

THE DIGITAL AGE LEGAL REVOLUTION: TAPED'S TRAILBLAZING INFLUENCE

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Received: 08 September, 2023 Revised: 29 October, 2023 Accepted: 05 November, 2023 Published: 20 November, 2023

ABSTRACT

This article delves into the dynamic landscape of digital trade regulation, offering a comprehensive analysis framed by insights drawn from the Trade Agreement Provisions on Electronic-commerce and Data (TAPED) dataset. Examining the period between January 2020 and November 2023, the study underscores a remarkable surge in digital trade negotiations within preferential trade agreements (PTAs). Notably, this era witnesses the emergence of 'Digital Economy Agreements,' marking a pivotal shift in treaty structures. Beyond the conventional scope of substantive rulemaking, this analysis sheds light on the profound involvement of non-traditional stakeholders who have adeptly filled the void created by the evolving interests of traditional rule-makers. These entities are actively shaping rules aligned with their specific policy agendas. Moreover, the breadth of subjects addressed in these agreements transcends the customary domains of digital trade, signalling a diversified range of commitments with varying levels of legal enforceability. Central to this exploration is the updated TAPED dataset, meticulously curated to encapsulate these contemporary developments. This emphasis underscores the necessity for periodic reviews, essential to maintaining currency and precision in both research endeavours and policy formulation within the realm of digital trade regulation.

Keywords: digital trade; e-commerce; data flows; preferential trade agreements; digital economy agreements; TAPED

INTRODUCTION

The evolution of the data-driven economy is perhaps the most significant trend of the past decade. Digital trade has proven to really matter for growth and innovation in individual economies and the global economy as a whole. Digital trade regulation has accordingly advanced rapidly in the pursuit of new framework conditions that move away from brick-and-mortar trade law and adequately reflect the practice of data-dependent trade – what we call 'Trade Law 4.0'. Since the adoption of the Comprehensive and Progressive Agreement for

Trans-Pacific Partnership (CPTPP) in 2018, we have witnessed a keen interest shared by governments around the world to regulate digital trade with specifically designed treaty templates. It should be pointed out that discussions and negotiations of digital trade rules have been taking place in various fora. These venues include the Work Programme on Electronic Commerce of the World Trade Organization (WTO) (WTO E-commerce Work Programme) and the ongoing E-Commerce Joint Initiative (JI) plurilateral negotiations at the WTO

and the current advanced e-commerce/digital trade negotiations that unfold in preferential trade agreements (PTAs) or stand-alone digital economy agreements (DEAs). This indicates that the impetus propelling the drive to negotiate rules on digital trade is in full throttle. The Trade Agreement Provisions on Electronic-commerce and Data (TAPED) dataset administered by the University of Lucerne has traced rulemaking developments in this vibrant field of international economic law since 2000 (Khan, A., & Ximei, 2022).

TAPED was initially launched in 2017 as part of the research project 'Governance of Big Data in Trade Agreements' and received funding from the Swiss National Science Foundation Research Programme (NRP)75: Big Data (2017–2021). This project was co-led by Prof. Mira Burri of the University of Lucerne and Prof. Manfred Elsig of the University of Bern. The scope and substance of the dataset were introduced to the research and policy community in 2020. Since 2021, as part of the European Research Council-funded Consolidator Grant project 'TRADE LAW 4.0: Trade Law for the Data-Driven Economy' (2021–2026) led by Mira Burri, TAPED has been regularly updated, expanded, and modified. TAPED provides insights into the significant growth of digital trade provisions in trade agreements globally, as well as into emerging issues of relevance to data governance (Khan, 2022).

This article seeks to showcase the latest developments in digital trade rulemaking from January 2020 until the latest update of TAPED in November 2023. During this period, an increase in the negotiation of digital trade commitments in PTAs, as well as the emergence of DEAs, was observed. Since January 2020, 49 agreements covering digital trade commitments have been concluded or signed, and more are being negotiated. While, at the beginning, such commitments were contained in a few provisions scattered throughout the preferential trade treaties, they have now become standard standalone substantive chapters, separate from the services and investment chapters. Moreover, the treaty commitments remain shallow, reflecting a divergence of domestic regulatory approaches. However, increasingly clear patterns of broader governance convergence have slowly started to emerge, closing the gap on the erstwhile deep fragmentation that characterized rules in this area.

