

# Digital Trade Provisions in Preferential Trade Agreements: Introducing a New Dataset

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The article introduces a new dataset that seeks to comprehensively trace developments in the area of digital trade governance. The TAPED (Trade Agreements Provisions on Electronic-Commerce and Data) dataset includes a detailed mapping and coding of all preferential trade agreements that cover chapters, provisions, annexes, and side documents that directly or indirectly regulate digital trade. This article presents the methodology behind TAPED and provides an overview of the evolution of digital trade provisions in preferential trade agreements, highlighting also some emerging trends. It then takes a look at the substance of selected rules found particularly in electronic commerce chapters and maps the diversity of approaches in tackling issues meant to facilitate online trade, such as the customs duty moratorium on electronic transactions or paperless trading, and discusses the very recent rule-making with regard to cross-border data flows. This is of course merely a glimpse of the wealth of information that TAPED provides, and the goal of this article is simply to uncover the great variety and the complexity of the norms found in the preferential trade agreements on digital trade governance, which reveals the value of the dataset.

文章介绍了一个新的数据集，旨在全面追踪数字贸易治理领域的发展。TAPED（电子商务和数据贸易协定规定）数据集包括所有优惠贸易协定的详细映射和编码，这些协定涵盖直接或间接规范数字贸易的章节、条款、附件和附带文件。本文介绍了 TAPED 背后的方法，并概述了优惠贸易协定中数字贸易条款的演变，还强调了一些新兴趋势。然后，它着眼于特别是在电子商务章节中发现的选定规则的实质，并描绘了解决旨在促进在线贸易的问题的方法的多样性，例如对电子交易或无纸交易的关税暂停，并讨论了最近的关于跨境数据流动的规则制定。这当然只是 TAPED 提供的丰富信息的一瞥，本文的目的只是揭示优惠贸易协议中关于数字贸易治理的规范的多样性和复杂性，揭示了数据集的价值。

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## 1.Introduction

Digital trade has emerged as an important topic in contemporary international economic law and policy and has moved up on the agenda of many trade negotiators around the world. Yet, the topic is by no means new and the membership of the World Trade Organization (WTO) recognized early on the implications of digitization for trade by launching a Work Programme on E-commerce in 1998. This initiative to examine and, if needed, adjust all pertinent issues including trade in services, trade in goods, intellectual property (IP) protection, and economic development did not however bear any fruit over a period of two decades. Indeed, WTO law, despite some adjustments through the Information Technology Agreement (ITA), its update in 2015, and the Trade Facilitation Agreement, is still very much in its pre-Internet state. It can of course be argued that the powerful and far-reaching principles of non-discrimination coupled with the adaptive mechanism of the WTO dispute settlement can easily cover new situations and still provide certainty and predictability for businesses and states to engage in global trade. Such a hypothesis may be however far-fetched and even flawed. Since the Work Programme on E-commerce was launched more than 20 years ago, the picture of global trade has changed in many critical aspects. The significance of digital trade, both in its contribution to the economic growth of many countries and the preoccupation of governments with digital trade-related policies, has grown exponentially. On the one hand, this progress and the changing interests relate to new, previously unknown or not fully developed technological applications, such as mobile telephony or cloud computing, which have become important platforms for business. On the other hand and more vitally, they relate to the Internet as an elemental foundation for innovation with deep economic, social, and cultural implications. The importance of data as a key aspect to essentially all societal activities is critical in this transformation<sup>9</sup> and has been recently clearly acknowledged in trade policy circles. The sweeping transformations brought about by the Internet have also been associated with a palette of new measures that inhibit digital trade, such as, among others, the much talked of 'data localization measures,' which encompass diverse requirements for either localization of data servers and providers, local content policies, or may involve discrimination against not locally based digital services or providers.

数字贸易已成为当代国际经济法中的一个重要话题，政策已被提上全球许多贸易谈判代表的议事日程。然而，这个话题绝不是新话题，世界贸易组织 (WTO) 的成员很早就认识到数字化对贸易的影响，并于 1998 年启动了电子商务工作计划。这项倡议旨在审查并在必要时，调整服务贸易、货物贸易、知识产权保护、经济发展等所有相关问题在过去的二十年里都没有取得任何成果。事实上，尽管通过信息技术协议 (ITA)、2015 年的更新和贸易便利化协议进行了一些调整，WTO 法律仍处于互联网前的状态。当然可以说，强大而深远的非歧视原则与 WTO 争端解决的适应性机制相结合，可以轻松涵盖新情况，并为企业和国家参与全球贸易提供确定性和可预测性。然而，这样的假设可能是牵强的，甚至是有缺陷的。自 20 多年前启动电子商务工作计划以来，全球贸易的格局在许多关键方面发生了变化。数字贸易的重要性，无论是对许多国家的经济增长的贡献，还是政府对数字贸易相关政策的关注，都呈指数级增长。一方面，这种进步和不断变化的兴趣与新的、以前未知的或未完全开发的技术应用有关，例如移动电话或云计算，它们已成为重要的商业平台。另一方面，更重要的是，它们将互联网视为具有深刻经济、社会和文化影响的创新的基本基础。数据作为基本所有社会活动的关键方面的重要性在这一转变中至关重要<sup>9</sup>，并且最近在贸易政策界得到了明确承认。互联网带来的全面变革也与一系列抑制数字贸易的新措施相关联，例如广为人知的“数据本地化措施”，其中包括对数据服务器本地化和提供商、本地内容政策，或可能涉及对非本地数字服务或提供商的歧视。

Against the backdrop of pre-Internet WTO law, many of these disruptive changes have demanded regulatory solutions outside the multilateral trade forum. States around the world have used in particular the venue of preferential trade agreements (PTAs) to fill in some of the gaps of the WTO framework, clarify its applications and beyond that, address the newer trade barriers, and accommodate their striving for seamless digital trade. Quite naturally for developments in preferential trade, the framework that has emerged as a result and now regulates contemporary digital trade is not coherent. It is neither evenly spread across different countries, nor otherwise coordinated. Indeed, it can be messy, fragmented with regard to substantive rules and the countries who endorse them, with both legal entrepreneurs and late comers; it is often power-driven and sometimes curiously not so.

