16) | ✓ (Art 19.15) | | | ✓ (Art 17) |
| Online Safety and Security (Art 5.2) | | ✓ (Art 18) | ✓ (Art 8.61-O) | ✓ (Art 14.23) | | ✓ (Art 29) | | | | | | | |
| BUSINESS AND CONSUMER TRUST | | | | | | | | | | | | | |
| SPAM (Art 6.2) | ✓ (Art 16) | ✓ (Art 19) | ✓ (Art 8.61-N) | ✓ (Art 14.20) | ✓ (Art 132-S) | ✓ (Art 28) | ✓ (Art 13) | ✓ (Art 36-K) | ✓ (Art 14.14) | ✓ (Art 19.13) | ✓ (Art 12.13) | ✓ (Art 5.10) | ✓ (Art 15) |
| Online Consumer Protection (Art 6.3) | ✓ (Art 14) | ✓ (Art 15) | ✓ (Art 8.61-M) | ✓ (Art 14.21) | ✓ (Art 132-R) | ✓ (Art 27) | ✓ (Art 12) | ✓ (Art 36-J) | ✓ (Art 14.7) | ✓ (Art 19.7) | ✓ (Art 12.12) | ✓ (Art 5.9) | ✓ (Art 14) |
| Principles on Access to and Use of the Internet (Art 6.4) | | ✓ (Art 20) | | ✓ (Art 14.24) | ✓ (Art 132-Z) | ✓ (Art 26) | ✓ (Art 15) | ✓ (Art 36-H) | ✓ (Art 14.10) | ✓ (Art 19.10) | ✓ (Art 12.16) | ✓ (Art 5.8) | ✓ (Art 13) |

| DIGITAL IDENTITIES | | | | | | | | | | | | | |
|---|--|------------|-------------------------|---------------|---------------|---------------------------|--|--------------|--|--|--|--|--|
| Digital Identities (Art 7.1) | | ✓ (Art 29) | ✓ (Art 8.61-S) | ✓ (Art 14.30) | ✓ (Art 132-W) | ✓ (Art 14) | | ✓ (Art 36-U) | | | | | |
| EMERGING TRENDS AND TECHNOLOGIES | | | | | | | | | | | | | |
| FinTech Cooperation (Art 8.1) | | ✓ (Art 32) | ✓ (ANNEX B Art 8.53(2)) | ✓ (Art 14.29) | | ✓ (Art 35) | | ✓ (Art 36-V) | | | | | |
| AI (Art 8.2) | | ✓ (Art 31) | ✓ (Art 8.61-R) | ✓ (Art 14.28) | ✓ (Art 132-V) | ✓ (Art 34) ¹⁰² | | ✓ (Art 36-W) | | | | | |
| Government Procurement (Art 8.3) | | | | | | | | | | | | | |
| Cooperation on Competition Policy (Art 8.4) | | ✓ Art 16 | ✓ (Art 8.61-U) | ✓ (Art 14.27) | ✓ (Art 132-X) | | | ✓ (Art 36-T) | | | | | |
| INNOVATION AND THE DIGITAL ECONOMY | | | | | | | | | | | | | |
| Public Domain (Art 9.3) | | | | | | | | | | | | | |
| Data Innovation (Art 9.4) | | ✓ (Art 26) | ✓ (Art 8.61-I) | ✓ (Art 14.25) | ✓ (Art 132-N) | ✓ (Art 23) | | | | | | | |

¹⁰² AI is not explicitly mentioned but forms part of the Emerging and Advanced Technologies also subject to the dedicated Annex on Emerging and Advanced Technologies.