To keep pace with these important developments, and considering that TAPED has been incrementally used in academic discourse and to inform policymaking, this article updates and complements the emerging trends in digital trade rulemaking discussed with the first release of TAPED in October 2019. In addition, this article showcases the evolving nature of the TAPED dataset. In comparison to the 90 different coded items that the dataset initially comprised, the evolution of the provisions in PTAs, as well as the expansion of the issues being covered, warranted the addition of new coded items (in total 34) and the recategorization of old ones into five different areas – i.e., (1) e-commerce; (2) data-dedicated provisions; (3) new data economy issues; (4) cross-cutting issues; and (5) intellectual property (IP). The codebook accompanying the dataset provides more information on each coded item and keywords used to identify the relevant provisions, as well as examples of actual treaty language. In addition to these updates, the methodology guiding the coding of the different items has also been modified. Following the typology developed by Abbott and Snidal for assessing the levels of legal legalization, the coding of provisions is now according to hard and soft commitments, blending the previous categorization of 'mixed legalization' into soft obligations.

This note is divided into five sections. Following this brief introduction, section two offers an overview of the current landscape of global digital trade governance. Against this backdrop, section three discusses the new developments unfolding in PTAs, while section four addresses the emergence and significance of DEAs. In the latter two sections, we highlight the new dynamics of digital trade rulemaking regarding the actors and the substantive issues being negotiated. In section five, we provide an overview of the new data economy issues observed in PTAs and DEAs and conclude in section six, by also providing an outlook on future developments in the broadening domain of digital trade governance (Khan, A., & Wu, X. 2021).

CHARTING THE EVOLUTION: DIGITAL TRADE REGULATION IN THE ERA OF TAPED'S INFLUENCE

The developments observed in PTAs and DEAs do not occur in a vacuum. They influence and are

influenced by the negotiations on digital trade that are taking place in multilateral and regional fora. Within the multilateral context, in November 2023, 90 members are currently negotiating the Joint Initiative on Electronic Commerce, (E-commerce JI) with the hopes of concluding a plurilateral agreement on electronic commerce/digital trade under the umbrella of the WTO by the end of 2023. The issues that comprise the current E-commerce JI negotiations have been categorized in the following bundles of topics:

- Enabling e-commerce (e-transactions and digital trade facilitation and logistics);
- Openness and e-commerce (custom duties on e-transmission, access to internet and data);
- Trust and e-commerce (consumer protection, privacy, business trust, cybersecurity);
- Cross-cutting issues (flow of information; transparency, domestic regulation and cooperation; capacity building; special and differential treatment);
- Telecommunications (updating the WTO Reference Paper on Telecommunications Services);
- Annex (diverse set of provisions ranging from logistic services, temporary entry of e-commerce related business persons, to goods and services market access)
- Scope and General Provisions (including provisions regarding relationship to other agreements, exceptions, indigenous peoples, taxation and dispute settlement).

Notably, of the 90 JI participants, the majority of countries are high-income economies while only five are least-developed countries (LDCs). The relatively low rate of participation of low-income countries and nearly all LDCs (particularly from Africa) in the E-commerce JI negotiations has raised concerns over how less-resourced countries can effectively participate in crafting rules that will regulate one of the most important areas of trade policy. This phenomenon could also be attributed to the critical stance they have taken against these negotiations in favour of the potentially less far-reaching WTO E-commerce Work Programme discussions. Moreover, their skepticism in negotiating cutting-edge rules has

been justified by their need to first understand the phenomenon and implications of digital trade before committing to rigid digital trade rules that are broad in scope (Abdelrehim Hammad, A. A., Khan, A., & Soomro, N. E. 2021).

Regional initiatives are also increasingly aiming to set policy frameworks to govern digital trade. Significant examples since January 2020 include the 2021 Mercosur E-Commerce Agreement and the electronic commerce chapter of the Regional Comprehensive Economic Partnership (RCEP). Moreover, the Digital Trade Protocol of the Agreement Establishing the African Continental Free Trade Area (AfCFTA), and the forthcoming ASEAN negotiations towards a Digital Economy Framework Agreement (DEFA) underline that no region wants to be left behind in the domain of digital trade regulation and that digital trade policies play an increasingly important role in regional integration.

Against this background, it is interesting to note that the divergent policy priorities of the traditional digital trade legal demandeurs (for instance, the United States (US) has shifted its attention to the Indo-Pacific, adjusted its position as to the negotiated digital trade topics, and appears less concerned with trade liberalization) have led to non-traditional actors stepping into the gap to craft rules that best fit their policy priorities. The DEAs are a case in point. They are predominantly being developed by dynamic countries seeking to capitalize on the economic potential of the digital economy. Countries like Singapore and Australia, which have not been conspicuous rule-makers, have become leading actors in designing new rules for digital trade. Uncoincidentally, Singapore and Australia, along with Japan, are also the co-convenors of the E-commerce JI. Moreover, Japan, which currently acts as G7 president, is an avid promoter of the concept 'data free flow with trust' (DFFT) and has recently endeavoured to operationalize this concept by establishing an international data governance body. This complements previous efforts by the G7 to set principles on digital trade. These principles tend to be liberal and include the promotion of DFFT; open digital markets; safeguards for workers, consumers, and businesses; digital trading systems; and fair and inclusive digital trade global governance.