在互联网前 WTO 法律的背景下，许多这些破坏性变化要求在多边贸易论坛之外进行监管解决方案。世界各国特别利用优惠贸易协定 (PTA) 的场所来填补 WTO 框架的一些空白，澄清其应用及除此之外，解决新的贸易壁垒，并适应他们对无缝数字贸易的努力。对于优惠贸易的发展而言，自然而然地，由此出现并现在规范当代数字贸易的框架并不一致。它既不是均匀分布在不同的国家，也不是以其他方式协调的。事实上，在实体规则和认可这些规则的国家（包括合法企业家和后来者）方面，它可能是混乱的、支离破碎的；它通常是动力驱动的，有时奇怪的是不是这样。

This article introduces a dataset that seeks to comprehensively trace all these developments in the area of digital trade governance. The Trade Agreements Provisions on Electronic-Commerce and Data (TAPED) dataset includes a detailed mapping and coding of all PTAs that include chapters, provisions, annexes, and side documents that directly or indirectly regulate digital trade. These rules can be found in electronic commerce, services chapters (in particular telecommunications, computer and related, audio-visual and financial services sectors), and IP chapters, as well as in specifically created understandings—for instance, on Information and Communications Technology (ICT) cooperation, government procurement, or in entirely new rules on free data flows. The TAPED dataset provides a helpful basis for comparing digital trade relevant norms scattered in the existing, predominantly bilateral, PTAs. It also gives an important evolutionary perspective on the political processes and the diverging positions of the main actors on digital trade issues, such as the United States (US) and the European Union (EU), and how these have changed over time. The dataset also permits to trace other developments that may be missed if one focuses solely on the US versus EU tensions and covers the important role of other actors, such as Australia, Japan, and the countries of the Pacific Alliance, in advancing new models of digital trade governance.

本文介绍了一个数据集，旨在全面追踪数字贸易治理领域的所有这些发展。电子商务和数据贸易协定规定 (TAPED) 数据集包括对所有 PTA 的详细映射和编码，其中包括直接或间接规范数字贸易的章节、规定、附件和附带文件。这些规则可以在电子商务、服务章节（特别是电信、计算机及相关、视听和金融服务部门）、知识产权章节以及专门创造的理解中找到——例如，关于信息和通信技术（ICT）合作、政府采购或关于自由数据流的全新规则。TAPED 数据集为比较分散在现有的、主要是双边的 PTA 中的数字贸易相关规范提供了有用的基础。它也就政治进程和主要参与者在数字贸易问题上的不同立场（例如美国 (US) 和欧盟 (EU)）以及这些随着时间的推移如何变化提供了重要的演变视角。如果仅关注美国与欧盟的紧张局势，该数据集还允许追踪可能遗漏的其他发展，并涵盖澳大利亚、日本和太平洋联盟国家等其他行为体在推进新模式中的重要作用。数字贸易治理。

We trust that this dataset can be in many ways invaluable to both research and policy, as it allows for a fully-informed understanding of digital trade rules and how these have been shaped over time. As many countries strive to push their digital agendas forward, including in the area of trade, TAPED may help along the way, in particular as to identifying gaps, best practices and pinpointing issues on which there seems to be some consensus among states, which can be then potentially more easily multilateralized. Beyond this and in an effort to link to international relations research, in the elaboration of the TAPED dataset, we have also tried to categorize existing provisions as 'hard' or 'soft,' so as to be able to detect levels of legalization and assess their impact on the domestic regulatory environment. International relations scholars can also make good use of TAPED in identifying models, tracking their global diffusion and thinking about the forces that may have driven this diffusion. Finally and in a normative sense, we hope that the TAPED dataset would permit research and policy recommendations on what should and can be done differently in digital trade governance, so that on the one hand, data-driven innovation can be fostered and sustained, while on the other hand, some important public interests, such as notably the protection of privacy, can be appropriately safeguarded. We view the TAPED dataset as a continued effort, as it will be made available to all to use and further develop under the creative commons (attribution, non-commercial, and share-alike) license on the University of Lucerne website ([unilu.ch/taped](http://unilu.ch/taped))

我们相信，该数据集在许多方面对研究和政策都是无价的，因为它可以全面了解数字贸易规则以及这些规则是如何随着时间的推移而形成的。随着许多国家努力推动其数字议程，包括在贸易领域，TAPED 可能会在此过程中提供帮助，特别是在确定差距、最佳实践和查明各国之间似乎达成某种共识的问题方面，这可以然后可能更容易多边化。除此之外，为了与国际关系研究联系起来，在制定 TAPED 数据集时，我们还尝试将现有条款归类为“硬”或“软”，以便能够检测合法化水平并评估对国内监管环境的影响。国际关系学者还可以很好地利用 TAPED 来识别模型、跟踪它们的全球传播并思考可能推动这种传播的力量。最后，在规范意义上，我们希望 TAPED 数据集能够就数字贸易治理中应该和可以采取的不同做法进行研究和政策建议，从而一方面可以促进和维持数据驱动的创新，同时另一方面，一些重要的公共利益，特别是隐私权的保护，可以得到适当的保障。我们认为 TAPED 数据集是一项持续的努力，因为它将在卢塞恩大学网站 ([unilu.ch](http://unilu.ch)) 上的知识共享（署名、非商业和类似共享）许可下提供给所有人使用和进一步开发/录音)

This article introduces the TAPED dataset and is structured as follows: Section two briefly explains the methodology used for the creation of TAPED; section three presents an overview of the evolution of digital trade provisions in PTAs and identifies some emerging trends. Section four looks at the substance of the provisions with a deep dive into the existing e-commerce chapters and side agreements. A brief conclusion follows in section five.