| | | | | | | | | | | | | | |
|---|------------|------------|----------------|---------------|---------------|------------------------|------------|---------------|---------------|---------------|---------------|--------------|------------|
| Open Government Data (Art 9.5) | ✓ (Art 20) | ✓ (Art 27) | ✓ (Art 8.61-H) | ✓ (Art 14.26) | ✓ (Art 132-M) | ✓ (Art 39) | ✓ (Art 16) | ✓ (Art 36-I) | | ✓ (Art 19.18) | | | ✓ (Art 12) |
| SMALL AND MEDIUM ENTERPRISES COOPERATION | | | | | | | | | | | | | |
| SMEs in the Digital Economy (Arts 10.1-10.4) | | ✓ (Art 36) | ✓ (Art 8.61-Q) | ✓ (Art 14.32) | ✓ (Art 132-U) | ✓ (Art 31) | ✓ (Art 24) | ✓ (Art 36-Z) | | | | | |
| DIGITAL INCLUSION | | | | | | | | | | | | | |
| Digital Inclusion (Art 11.1) | | | ✓ (Art 8.61-P) | | ✓ (Art 132-T) | ✓ (Art 30) | ✓ (Art 25) | ✓ (Art 36-AA) | | | | | |
| DEPA-EXTRA ISSUES | | | | | | | | | | | | | |
| Source code | ✓ (Art 17) | ✓ (Art 28) | ✓ (Art 8.16-K) | ✓ (Art 14.19) | ✓ (Art 132-P) | ✓ (Art 24) | ✓ (Art 11) | ✓ (Art 36-P) | ✓ (Art 14.17) | ✓ (Art 19.16) | ✓ (Art 12.11) | ✓ (Art 5.14) | |
| LawTech | | | ✓ (Art 8.16-T) | | | | | | | | | | |
| Rules of origin (RoO) | | | | | | Anne x on RoO | | | | | | | |

IV. DEAS AS ONGOING RECALIBRATION OF DIGITAL TRADE LIBERALISATION AND REGULATORY AUTONOMY

A persistent concern in the development of international economic law has been the reconciliation of market access commitments with the preservation of domestic regulatory autonomy.¹⁰³ The same consideration arises in the context of digital trade rulemaking and the negotiation of DEAs. The fundamental issue is how to achieve a balance between treaty commitments and the ability to maintain and adopt policies in the public interest. Striking such a balance has always been complex, as it is dependent on multiple considerations, such as the domestic political economy of the treaty parties and external geopolitical pressures. In the context of digital trade, achieving the proper balance has only become more difficult. On the one hand, governments are under pressure to reap the benefits of the digital economy, data-driven growth and innovation, and increasingly, AI adoption, including through market liberalising commitments and international cooperation. On the other hand, they also must ensure the protection of fundamental rights and freedoms of their citizenry and the attainment of public policy objectives that reflect the country's vital interests and priorities, including policies related to the notion of digital sovereignty,¹⁰⁴ and do this in a future-proof manner, considering rapid technological developments with known and unknown societal implications.¹⁰⁵

Various tools are available in the realm of digital trade to preserve a country's policy space. These tools include exemptions/carve-outs, exceptions, the right-to-regulate provisions, review clauses, transition provisions, and, for developing countries, and special and differential treatment provisions. These tools have been included in various ways in DEAs, underscoring that there is no 'copy-paste' but rather a 'copy-adapt' approach to digital trade rulemaking, including with regard to retaining policy leeway. In line with this, across all DEAs, there are a few aspects worth highlighting.

All DEAs have a general exception clause, allowing Parties to deviate, under certain conditions, from obligations and commitments under the treaty. These exceptions are formulated for the pursuit of public policy objectives.¹⁰⁶ This is, however, not

¹⁰³ See, e.g., JOHN H. JACKSON, SOVEREIGNTY, THE WTO, AND CHANGING FUNDAMENTALS OF INTERNATIONAL LAW 57-78 (2006).

¹⁰⁴ See generally DATA SOVEREIGNTY: FROM THE DIGITAL SILK ROAD TO THE RETURN OF THE STATE (Anupam Chander and Haochen Sun eds., 2023).

¹⁰⁵ See Burri & Kugler, *supra* note 35; Burri, *supra* note 35 (for examples in the area of personal data protection); Chander & Schwartz, *supra* note 35.