As global digital trade rulemaking continues to evolve, evidence-based research can help

policymakers to identify the opportunities between the most advanced international treaty frameworks and their own efforts to adopt digital trade rules and accordingly shape domestic regimes. Moreover, an overview of the evolution of international digital trade rulemaking can illuminate the outlook of norm convergence or further fragmentation. TAPED serves as a source of unbiased, comprehensive and accessible data and seeks to inform policymaking in this regard. The next section discusses the advances in digital trade rulemaking in PTAs (Khan, A., & Wu, X. 2021).

SHIFTING PARADIGMS: DIGITAL TRADE PROVISIONS' EVOLUTION WITHIN PTAs

The number of digital trade provisions in PTAs has steadily increased over time. Of the 432 PTAs currently comprising TAPED, which were concluded or signed between January 2000 and December 2022, 214 contain provisions relevant for e-commerce and digital trade, and 122 have dedicated e-commerce or digital trade chapters. The significant jump in these commitments came about in the past few years. From January 2020 to November 2023, a total of 49 PTAs were concluded or signed. Of these, 44 (or almost 90 per cent) contain provisions on digital trade or e-commerce, and 26 (or 53 per cent) have separate chapters on the subject, indicating that the majority of PTAs being concluded contain provisions on digital trade and most are found in a dedicated chapter. In contrast with the trends observed from January 2016, the year in which the text of the Trans-Pacific Partnership Agreement (TPP) was concluded and from which the US withdrew at the start of the Trump administration, up to December 2019, 68 PTAs were concluded or signed. Of these, 55 (or 80 per cent) contained provisions on digital trade and 33 (just above 48 per cent) had dedicated chapters on the subject. The relatively lower number of PTAs concluded or signed during 2020–2023 could be attributed to the Covid-19 pandemic restrictions. Nevertheless, we see a steady increase in the negotiation of PTAs that include provisions or chapters on digital trade.

During the reference period of January 2020 and November 2023, there has also been increased diversity in the parties negotiating these agreements. This is most apparent in RCEP, whose members include developed and developing countries, as well

as LDCs. Other less visible PTAs also reflect this tendency. An example is the Comprehensive Economic Partnership Agreement (CEPA) between India and the United Arab Emirates (UAE) (Khan, A., Jillani, M. A. H. S., Abdelrehim Hammad, A. A., & Soomro, N. E. H. 2021).

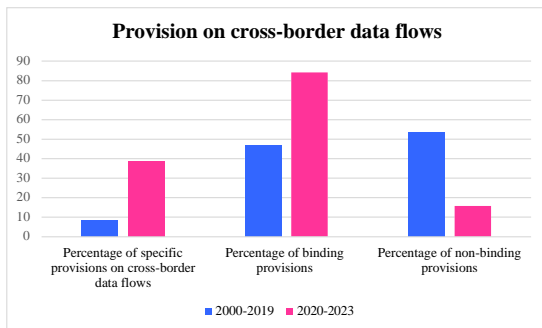
In other important developments, we observe a certain repositioning of traditional actors. As noted elsewhere, the European Union (EU) has repositioned itself on cross-border data flows over time starting with clauses in which the Parties commit to 'reassess', within three years of the entry into force of the agreement, the need to include provisions on the free flow of data in the treaty – which has been the case in the EU's deals with Japan and Mexico. The EU's much clearer position on cross-border data flows was first asserted by the post-Brexit Trade and Cooperation Agreement (TCA) with the United Kingdom (UK) and the follow-up free trade agreements (FTAs) with New Zealand and Chile. The EU's newly found commitments are however linked to the higher standards of personal data protection under its General Data Protection Regulation, essentially creating a conditional data flow regime. A similar repositioning is observed in China's PTAs. So far, China has negotiated an e-commerce chapter (but not digital trade chapters) in at least nine of its PTAs. China's willingness to participate in or influence e-commerce rulemaking is evidenced more clearly in RCEP. This agreement creates, among other things, a conditional framework for cross-border data flows with some obligations but also important exceptions and carve-outs, so that the RCEP parties reserve their policy space, particularly in the area of national security. China's application to join the CPTPP on 16 September 2021 can be a turning point, as the latter contains less flexible provisions on cross-border data flows and a clear ban on data localization measures, or measures requiring the location of data infrastructure or processing in a certain jurisdiction. If China's application to accede to the CPTPP is successful, it will mark a radical change in China's PTA policies on data governance and potentially have implications for its involvement in the WTO negotiations. However, it is unlikely that China will be welcomed into the CPTPP because of political frictions with key members and the large (and growing) distance between CPTPP's commitments (including beyond digital trade) and

China’s applied regime and commitments in its current PTAs.