本文介绍了 TAPED 数据集，结构如下：第二节简要介绍了用于创建 TAPED 的方法；第三部分概述了 PTA 中数字贸易条款的演变，并确定了一些新兴趋势。第四节着眼于条款的实质，深入探讨了现有的电子商务章节和附带协议。第五节给出了一个简短的结论。

## **2.Methodology（方法论）**

Digital trade as a critical policy topic can be construed in two ways—one narrow and one broad. In the former sense, digital trade is plainly equated to commerce in products and services

delivered via the Internet. The second aspect is much broader and has to do with enabling innovation and the free flow of information in the digital networked environment. This difference is not of mere academic interest but has true policy implications, as for instance in the current WTO negotiations, China has promoted a narrow view of digital trade, which focuses on trade in goods online, while the US and others have subscribed for an inclusive approach. It has been the purpose of our dataset to cover issues under both these definitions of digital trade and strive for comprehensiveness. If one wishes, by merely filtering the dataset by countries, it is possible to identify which countries have followed an arrower or abroad approach on digital trade.

数字贸易作为一个重要的政策主题，可以从两种角度来解释——一种狭义的，一种广义的。在前一种意义上，数字贸易显然等同于通过互联网提供的产品和服务的贸易。第二个方面更广泛，与数字网络环境中的创新和信息自由流动有关。这种差异不仅仅是学术利益，而是具有真正的政策含义，例如在当前的世贸组织谈判中，中国提倡对数字贸易的狭隘观点，侧重于在线商品贸易，而美国和其他国家则支持包容性的方法。我们数据集的目的是涵盖这两种数字贸易定义下的问题并力求全面。如果愿意，只需按国家过滤数据集，就可以确定哪些国家在数字贸易方面遵循了箭头或国外的方法。

Unless otherwise specified, we considered as digital trade provisions those explicitly mentioning and referring to electronic commerce, digital trade, and data flows. Several keywords were used as a short-cut to identify such provisions (e.g. 'data,' 'digital,' 'electronic,' 'information and communication,' 'internet,' 'online,' and 'information technology'). As these keywords can appear in different sections besides chapters devoted to electronic commerce or digital trade, we have made a cross-cut analysis of digital trade provisions, regardless where there were found in the text of the PTA. In this sense, our coding also considered commitments that are related to the effective implementation of digital trade provisions, like national treatment (NT) and market access commitments in telecommunications, financial, and computer and related services. With this methodology, we aim for breadth and hope to contribute to the growing literature that systematically maps PTA rules in various trade areas using different analytical approaches

除非另有说明，我们将明确提及和提及电子商务、数字贸易和数据流的那些条款视为数字贸易条款。几个关键词被用作识别此类条款的捷径（例如，“数据”、“数字”、“电子”、“信息和通信”、“互联网”、“在线”和“信息技术”）。由于这些关键词可以出现在电子商务或数字贸易章节之外的不同章节中，我们对数字贸易条款进行了交叉分析，无论在 PTA 文本中的何处找到。从这个意义上说，我们的编码还考虑了与有效实施数字贸易条款相关的承诺，例如电信、金融和计算机及相关服务中的国民待遇 (NT) 和市场准入承诺。通过这种方法，我们的目标是广度，并希望为不断增长的文献做出贡献，这些文献使用不同的分析方法系统地映射各个贸易领域的 PTA 规则

Together with the collection and revision of metadata of these agreements (parties, date of signature, entry into force, etc.), a double-coding of each treaty was done manually and then complemented with the digital mapping of texts using a software designed for computer-assisted qualitative and mixed methods data, text, and multimedia analysis (MAXQDA). A total of 90 different items were coded, including provisions on digital trade, IP, key services sectors, government procurement, trade in goods, as well as general and specific exceptions. A codebook explaining the questions behind the coding points is made available online together with the dataset. Although we have tried to formulate the coding questions in straightforward and specific terms, it cannot be excluded that some questions suffer from an unintended selection bias, which has to do with history of data governance.

连同这些协议的元数据（缔约方、签署日期、生效等）的收集和修订，每个条约的双重编码都是手动完成的，然后使用专为 计算机辅助定性和混合方法数据、文本和多媒体分析 (MAXQDA)。共有 90 个不同的项目被编码，包括关于数字贸易、知识产权、关键服务部门、政府采购、货物贸易以及一般和特定例外的规定。解释编码点背后问题的密码本与数据集一起在线提供。尽管我们试图用直截了当和具体的术语来表述编码问题，但不能排除某些问题存在无意的选择偏差，这与数据治理的历史有关。