¹⁰⁶ US-Japan DTA, *supra* note 10, art. 3; DEPA, *supra* note 4, art. 15.1; ASDEA, *supra* note 10, art. 3; UK-Singapore DEA, *supra* note 10, art. 8.61-X referring to UK-Singapore FTA, art. 8.62; Korea-Singapore DEA, *supra* note 10, annex B(2) amends the general exceptions clause found in Korea-Singapore FTA, art. 21.2; the general exceptions clause applicable to the UK-Ukraine DTA is in Article 133 UK-Ukraine FTA; EU-Singapore DTA, *supra* note

the case with the AfCFTA Digital Trade Protocol, which does not include a general exception clause. According to Sucker, this implies that AfCFTA parties ‘may have limited policy space to adopt measures in support of infant digital industries and broader developmental objectives’ other than those permitted under specific exceptions, for instance, under the cross-border data flow provision.¹⁰⁷ Similar considerations arise regarding security exceptions. All DEAs, except the AfCFTA Digital Trade Protocol, contain security exceptions that allow deviations from commitments for national security purposes.¹⁰⁸

Concerning carve-outs, all DEAs exclude from the scope of the agreement government procurement,¹⁰⁹ except for the EU-Singapore DTA and the EU-Korea DTA; nor is government data covered.¹¹⁰ Furthermore, in the case of the two EU DTAs and the EFTA-Singapore DEA, audio-visual services are excluded from the scope of the DEA — a stance that is typical for all EU FTAs. In the case of the EU-Singapore DTA and the EFTA-Singapore DEA, this includes broadcasting services as well¹¹¹ — an extension that is mostly for enhanced legal certainty, as normally

12, art. 29 refers to the general exceptions clauses of the EU-Singapore FTA, arts. 2.14 & 8.62; EU-Korea DTA, *supra* note 10, art. 28 refers to the general exceptions clauses of the EU-Korea FTA, arts. 2.15 & 7.50; EFTA-Singapore DEA, *supra* note 14, art. 36-AB.

¹⁰⁷ Sucker, *supra* note 58, at 22.

¹⁰⁸ US-Japan DTA, *supra* note 10, art. 4; DEPA, *supra* note 4, art. 15.2 (the security exception applicable to the ASDEA is in Australia-Singapore FTA, chapter 7 art. 2; the security exception applicable to the UK-Singapore DEA is in UK-Singapore FTA, art. 16.11; the security exception applicable to the Korea-Singapore DEA is in Korea-Singapore FTA, art. 21.3; the security exception applicable to the UK-Ukraine DTA is in UK-Ukraine FTA, art. 135; EU-Singapore DTA, *supra* note 12, art. 30 refers to the security exception of EU-Singapore FTA, art. 16.11; EU-Korea DTA, *supra* note 10, art. 29 refers to the security exception of EU-Korea FTA, art. 15.9; and EFTA-Singapore DEA, *supra* note 12, art. 36-C refers to the security exception of EFTA-Singapore FTA, arts. 20 & 34).

¹⁰⁹ US-Japan DTA, *supra* note 10, art. 2(2)(a); DEPA, *supra* note 4, art. 1.1(2)(c); ASDEA, *supra* note 10, art. 2(2)(a); UK-Singapore DEA, *supra* note 10, art. 8.58(4)(b); Korea-Singapore DEA, *supra* note 10, art. 14.2(2)(a); UK-Ukraine DTA, *supra* note 10, art. 132-A(4); AfCFTA Digital Trade Protocol, *supra* note 11, art. (3)(2)(a); EFTA-Singapore DEA, *supra* note 14, art. 36-B(3)(b).

¹¹⁰ US-Japan DTA, *supra* note 10, art. 2(2)(c); DEPA, *supra* note 4, art. 1.1(2)(d); ASDEA, *supra* note 10, art. 2(2)(b); UK-Singapore DEA, *supra* note 10, art. 8.58(4)(b); Korea-Singapore DEA, *supra* note 10, art. 14.2(2)(b); UK-Ukraine DTA, *supra* note 10, art. 132-A(3); AfCFTA Digital Trade Protocol, *supra* note 11, art. 3(2)(b); EU-Singapore DTA, *supra* note 12, art. 2(2)(c); EU-Korea DTA, *supra* note 13, art. 2(2)(c); EFTA-Singapore DEA, *supra* note 14, art. 36-B(3)(c).