Notwithstanding advances in negotiating rules on e-commerce and digital trade, or even substantive chapters in this area, there remain several contentious issues. We highlight three of them: (1) cross-border data flows; (2) banning or limiting data localization requirements; (3) disclosure or transfer of source code and afterwards discuss other observable trends in digital trade rulemaking.

With regard to provisions on cross-border data flows, of all the PTAs coded in TAPED, only 49 (or just above 11 per cent of all PTAs) contain provisions on the free movement of data. Of these, 19 are not legally binding, while 30 are binding. This cautious approach to including obligations on cross-border data flows persists in the most recent agreements, although we observe significant improvements. Out of the 49 PTAs concluded or signed since January 2020, 19 (or circa. 38 per cent of the reference period PTAs) contain a provision on the subject of cross-border data flows. Of these, 16 are binding. These findings are an improvement from the trends observed during the period January 2000 to December 2019. Out of a total of 383 agreements, 30 PTAs contained the relevant provisions and only 14 are binding (for a visualization of this evolution, see Figure 1 below). Other relevant provisions include review clauses in which the parties agree to review data flows provisions after a certain amount of time. The EU case is the most prominent example in this regard and such an update is currently being negotiated with Japan.

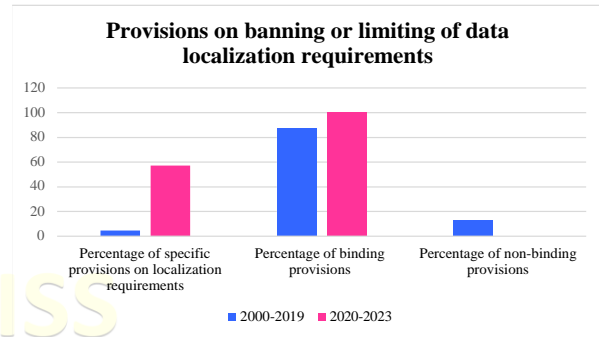
Figure 1



Source: The authors based on TAPED

Concerning the banning or limiting of data localization requirements, only 32 PTAs of a total of 432 contain a provision on the subject. This represents seven per cent of the total number of PTAs. Of these, 30 are binding. Data from January 2020 until November 2023 indicates that out of the 49 PTAs concluded or signed, only 16 PTAs contain a provision banning or limiting data localization requirements (for a visualization of this evolution, see Figure 2 below). All of these are binding, indicating a consistency to agree on hard prohibitions on data localization and a more differential approach to data flows, which is interesting to observe, as there is an interlinkage between these provisions and the commitments made under them.

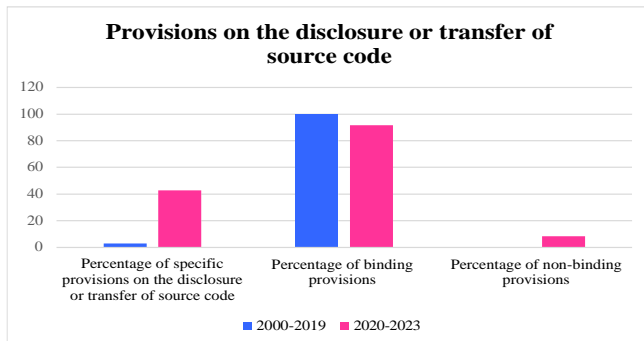
Figure 2



Source: The authors based on TAPED

Another important provision in the context of digital governance relates to the commitments on the disclosure or transfer of source code. So far, only 23 PTAs of the total of 432 PTAs contain a provision on the subject. Of these 22 are binding. From January 2000 to December 2019, a total of 11 PTAs prohibit requirements on the transfer of, or access to, source code of software owned by a person, as a condition for the import, distribution, sale or use of such software. All of these are binding. Moreover, since January 2020, another 12 PTAs contain a provision on the subject and there has been some convergence between the US-led and the EU model in this regard, although the EU still inserts several exceptions. Of these, 11 are binding obligations (for a visualization of this evolution, see Figure 3 below). On a much newer issue, at least six PTAs in the dataset make a separate reference to the transfer of, or access to, an algorithm, which expands the scope of the ban on forced technological transfer of source code (Khan, A., Abd Elrhim, A. A., & Soomro, N. E. 2021).

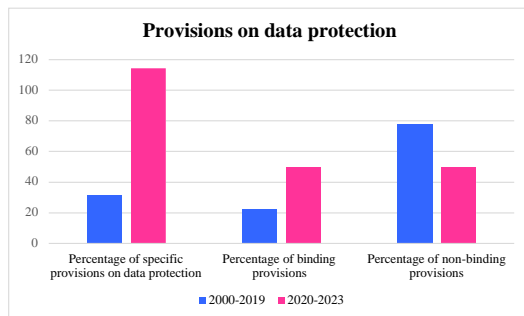
Figure 3



Source: The authors based on TAPED.