Our work has not started from scratch, nor has it developed in a scholarly vacuum. We have used the basic framework given through the existing and evolving body of literature in the area of conceptualizations of Big Data and related topics, as well as the existing efforts of creating databases or mapping PTAs. For our analysis, we have used as a starting point the Design of Trade Agreements (DESTA) database, which has since 2009 systematically collected data on various types of PTAs. As of March 2019, DESTA works with a list of 993 PTAs. Unlike other enquiries, which have analyzed e-commerce provisions in PTAs, this study provides a comprehensive quantitative analysis beyond the PTAs currently in force and notified to the WTO and covers also those agreements that are not notified, those that are signed but not yet in force, and those for which the negotiation has been completed and the text made available. Using the kick-off of the US Digital Agenda (with the Bipartisan Trade Promotion Authority Act of 2002), and the EU's 2000 Directive on e-commerce as starting points of the PTA proliferation, our dataset includes the revision of 346 PTAs concluded between 2000 and October 2019, which were compiled in pdf format. From those treaties, 184 PTAs include provisions that are related to digital trade, 108 have specific e-commerce provisions and 78 consider dedicated e-commerce chapters and side agreements. In comparison, the most complete analysis made prior to TAPED, only examines 75 WTO-notified PTAs that explicitly include e-commerce provisions

我们的工作不是从零开始，也不是在学术真空中发展起来的。我们使用了大数据和相关主题概念化领域现有和不断发展的文献提供的基本框架，以及创建数据库或映射 PTA 的现有努力。在我们的分析中，我们以贸易协定设计 (DESTA) 数据库为起点，该数据库自 2009 年以来系统地收集了各类 PTA 的数据。截至 2019 年 3 月，DESTA 与 993 个 PTA 合作。与分析 PTA 中电子商务条款的其他调查不同，本研究提供了超越当前有效并通知 WTO 的 PTA 之外的全面定量分析，还涵盖了未通知的协议、已签署但尚未签署的协议。力，以及谈判已经完成并提供文本的那些。使用美国数字议程（2002 年两党贸易促进管理局法案）的启动和欧盟 2000 年电子商务指令作为 PTA 扩散的起点，我们的数据集包括对 2000 年之间缔结的 346 个 PTA 的修订和 2019 年 10 月，以 pdf 格式编译。在这些条约中，184 个 PTA 包含与数字贸易相关的条款，108 个具有特定的电子商务条款，78 个考虑专门的电子商务章节和附带协议。相比之下，在 TAPED 之前进行的最完整分析仅审查了 75 个明确包含电子商务条款的 WTO 通知的 PTA

An assessment of the extent of legalization of all coded provisions was also performed, distinguishing between 'soft,' 'mixed,' and 'hard' commitments, as well as the number of provisions and words contained in each agreement that are related to digital trade. We considered as 'soft' those commitments that are not enforceable by the parties. These include 'best effort' provisions like those 'recognizing the importance,' 'working towards,' or 'promoting' a certain objective. Cooperation provisions were considered as non-binding unless an obligation to cooperate in certain areas is made explicit in the treaty, within a specific frame and time. When coding these provisions, we took into account that several treaties use language that initially

appears binding (e.g. 'shall') but becomes hortatory by adding another word (e.g. 'shall endeavor'). We classified as 'hard' those commitments that oblige a party to comply with a provision or a principle and which are enforceable by another party. Examples of binding commitments include 'shall,' 'must,' or 'shall take appropriate measures.' We consider an agreement with 'mixed' legalization, if the treaty has both soft and hard commitments in the same coding line, regardless the number of provisions that bear such characteristics. Similarly, we included in this category references to other agreements that are only partially applicable (e.g. some specific provisions of the TRIPS) or if the agreement 'allows' for something that is not explicitly noted in the text (e.g. certain exceptions). To be sure, there are limitations that are inherent to this type of analysis: sometimes different wording of provisions can mean the same thing and vice versa; some interpretations also depend on the context of the treaty, such as its preamble. Similarly, a greater number of words in e-commerce chapters or side agreements may not mean more liberalization of digital trade, although it arguably signifies a greater interest in the subject.

还对所有编码条款的合法化程度进行了评估，区分了“软”、“混合”和“硬”承诺，以及每个协议中与数字贸易相关的条款和文字的数量。我们认为那些不能由当事人强制执行的承诺是“软的”。其中包括“最大努力”条款，例如“认识到重要性”、“努力实现”或“促进”某个目标。合作条款被认为是不具约束力的，除非条约在特定框架和时间内明确规定在某些领域进行合作的义务。在对这些规定进行编码时，我们考虑到一些条约使用的语言最初看起来具有约束力（例如“应”），但通过添加另一个词（例如“应努力”）变得具有鼓励性。我们将那些要求一方遵守条款或原则并且可由另一方强制执行的承诺归类为“硬”。具有约束力的承诺的示例包括“必须”、“必须”或“应采取适当措施”。如果条约在同一编码行中同时包含软承诺和硬承诺，我们会考虑“混合”合法化的协议，无论其数量多少。具有这种特征的条款。同样，我们在此类别中引用了仅部分适用的其他协议（例如 TRIPS 的某些特定条款），或者协议“允许”文本中未明确指出的内容（例如某些例外）。可以肯定的是，这种分析存在固有的局限性：有时条款的不同措辞可能意味着同一件事，反之亦然；一些解释还取决于条约的背景，例如其序言。同样，电子商务章节或附带协议中的更多词语可能并不意味着数字贸易更加自由化，尽管它可以说意味着对该主题的更大兴趣。

### **3.The Evolution of Digital Trade Provisions in PTAS: Overview and Some Emerging Trends (PTAS 中数字贸易条款的演变：概述和一些新兴趋势)**