¹¹¹ EU-Singapore DTA, *supra* note 12, art. 2(2)(a) & (b); EU-Korea DTA, *supra* note 13, art. 2(2)(a); EFTA-Singapore DEA, *supra* note 14, art. 36-B(3)(a) & n.2.

audio-visual services cover broadcasting. In addition, all DEAs exclude taxes or taxation measures from the scope of the agreement.¹¹²

The right to regulate has also been incorporated in the EU DTAs, the AfCFTA Digital Trade Protocol, and the EFTA-Singapore DEA.¹¹³ Despite the potentially broad scope of the right to regulate, the legal value of this provision remains debatable, as shown by Burri and Kugler.¹¹⁴ The EU approach towards retaining policy space in key issues such as cross-border data flows and the protection of source code is however worth highlighting. In both EU DTAs, the EU has included fully-fledged language on exceptions. In contrast to non-EU DEAs, which provide that the measures to protect legitimate public policy objectives should not amount to arbitrary or unjustifiable discrimination or a disguised restriction on trade and do not impose restrictions greater than are required to achieve the legitimate objective,¹¹⁵ the EU DEAs go a step further. They clarify, through a non-exhaustive list, what is understood by legitimate public policy objectives, mentioning a wide range of measures that qualify, including ‘public security, public morals, or human, animal or plant life or health, (measures) to maintain public order, to protect other fundamental interests of society such as social cohesion, online safety, cybersecurity, safe and trustworthy artificial intelligence, or protecting against the dissemination of disinformation, or other comparable objectives of public interest, taking into account the evolving nature of digital technologies and related challenges’.¹¹⁶ Moreover, EU DEAs also clarify that the interpretation of those objectives should take into account the ‘evolving nature of digital technologies’,¹¹⁷ thus permitting a forward-looking approach to treaty interpretation. The EU DTAs also complement cross-border data flow provisions with review clauses, which allow parties to reassess the implementation of these provisions within three years of the Agreement’s entry into force and whenever a party considers it appropriate.¹¹⁸

¹¹² US-Japan DTA, *supra* note 10, art. 6; DEPA, *supra* note 4, arts. 3.2(2) & 15.5; ASDEA, *supra* note 10, art. 5(2); UK-Singapore DEA, *supra* note 10, art. 8.59(2); Korea-Singapore DEA, *supra* note 10, art. 14.5(2); UK-Ukraine DTA, *supra* note 10, art. 132-B(2); AfCFTA Digital Trade Protocol, *supra* note 11, art. 6(2); EU-Singapore DTA, *supra* note 12, art. 32; EU-Korea DTA, *supra* note 13, art. 7(2); EFTA-Singapore DEA, *supra* note 14, art. 36-AG.

¹¹³ EU-Korea DTA, *supra* note 13, art. 3; EU-Singapore DTA, *supra* note 12, art. 3; AfCFTA Digital Trade Protocol, *supra* note 11, art. 4; EFTA-Singapore DEA, *supra* note 14, preamble.

¹¹⁴ See Burri and Kugler, *supra* note 35.

¹¹⁵ See, e.g., DEPA, *supra* note 4, art. 4(3) read together with arts. 5 & 8(b) of the DEPA Protocol.

¹¹⁶ EU-Singapore DTA, *supra* note 12, art. 5(4) & n.1; see also, although worded slightly differently, EU-Korea DTA, *supra* note 13, art. 5(3) & n.5.

¹¹⁷ See EU-Korea DTA, *supra* note 13, art. 5; EU-Singapore DTA, *supra* note 12, art. 5.

¹¹⁸ See EU-Korea DTA, *supra* note 13, art. 5.6; EU-Singapore DTA, *supra* note 12, art. 5.3.