Less contentious is the inclusion of provisions on data protection, where we can observe an upward trend. Since January 2020, 32 out of the 49 coded PTAs have included a relevant provision. Yet only 16 of these provisions are binding obligations. This contrasts with previous observations for the period from January 2000 to December 2019, where out of the 113 PTAs containing provisions on the subject, 25 were binding (for a visualization of this evolution, see Figure 4 below). Notably, there is some convergence in the way provisions on data protection are being included in the latest PTAs, particularly in DEAs. A common reference is to ‘international standards, principles and guidelines’. In the reference period, 18 PTAs mention these aspects. Of the 13 agreements referring to international principles, six include binding commitments, and those referring to international standards, all but two of 13 agreements (in other words, 11) have binding provisions. In addition, we observe increased reference to ‘compatibility’ and ‘interoperability’ of data protection laws. These aspects are of increased importance in global initiatives, such as the G7 work on DFFT ().

Figure 4



Source: The authors based on TAPED

Provisions on the facilitation of digital trade are also a rising trend, reflecting parallel developments occurring in the context of the WTO JI E-commerce negotiations, where the participating members reached some agreement on certain issues, such as online consumer protection; electronic signatures and authentication; unsolicited commercial electronic messages; electronic contracts; transparency; paperless trading; and open internet access. Nonetheless, while PTAs also include these aspects, the nature of these provisions remains, largely, non-binding. For instance, out of all coded PTAs, 107 PTAs include a provision on paperless trading, but only 19 of these are binding. Similar metrics are reflected in provisions on customs procedures automatization or custom data exchange systems. In these cases, 106 PTAs contain provisions on these issues, but only 26 of them are binding. In these and other areas, there is however a concerted effort to achieve interoperability and to comply with existing standards or to participate in international standard-setting activities (Kahn, A., & Wu, X. 2020).

Regarding the relationships between the digital trade chapters with other agreements or chapters of the same agreement, some PTAs regulate this relationship in the event of inconsistency. We observe that from January 2020 until November 2023, only six PTAs contain relevant rules. In the particular case of the relationship between digital trade chapters with IP rules, only three PTAs contain a relevant provision. This is not trivial, as it conditions the normative value of the agreed-upon digital trade provisions; it is also an issue that deserves further scholarly attention, in particular in combination with the carve-outs and exception clauses formulated in the digital trade chapters and other parts of the treaties.

Concerning the justiciability of these provisions, less than half of the e-commerce and digital trade chapters in PTAs during January 2020 and November 2023, are subject to dispute resolution under the respective treaty. Of the 49 PTAs that have been concluded or signed in this time frame, 28 of these agreements have a dispute settlement chapter that applies to the digital trade chapter. These observations complement previous studies. Based on data of 275 Regional Trade Agreements notified to the WTO until May 2017, Monteiro and Teh found

that out of 76 agreements, 58 of the e-commerce provisions were covered by dispute settlement. Nine expressly excluded the provisions from dispute settlement, while the other nine excluded some provisions from dispute settlement. Other studies have also noted that in South–South PTAs, the digital trade provisions tend to fall outside the scope of the dispute settlement mechanism.

Nevertheless, there are some nuances in these observations. For example, the RCEP e-commerce chapter is currently not subject to dispute settlement. However, the dispute settlement chapter will apply to the parties that have agreed to its application after the five-yearly general review (Boyd, D. R. 2017).

Another relevant issue that is becoming increasingly clear as a feature of digital trade rulemaking in PTAs is the inclusion of exceptions and carve-outs. These provisions are relevant as countries seek to retain policy space and define the bounds of their digital sovereignty. These conditionalities are also a vehicle for making the digital trade commitments politically feasible for the treaty parties. The critical importance of these exception clauses has merited the restructuring of the items being coded in the TAPED database. Exceptions typically occur where a prohibition is made – for instance, the parties may not impose requirements on the location of computing facilities (data localization). The general tendency is for parties to add a provision stating that nothing prevents countries from requiring the localization of data to comply with national laws or specific national interest considerations immediately after the provisions. In some PTAs, general exception clauses, such as those found in WTO law under Article XX of the GATT 1994 or Article XIV of the GATS apply *mutatis mutandis* or they are reproduced in the relevant section of the treaty. Sometimes this reproduction is abridged in that elements of the WTO general exception clauses, in particular, the exhaustive listing of the permissible legitimate objectives are missing. These are general public policy exceptions, including for privacy protection. Countries also add national security exceptions, which at times refer to Article XXI of the GATT 1994 or Article XIVbis of the GATS, applying *mutatis mutandis*. Furthermore, we observe an emerging pattern in the issues expressly excluded from digital trade chapters. The following are frequently excluded to preserve policy space:

government procurement, information held or processed by or on behalf of a Party, or measures related to such information, including its collection, internal taxation, financial services, and audio-visual services. The EU tends to include in addition a broadly defined ‘right to regulate’, which can potentially cover all policy areas linked to digital trade and undermine the treaty commitments made. There is in this sense a layering of different exceptions, the ultimate effect of which demands, as earlier noted, a careful analysis of each PTA to understand the impact of the treaty and the overall policy space that remains available under PTAs (Shariff, S., Wiseman, A., & Crestohl, L. 2012).