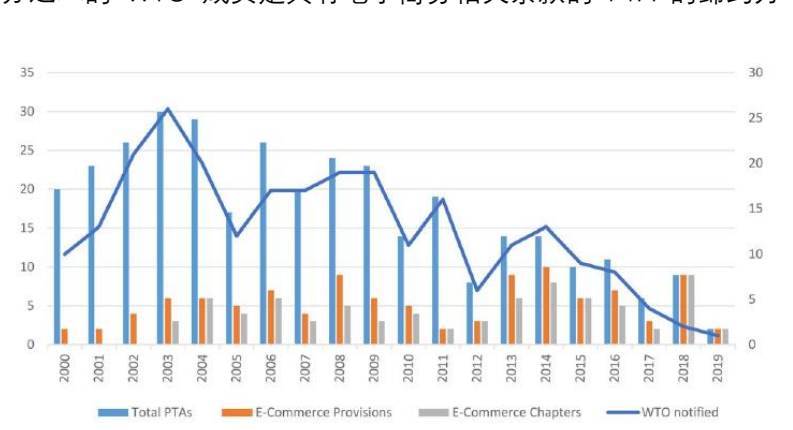
From the 346 PTAs reviewed, we found 184 PTAs with provisions related to digital trade. The largest number of provisions is found in e-commerce and IP chapters; overall, the provisions remain however highly heterogeneous, addressing various issues ranging from customs duties and non-discriminatory treatment of digital products to domestic regulatory framework, electronic signatures, consumer protection, data protection, paperless trading, and unsolicited electronic messages. Putting the agreements along a chronological line, it is evident that the inclusion of digital trade provisions in PTAs referring explicitly to electronic commerce is not a recent phenomenon, although it has evolved significantly in the past two decades. The first e-commerce provision is found in the 2000 Free Trade Agreement (FTA) between Jordan and the US. Three years later, the 2003 Australia–Singapore FTA (SAFTA) was the first PTA to have a dedicated chapter on e-commerce. At the moment of this writing, specific provisions applicable to e-commerce can be found in 108 PTAs, mostly in dedicated chapters (78 in our dataset).

在审查的 346 份 PTA 中，我们发现 184 份 PTA 中有与数字贸易相关的条款。电子商务和知识产权章节中的条款数量最多；总体而言，这些规定仍然存在很大差异，涉及从关税和数字产

品的非歧视待遇到国内监管框架、电子签名、消费者保护、数据保护、无纸化交易和未经请求的电子消息等各种问题。按时间顺序排列协议，很明显，在 PTA 中明确提及电子商务的数字贸易条款并不是最近才出现的现象，尽管在过去的二十年中它已经发生了显著变化。第一个电子商务条款见于 2000 年约旦和美国之间的自由贸易协定 (FTA)。三年后，2003 年澳大利亚-新加坡自由贸易协定 (SAFTA) 成为第一个专门设立电子商务章节的 PTA。在撰写本文时，可以在 108 个 PTA 中找到适用于电子商务的具体规定，其中大部分位于专门的章节中（我们数据集中的 78 个）。

Provisions regarding data flows in particular are found in trade agreements for more than a decade. While the first PTA including such provisions in general terms is the 2007 Korea-US FTA (KORUS), the 2000 New Zealand-Singapore Closer Economic Partnership Agreement (CEPA) already included a provision considering the transfer of financial information, as well as data processing as part of the financial services commitments. Although the number of PTAs incorporating specific digital trade provisions remains limited, the last eight years have witnessed a significant increase in the number of agreements with such provisions. As shown in Figure 1, digital trade provisions are, on average, included in more than 61% of all PTAs that were concluded between 2010 and 2018. The correlation is even closer, if we consider only the PTAs that have been notified to the WTO. As Willemyns mentions, two-thirds of the WTO Members are party to a PTA with e-commerce related provisions

十多年来，在贸易协定中尤其可以找到有关数据流的规定。虽然第一个包含此类条款的 PTA 是 2007 年的韩美 FTA (KORUS)，但 2000 年的新西兰-新加坡更紧密经济伙伴关系协议 (CEPA) 已经包含了一项考虑财务信息转移以及数据处理的条款 作为金融服务承诺的一部分。尽管包含特定数字贸易条款的 PTA 数量仍然有限，但在过去八年中，包含此类条款的协议数量显著增加。如图 1 所示，在 2010 年至 2018 年期间缔结的所有 PTA 中，平均超过 61% 包含数字贸易条款。如果我们仅考虑已通知 WTO 的 PTA，则相关性更加密切。正如 Willemyns 所提到的，三分之二的 WTO 成员是具有电子商务相关条款的 PTA 的缔约方

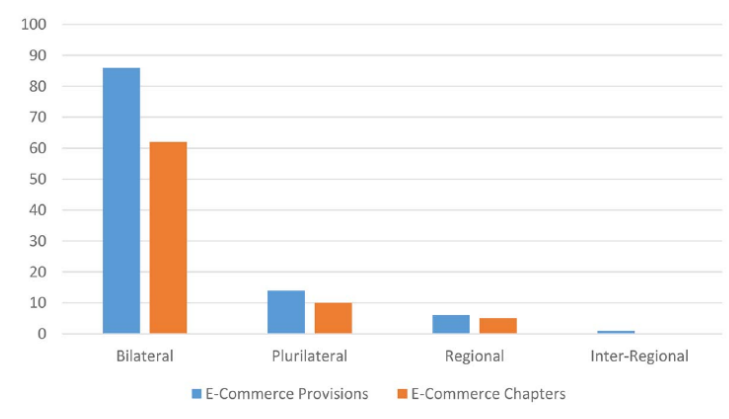


**Figure 1. Evolution of PTAs with digital trade provisions.**

This rise in the total number of PTAs with digital trade provisions is driven mainly by bilateral agreements: 77% of all trade agreements concluded since 2000 are bilateral, and within that group 83% agreements include digital trade provisions, as it is depicted in Figure 2.