The justiciability of treaty commitments also determines the regulatory autonomy of states. In this regard, it is worth noting that among the pool of DEAs, the only one not subject to dispute settlement is the US-Japan DTA. All the other DEAs either explicitly or implicitly subject their provisions to dispute settlement. For example, DEPA, as a standalone agreement, establishes a whole new dispute settlement mechanism, including arbitration and mediation procedures, in module 14. In addition, the 2023 DEPA Protocol reinforced the legal certainty of key provisions, including those regarding cross-border data flows and data localisation, by subjecting them to dispute settlement.¹¹⁹

The enforceability of DEAs is also true for DEAs that are linked to a PTA. In those cases, the parties will explicitly or implicitly extend the applicability of the dispute settlement mechanism found in the underlying PTA to the provisions of the DEA. DEAs that explicitly extend the application of the dispute settlement mechanism to the DEA are the AfCFTA Digital Trade Protocol, whereby its Article 45 refers to the Protocol on Rules and Procedures on the Settlement of Disputes under the AfCFTA rules framework. Similarly, the EU DTAs establish that the provisions on dispute settlement of the FTA apply *mutatis mutandis* to the DTA.¹²⁰ On the other hand, in the ASDEA, Singapore-UK DEA, Korea-Singapore DEA, the UK-Ukraine DEA, and the EFTA-Singapore DEA, the parties do not explicitly exclude the application of the dispute settlement chapter. It can be however presumed that it applies to the provisions of the DEA.

V. DEAS VIS-À-VIS THE PROPOSED WTO AGREEMENT ON ELECTRONIC COMMERCE

Another important question is how DEAs measure up against multilateral efforts to regulate digital trade, particularly those under the WTO Joint Statement Initiative on Electronic Commerce and the proposed WTO Agreement on Electronic Commerce. Based upon the text distributed to the WTO General Council in February 2025,¹²¹ the Agreement on Electronic Commerce covers a number of key digital trade regulation issues organised along several clusters:

¹¹⁹ DEPA Protocol, art. 8 ceases the application of Annex 14-A ‘Dispute Settlement’, so that Module 14 (Dispute Settlement), including Annex 14-B (Mediation Mechanism) and Annex 14-C (Arbitration Mechanism), now apply to: (a) art. 3.3 (Non-Discriminatory Treatment of Digital Products); (b) art. 3.4 (Information and Communication Technology Products that Use Cryptography); (c) art. 4.3 (Cross-Border Transfer of Information by Electronic Means); and (d) art. 4.4 (Location of Computing Facilities).

¹²⁰ EU-Singapore DTA, *supra* note 12, art. 33; EU-Korea DTA, *supra* note 13, art. 30.

¹²¹ See Incorporation of the Agreement, *supra* note 7.

Section A: Scope and general provisions (preamble, definitions, principles, scope, relation to other WTO agreements);

Section B: Enabling electronic commerce (electronic transactions, electronic authentication and signatures, electronic contracts, electronic invoicing, paperless trading, single windows data exchange and system interoperability, electronic payments);

Section C: Openness and e-commerce (custom duties moratorium, open government data, access to and use of the internet for electronic commerce);

Section D: Trust and e-commerce (online consumer protection, spam, personal data protection, cybersecurity);

Section E: Transparency, cooperation and development (transparency, cooperation, capacity building, special and differential treatment);

Section F: Telecommunications (disciplines relating to Telecommunications Services);¹²²

Section G: Exceptions (general and security exceptions, prudential measures, personal data protection exception, indigenous peoples);

Section H: Institutional arrangements and final provisions (dispute settlement; committee on trade-related aspects of electronic commerce and procedural issues, such as entry into force, implementation, reservations, amendments, review, etc.).

Without entering into detail, it is evident that the substantive provisions of the Agreement on Electronic Commerce cover predominantly digital trade issues in the area of digital trade facilitation that have been part of the already well-established PTA templates and where over the years treaty partners have reached a substantial level of convergence, although not necessarily the same degree of legalization (i.e., agreeing on binding rules). In contrast, it is evident that DEAs go substantively well beyond the Agreement on Electronic Commerce. This is particularly notable in the area of data governance. While the proposed WTO Agreement on Electronic Commerce does contain a binding provision on privacy protection and a non-binding provision on open government data,¹²³ it has no rules on cross-border data flows and data localisation — effectively disconnecting itself from the most critical domains of digital trade law. The same is true also for the protection of source code — an issue covered by all DEAs, except for DEPA, as mentioned in Part III above. Beyond these important issues, which are also covered by the advanced PTA

¹²² In addition, there is an Annex setting out principles on the regulatory framework for basic telecommunication services, such as on competition, interconnection, universal service, and allocation and use of scarce resources.