Among the other interesting trends to observe and that will merit future updates of TAPED is the inclusion of clauses on Special and Differential Treatment (SDT). Some PTAs, like the CPTPP and RCEP, include clauses on SDT. This is an aspect worth keeping an eye on, as these provisions could enable LDCs, which have not engaged meaningfully in digital trade rulemaking so far, to undertake reduced commitments at the outset and increase them over time or to have longer periods of implementation or support in the implementation process. Previous experiences in negotiating and implementing such types of clauses in the multilateral context could be informative in this regard, showcasing once again the mutually reinforcing relationship between PTAs and multilateral/plurilateral negotiations.

A final aspect to note concerns the scope of the PTAs in the sense of the expansion of the issues being negotiated, which has warranted the update of TAPED. In addition to those provisions on facilitation of digital trade, data protection, and data flows, as well as provisions with any sort of impact on the conditions for digital trade, such as provisions on IP, non-discrimination, general and specific exceptions, PTAs often include, what we call, ‘new data economy provisions’, discussed later in this article. The next section delves first into exploring the DEAs, considered the most innovative agreements on digital trade (Germain, 2007).

ILLUMINATING THE RISE: DIGITAL ECONOMY AGREEMENTS IN FOCUS

As previously mentioned, a significant development in digital trade regulation is the emergence of the so-called DEAs. Since 2019 the following five DEAs have been signed: (1) US–Japan Digital Trade Agreement (DTA), 2019; (2) Singapore–Australia Digital Economy Agreement, 2020 (SADEA); (3) Digital Economy Partnership Agreement (DEPA) among Chile, New Zealand and Singapore, 2020; (4) UK–Singapore DEA, 2022; and (5) Korea–Singapore DEA, 2022. Except for the US–Japan DTA and the DEPA, the other three agreements are part of, and upgrade, an existing FTA. In other words, the US–Japan DTA and the DEPA are the only true stand-alone DEAs. The conclusion of DEAs raises questions about their compatibility with the multilateral legal framework.

Under WTO law, advanced free trade agreements (FTAs) covering goods are required to comply with Article XXIV of the GATT 1994 and FTAs covering services must comply with Article V of the GATS. As they do not form part of an FTA, within the meaning of WTO law, the legal status of the US–Japan DTA and the DEPA under WTO law remains unclear. Specifically, there is some doubt whether they would qualify as valid agreements contemplated under Article XXIV of the GATT 1994 or even Article V of the GATS.

WTO law has specific requirements that FTAs must fulfil to be exempt from the most-favoured-nation obligation (in other words, to be considered a valid trade liberalization agreement under WTO law). Article XXIV:8(b) of the GATT 1994 requires ‘duties and other restrictive regulations of commerce’ to be eliminated on ‘substantially all the trade between the constituent territories in products originating in such territories’. In Turkey – Textiles, the Appellate Body noted that WTO Members have never reached an agreement on the meaning of the term ‘substantially all the trade’. However, the Appellate Body considered that it is clear that ‘substantially all the trade’ is not ‘all the trade’ but ‘is something considerably more than merely some of the trade’. The preamble of the Understanding on the Interpretation of Article XXIV of the [GATT 1994] (Understanding) suggests that omitting any major sector of trade would not fulfil the requirement of ‘substantially all the trade’. Moreover, during

negotiations on the meaning of this term, some WTO Members suggested that an FTA that covers 95 per cent of tariff lines at the six-digit level would fulfil the condition under Article XXIV:8 of the GATT 1994. Digital trade is a large part of trade nowadays but it has not yet reached its full potential. As an illustration, in the US e-commerce sales currently only constitute around 14.5 per cent of all retail sales. In 2020, the corresponding figure in Australia was 9.4 per cent, 25.9 per cent in the Republic of Korea, 11.7 per cent in Singapore, and 23.3 per cent in the UK. It is thus questionable whether a stand-alone DEA would fulfil the requirements of being a valid FTA under Article XXIV:8 of the GATT 1994, as it does not encompass ‘substantially all the trade’ (Lakshminath, A., & Mukund, S. 2013).