具有数字贸易条款的 PTA 总数的增加主要是由双边协议推动的：自 2000 年以来缔结的所有贸易协定中有 77% 是双边的，在该组中，83% 的协议包括数字贸易条款，如图 2 所示。

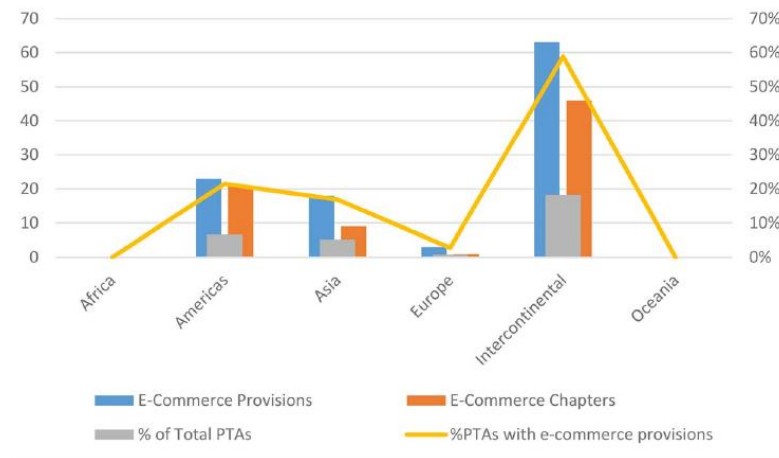




**Figure 2.** Type of PTA with digital trade provisions.

The agreements with digital trade provisions are mostly of an intercontinental nature; the Americas and Asia being the most relevant regional areas, as portrayed in Figure 3.

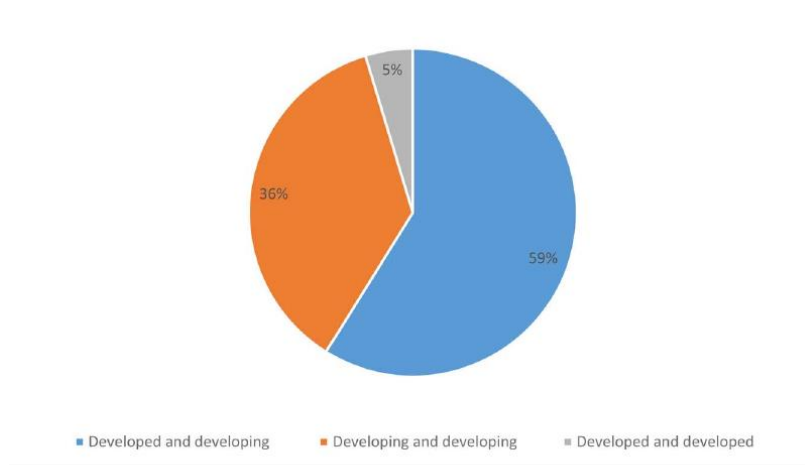
带有数字贸易条款的协议大多具有洲际性质；美洲和亚洲是最相关的区域，如图 3 所示。



**Figure 3.** PTAs with digital trade provisions per region.

The rise of PTAs having digital trade provisions involves both developed and developing countries. Following the country classification of the UN World Economic Situation and Prospects report, as of September 2019, 59% of the PTAs with digital trade provisions were negotiated between developed and developing countries and 36% between developing countries. Only 5% of PTAs with e-commerce provisions were negotiated between developed countries, as depicted in Figure 4

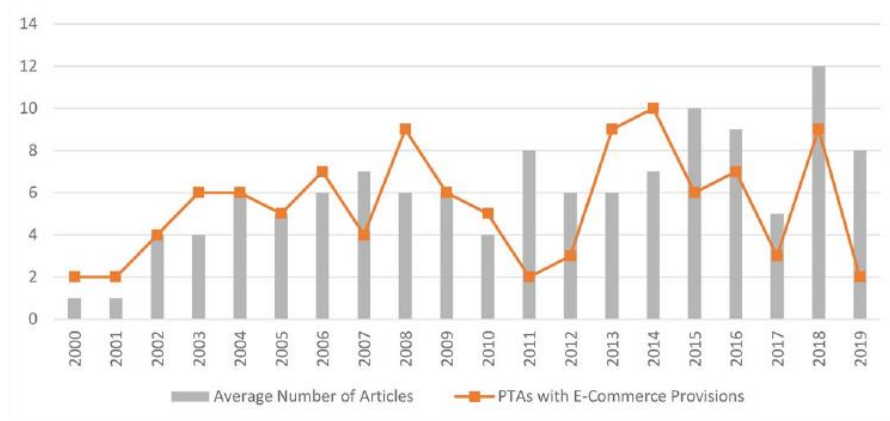
具有数字贸易条款的 PTA 的兴起涉及发达国家和发展中国家。根据联合国世界经济形势与展望报告的国家分类，截至 2019 年 9 月，59% 的具有数字贸易条款的 PTA 是在发达国家和发展中国家之间谈判的，36% 是在发展中国家之间谈判的。如图 4 所示，只有 5% 的具有电子商务条款的 PTA 是在发达国家之间谈判达成的



**Figure 4.** Parties to PTAs with digital trade provisions.

Among the PTAs in our dataset, the number of agreements including digital trade provisions has increased significantly over the years. As of October 2019, seven is the average number of PTAs provisions found in e-commerce chapters and side agreements, and if we consider the past five years that average goes up to ten, as shown in Figure 5.