¹²³ Incorporation of the Agreement, *supra* note 7, art. 12.

templates on digital trade, the WTO Agreement on Electronic Commerce contains none of the novel features of DEAs that pertain to the broader regulation of datafied economies, as highlighted in Part III.

Perhaps the only exception in this regard and an undoubtedly positive feature of the Agreement on Electronic Commerce when compared to DEAs is the attention paid to developing and LDCs and the effort made through capacity-building and transition periods to enable their participation in both digital trade and digital trade rulemaking.¹²⁴

Overall, the WTO Agreement of Electronic Commerce, if and when agreed upon,¹²⁵ will be clearly ‘DEA-minus’ — both as to breadth and the depth of the commitments. It will do little to address the existing regulatory fragmentation, and states will still need to engage in forum-shopping, among others, by resorting to DEAs, to keep up with the challenges of the digital transformation of trade.

VI. APPRAISAL AND OUTLOOK

DEAs represent a recent form of digital trade rulemaking that broadens its substantive scope. They make possible the codification of advanced PTA digital trade commitments, also providing a valuable platform for cooperation on various other data economy issues, including those of not purely trade nature, where binding commitments still appear impossible or are premature.¹²⁶ The legal architecture of DEAs offers some flexibility, allowing parties to these treaties to design the best legal frameworks that cater to their needs. This works well in an environment of both rapid technological change and geopolitical shifts, while providing a level of certainty and regulatory interoperability. Although many provisions found in DEAs are couched in soft language, the DEPA protocol has also shown that there is a possibility to move towards more binding rules, as issues mature and as there is a clearer understanding among policymakers on the way forward.

The additions of the EU and the EFTA to the DEA landscape and the efforts of less developed countries under the ASEAN DEFA and the AfCFTA Digital Trade

¹²⁴ Incorporation of the Agreement, *supra* note 7, art. 20; see generally Mira Burri, *Inequalities in Digital Trade and Digital Trade Regulation*, in CONTESTED EQUALITY 203-220 (Elif Askin & Hanna Stoll eds., 2024).

¹²⁵ See *id.*; see also Peter Ungphakorn, *E-Commerce Initiative is the Latest WTO Rule-Making Effort to Be Blocked*, TRADE & BLOG (Feb. 20, 2025), <https://tradebetablog.wordpress.com/2025/02/19/e-commerce-initiative-latest-blocked/#updates>.

¹²⁶ See Dan Ciuriak, *Digital Trade: Is Data Treaty-Ready?* (Ctr. for Int’l. Governance Innovation, CIGI Paper No. 162, 2018) (for an argument that not all issues of the data-driven economy are treaty-ready).

Protocol are also a positive sign that proves that there is room for squaring different regulatory approaches and for more inclusive cooperation on digital trade issues. Two questions with regard to DEAs appear at this time not fully answered — first, what their real impact on the ground is,¹²⁷ and second, whether they reduce or rather exacerbate the existing regulatory fragmentation in the area of digital trade governance.¹²⁸ It is admittedly somewhat early to answer these queries definitively, as the DEAs are still a rather new development. However, they do already form an important part in the landscape of digital trade law and seem to be well positioned to advance, through a combination of hard and soft law, the learning processes that may lead to better models of trade law 4.0.¹²⁹

¹²⁷ See ELMS, *supra* note 53; see also APEC COMMITTEE ON TRADE & INV., ECONOMIC IMPACT OF ADOPTING DIGITAL TRADE RULES: EVIDENCE FROM APEC MEMBER ECONOMIES (2023).

¹²⁸ SIMON J. EVENETT & JOHANNES FRITZ, EMERGENT DIGITAL FRAGMENTATION: THE PERILS OF UNILATERALISM (2022).

¹²⁹ Gregory C. Shaffer, *Trade Law in a Data-Driven Economy: The Need for Modesty and Resilience*, in ARTIFICIAL INTELLIGENCE AND INTERNATIONAL ECONOMIC LAW: DISRUPTION, REGULATION, AND RECONFIGURATION 29-53 (Shin-Yi Peng, et al. eds., 2021).