Similarly, an FTA that is considered to be a valid economic integration agreement under Article V:1(a) of the GATS must have substantial sectoral coverage. Footnote 1 explains that ‘[t]his condition is understood in terms of number of sectors, volume of trade affected and modes of supply. In order to meet this condition, agreements should not provide for the a priori exclusion of any mode of supply’. Trade volumes aside, there is no consensus on whether services provided via digital trade entail both Mode 1 (cross-border supply) and Mode 2 (consumption abroad) or only Mode 1. Nevertheless, even if, hypothetically, digital trade involved both those modes of supply, it necessarily excludes, at least, two modes (Modes 3 and 4, i.e. commercial presence and movement of natural persons). Therefore, an agreement based on (maximum) two modes of supply would ostensibly not fulfil the conditions for a valid services FTA under the GATS. In sum, it appears doubtful that the DEPA and the US–Japan DTA would fulfil the WTO requirements to constitute a valid PTA. Interestingly, neither agreement has been notified to the WTO. Concerns about the legal status and WTO legal compatibility of previous negotiations, like the Trade in Services Agreement TiSA, have also been made. In that case, the means of its incorporation into the WTO legal framework was uncertain. This issue remains unresolved because the negotiations were discontinued.

That aside, a few trends have emerged in the parties and typical features of DEAs. Thus far, countries that have signed these agreements are Australia, Chile,

Japan, New Zealand, Singapore, Korea, the UK and the US. Therefore, except for Chile, these agreements are typically concluded between or among high-income countries. Moreover, Singapore has emerged as the global leader in concluding DEAs. It is involved in each of these agreements except the US–Japan DTA. This indicates Singapore’s strong interest in digital trade and its legal entrepreneurship in this area.

Common trends have emerged in all the DEAs and specifically the ones in which Singapore is involved. We first provide an overview of the common features of the main substantive provisions in all DEAs thus far. We then elaborate on the common features in Singapore’s DEAs, which are generally cutting-edge topics, including some of the ‘new data economy issues’ addressed in the next section (Grazian, D. 2005).

The following provisions are common to all DEAs:

- They substantially exclude government procurement and government data.
- They 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.
- The Parties have undertaken to adopt the UNCITRAL Model Law on Electronic Commerce 1996 in the provisions on domestic electronic transaction frameworks.
- The Parties undertake not to prohibit cross-border data flows. However, the provisions include exceptions for legitimate public policy reasons and adopt the necessity test under Article XX of the GATT 1994 or Article XIV of the GATS.
- They all prohibit data localization requirements as a condition for market access or conducting business in the territory of the other party/parties.
- They all require the adoption of laws protecting personal information.
- They all have provisions requiring the adoption of consumer protection laws.
- They all require the adoption of measures to control Unsolicited

Commercial Electronic Messages (spam).

- They all prohibit the disclosure of proprietary information relating to cryptography for ICT as a condition for market access or doing business in the territory of the other party/parties.
- They all have cooperation undertakings to address cybersecurity threats.
- They all have provisions on open government data, generally requiring that it is anonymized, has descriptive metadata, is machine readable and in an open format that allows it to be searched, retrieved, used, reused and redistributed.

While the innovations in the DEAs are exciting, it is also interesting to note the two features of the US–Japan DTA that differ from the agreements involving Singapore. First, the former agreement does not have a dispute settlement provision. This is atypical of previous US agreements. For instance, the US–China Economic and Trade Agreement (the Phase I Agreement), which was signed later than the US–Japan DTA and the USMCA, include a dispute settlement chapter. Second, the US–Japan DTA has a provision excluding platform liability for tech companies, which necessarily demands the application of Section 230 Communications Decency Act (CDA). Section 230 CDA insulates platforms from liability for third party but has been recently under attack, even in the US, and has become constrained through regulation in other jurisdictions.

It can also be observed that while the US had the first-mover advantage in concluding agreements in digital trade since 2000, Singapore has certainly taken the baton and ran with it. As previously mentioned, all but one DEA have Singapore as a party. Of course, the DEAs are not the only agreements that have digital trade chapters. However, the level of ambition and new issues in other contemporaneous agreements do not reach the levels incorporated in the DEAs. For example, during the same period, the UK concluded its post-Brexit PTAs; RCEP and the India–UAE CEPA were signed; and the negotiations of the EU–New Zealand FTA were concluded. Even with ostensibly like-minded advanced economies, the number of new data economy issues covered in the digital trade

chapters of PTAs that are not DEAs is comparatively low. The next section provides an overview of the ‘new data economy issues’ included in FTAs and DEAs (Breunig, C., & Pertot, T. 2018).