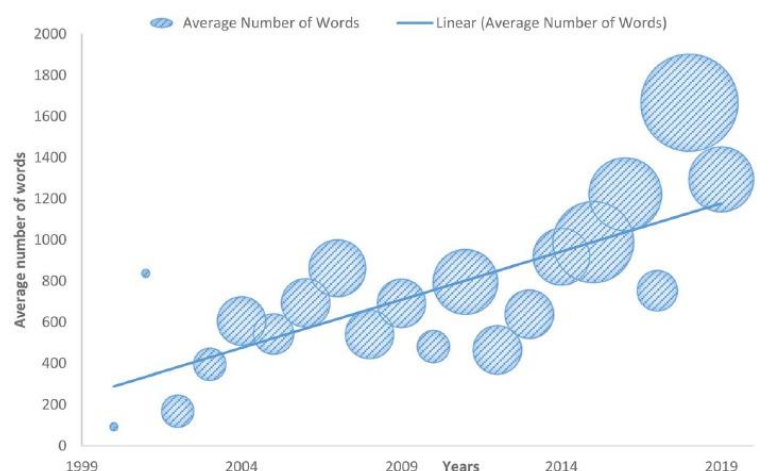
在我们数据集中的 PTA 中，包括数字贸易条款在内的协议数量多年来显著增加。截至 2019 年 10 月，电子商务章节和附带协议中 PTA 条款的平均数量为 7，如果我们考虑过去五年，该平均值上升到 10，如图 5 所示。



**Figure 5.** PTAs with digital trade provisions: average number of articles.

Among the PTAs with digital trade provisions, it is evident that the level of detail has also increased significantly over the years. As of October 2019, 835 is the average number of words found in e-commerce chapters and side agreements, with an average number of 1476 words in the last five years, as shown in Figure 6.

在具有数字贸易条款的 PTA 中，很明显，这些年的详细程度也显著提高。截至 2019 年 10 月，电子商务章节和附带协议中的平均字数为 835，最近五年的平均字数为 1476，如图 6 所示。



**Figure 6.** PTAs with E-commerce chapters: average number of words.

As of October 2019, the updated 2016 SAFTA is the PTA in force with the highest number of provisions in an E-commerce chapter (19 in total), with a total of 2997 words. If approved, the 2019 Japan-US Digital Trade Agreement (DTA) would overtake SAFTA, as its current text has 22 articles comprising 5346 words.

截至 2019 年 10 月，更新后的 2016 SAFTA 是电子商务章节中条款数量最多的 PTA（共 19 个），共 2997 字。如果获得批准，2019 年日美数字贸易协定 (DTA) 将超过 SAFTA，因为其当前文本有 22 篇文章，共 5346 个单词。

#### **4. Substantive Digital Trade Provisions in PTAs: Insights from the e-commerce Chapters (PTAs 中的实质性数字贸易规定：来自电子商务章节的见解)**

We now take a deep dive into some substantive areas of the emergent digital trade law, as shaped by PTAs. While in the preceding section, we looked at the digital provisions that are generally found in PTAs; in this section, we focus on selected topics tackled in mostly in dedicated e-commerce chapters, as these tend to include the most comprehensive and binding commitments on digital trade. To structure the overview, we have focused on those provisions within commerce chapters that are also most likely to have a strong impact on domestic regulatory regimes underlying digital technologies and their development. We have tentatively split these provisions into categories that are (i) meant to compensate for the lack of development under the WTO and/or address specific issues raised by the WTO Work Programme on E-Commerce; (ii) meant to enable digital trade by either cutting red tape, by facilitating digital transactions or in general, by making it easier to conduct business online; and (iii) provisions that cover new issues that have not been discussed in the WTO context (the so-called ‘WTOextra’ issues) and try to address more contentious areas, such as in particular data flows and data protection. Our goal is to uncover the great variety and the complexity of the norms found in the PTAs, which also reveals the value of the TAPED dataset.

我们现在深入探讨由 PTA 塑造的新兴数字贸易法的一些实质性领域。在上一节中，我们研究了 PTA 中普遍存在的数字条款；在本节中，我们将重点关注主要在专门的电子商务章节中处理的选定主题，因为这些主题往往包括关于数字贸易的最全面和具有约束力的承诺。为了构建概述，我们重点关注商业章节中的那些条款，这些条款也最有可能对数字技术及其发展的国内监管制

度产生重大影响。我们暂时将这些条款分为以下几类：(i) 旨在弥补 WTO 发展的不足和/或解决 WTO 电子商务工作计划提出的具体问题；(ii) 旨在通过减少繁文缛节、促进数字交易或总体上使在线业务更容易开展数字贸易；(iii) 涵盖尚未在 WTO 范围内讨论的新问题（所谓的“WTO 额外”问题）并试图解决更具争议性的领域的条款，例如特别是数据流和数据保护。我们的目标是揭示 PTA 中规范的多样性和复杂性，这也揭示了 TAPED 数据集的价值。

#### **4.1 Compensating for developments under the WTO (WTO 下的补偿事态发展)**

##### **4.1.1. Applicability of WTO rules (一、WTO 规则的适用性)**

It is commonly assumed that the digital trade provisions in PTAs build upon the rules of the WTO. As a move of regime-shifting, PTAs are also expected to fill in gaps and address some of the questions that have been left open by the multilateral forum. When looking at the e-commerce chapters of PTAs, however, it appears that the majority of PTAs do not include a provision referring to the applicability of WTO rules to e-commerce. From the 108 PTAs that have e-commerce chapters or side agreements, only 48 agreements include such reference, with important differences of language across agreements. Some of the PTAs do explicitly recognize the applicability of the WTO rules to electronic commerce, but do not clearly specify which the relevant rules that would be applied are. Such provisions are found mainly in some of the PTAs to which the EU is a Party, as well as in agreements concluded by Canada and Singapore. A similar provision stipulates that the Parties recognize that WTO rules apply ‘to the extent they affect electronic commerce,’ or to measures ‘affecting electronic commerce’ —such provisions are found mainly in agreements concluded by Colombia, South Korea, and the US. In other softer variations, countries merely ‘reaffirm’ their respective commitments under the WTO Agreements, agree that electronic commerce ‘falls within the scope of WTO rules and commitments,’ or endeavor to develop their legal framework for electronic commerce applying decisions taken within the WTO framework on this issue.