NAVIGATING UNCHARTED TERRITORY: EXPLORING EMERGING DATA ECONOMY CONCERNS

As digital trade rulemaking in PTAs continues to evolve, so does TAPED. The addition of new data economy issues is an example in this regard. Since January 2020, we observe, more and more, that PTAs, and in particular, DEAs and selected UK PTAs, possibly inspired by Singapore, contain provisions on aspects that transcend traditional digital trade rulemaking. These new provisions are for instance on competition policy related to the digital economy; digital identities; digital inclusion; fintech and lawtech cooperation; artificial intelligence; standardization, interoperability, or mutual recognition regarding electronic means. Most of these issues are found in DEAs but some of them have also permeated into PTAs’ digital trade chapters. For example, the India–UAE CEPA of 2022 includes provisions on digital identities. The New Zealand–UK FTA, in addition to the provisions on digital identities, also includes language on artificial intelligence.¹¹⁹ Some of these provisions reflect parallel developments occurring elsewhere. For example, policies to facilitate the integration of micro-, small- and medium-sized enterprises (MSMEs) in electronic commerce are key to harnessing the benefits of the digital economy and figure prominently in the current plurilateral negotiations at the WTO. Relevant provisions in this regard are also increasingly found in most recent PTAs and DEAs. Moreover, the Korea–Singapore DEA specifically mentions start-ups as companies that should be promoted and supported in the digital economy (Ziercke, E., Hartung, D., & Hohenstatt, K. S. 2020).

Interesting is also the incorporation of provisions on digital inclusion, which explicitly appear in five agreements – DEPA, Chile–Paraguay FTA, India–UAE CEPA, Singapore–UK DEA, and the UK–New Zealand FTA. All but the UK–New Zealand FTA have at least one developing-country party. Digital inclusion provisions initially involved providing economic opportunities for MSMEs. However, they

have subsequently expanded to encompass women, rural populations, low socio-economic groups, disabled people, and Indigenous Peoples. The UK–Singapore DEA is unique in that it specifically targets fair labour conditions, worker protection, and improving digital skills. Moreover, its Parties also recognize the digital divide between countries and undertake to promote the participation of other countries in digital trade (Port, K. L. 1991).

We also observe that the UK has progressively included some of the recent innovations found in DEAs and added new issues to its negotiating agenda. The inclusion of lawtech in the UK–Singapore FTA makes it the DEA with the most new data economy topics covered so far. Of all the PTAs with provisions on artificial intelligence, the UK–Singapore DEA is the most comprehensive, seeking cooperation on issues and developments relating to artificial intelligence, including among others, ‘ethical use, human diversity and unintended biases, industry-led technical standards and algorithmic transparency’, ‘joint deployment and test-bedding opportunities’, ‘opportunities for investment in and commercialisation of AI and emerging technologies’. Similarly, while all the PTAs with provisions on artificial intelligence seek to promote collaboration for the development and adoption of frameworks that support the trusted, safe and responsible use of these technologies, the New Zealand–UK FTA explicitly makes reference to the ‘principles and guidelines of relevant international bodies, such as the OECD and the Global Partnership on Artificial Intelligence’. The progressive nature of some of the UK’s recent agreements goes in tandem with the domestic reforms that the UK has undertaken in recent years to position itself as a tech ‘superpower’, which seems to be increasingly reflected in its digital trade policy. It also signifies a distancing from the EU model, which can be problematic having in mind the bindingness of the TCA and therewith linked obligations for the UK to provide essentially equivalent level of personal data protection (Miller, E. A., & West, D. M. 2009).

A final remark on artificial intelligence provisions in PTAs is the explicit link that these provisions make to the digital economy, and in some cases, to the promotion of trade and investment flows. So far, none of the provisions on artificial intelligence in PTAs refer to the human rights implications of these

technologies, including possible privacy concerns, issues which have prominently featured in recent discussions on whether or not to allow generative artificial intelligence.

CONCLUSION

In essence, the evolution of digital trade regulation, intricately examined through the lens of TAPED's insights, unveils a transformative legal landscape. The period scrutinized, spanning from January 2020 to November 2023, reveals a profound shift in trade agreements and treaty structures. The burgeoning prominence of Digital Economy Agreements and the expanding scope of subjects addressed therein underscore the dynamic nature of contemporary trade negotiations. Notably, this study accentuates the pivotal role played by unconventional stakeholders in crafting policies that align with their nuanced agendas, supplementing the changing interests of traditional rule-makers. Moreover, the broadened commitments within these agreements, often characterized by varying levels of enforceability, signal a multifaceted approach to addressing the complexities of the digital realm. The updated TAPED dataset serves as a testament to the imperative nature of continual reviews and adaptations in research and policy formulation concerning digital trade regulation. This research illuminates the necessity for adaptive strategies that remain agile amidst the ever-evolving digital landscape. Ultimately, TAPED stands as a beacon guiding future endeavors, emphasizing the significance of staying attuned to emerging trends to navigate the complexities of the digital age effectively.

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