人们普遍认为 PTA 中的数字贸易条款建立在 WTO 规则的基础上。作为体制转变的举措，PTA 也有望填补空白并解决多边论坛尚未解决的一些问题。然而，在查看 PTA 的电子商务章节时，似乎大多数 PTA 并未包含提及 WTO 规则对电子商务的适用性的条款。在有电子商务章节或附议的 108 个 PTA 中，只有 48 个协议包含此类参考，并且协议之间的语言差异很大。一些优惠贸易协定确实明确承认 WTO 规则对电子商务的适用性，但没有明确说明将适用哪些相关规则。此类规定主要见于欧盟作为缔约方的一些优惠贸易协定，以及加拿大和新加坡缔结的协议。类似的条款规定，缔约方承认 WTO 规则“在影响电子商务的范围内”或“影响电子商务”的措施适用——此类条款主要见于哥伦比亚、韩国和美国缔结的协议。在其他较软的变体中，各国仅“重申”其各自在 WTO 协议下的承诺，同意电子商务“属于 WTO 规则和承诺的范围”，或努力制定其电子商务法律框架，以应用在 WTO 内作出的决定这个问题的框架。

##### **4.1.2. Non-imposition of customs duties on electronic transmissions (电子传输免关税)**

One explicit link to the WTO is made through provisions on the so-called ‘moratorium on custom duties.’ The latter has been one of the frequently discussed issues under the WTO E-Commerce Programme and one that has actually enjoyed, at least partial, support of the WTO membership. Until now, members have continued to extend the obligation not to impose customs duties on electronic transmissions at all Ministerial Conferences since the start of the WTO E-Commerce Work Programme but have failed to make it permanent. The ban on customs duties is one of the most common provisions found in PTAs with digital trade rules (76 agreements) and provides some legal certainty for digital commerce, in particular for trade in downloadable products, such

as software, e-books, or music. Despite being commonplace, these commitments have different wording. An earliest type of provisions merely recognizes the 'existing practice of not imposing customs duties on electronic transmissions' between the Parties; with some agreements making it explicit that the practice shall or will be maintained. In certain cases, the agreements make reference to the Work Programme on Electronic Commerce and the Parties pledge to cooperate to make this practice binding in the WTO framework. In few agreements, the parties reserve their right to adjust this practice, consistent with any changes to the WTO Ministerial Decision on this issue.

与 WTO 的一个明确联系是通过关于所谓的“暂停关税”的规定。后者一直是 WTO 电子商务计划下经常讨论的问题之一，并且实际上至少部分享有，世贸组织成员的支持。迄今为止，自 WTO 电子商务工作计划启动以来，成员们继续在所有部长级会议上延长不对电子传输征收关税的义务，但未能使其永久化。关税禁令是具有数字贸易规则（76 项协议）的 PTA 中最常见的规定之一，并为数字贸易提供了一定的法律确定性，特别是对可下载产品（如软件、电子书或音乐）的贸易。尽管是司空见惯的，这些承诺有不同的措辞。最早的一类条款仅承认双方之间“不对电子传输征收关税的现有做法”；一些协议明确规定应或将保持这种做法。在某些情况下，协议提及电子商务工作计划，双方承诺合作使这种做法在 WTO 框架内具有约束力。在少数协议中，缔约方保留调整这一做法的权利，以符合世贸组织部长级决定对此问题的任何修改。

Yet, the most common approach is a provision on a permanent moratorium on duty-free treatment, meaning that no customs duties should be imposed on electronic transmissions and digital products. Here again, there are several variations. Some PTAs plainly stipulate that a party may not apply customs duties on digital products of the other Party, or in more binding terms, 'shall' not impose such duties, or generally not to apply them, as well as any fees or charges on import or export of digital products by electronic means. In certain agreements, mostly concluded by the EU, the parties agree that electronic transmissions shall be considered as the provision of services and for that reason can not be subject to customs duties. In some of these treaties, instead of referring to electronic transmissions, the parties simply agree not to impose duties on 'deliveries by electronic means.' Another group of PTAs makes it clear that the moratorium extends only to customs duties, fees, or other charges on or in connection with the importation or exportation of digital products, and not to internal taxes, fees, or other charges, provided that are imposed in a manner consistent with the agreement.

然而，最常见的做法是永久暂停免税待遇，这意味着不应应对电子传输和数字产品征收关税。同样，这里有几种变体。一些 PTA 明确规定，一方不得对另一方的数字产品征收关税，或者用更具约束力的术语，“不得”征收此类关税，或一般不征收此类关税，以及任何进口费用或收费或以电子方式出口数码产品。在某些主要由欧盟缔结的协议中，各方同意电子传输应被视为提供服务，因此不能缴纳关税。在其中一些条约中，缔约方没有提及电子传输，而是简单地同意不对“通过电子方式交付”征收关税。另一组 PTA 明确表示，暂停仅适用于关税、费用或其他费用与数字产品的进口或出口有关的或与之相关的，不包括以符合协议的方式征收的国内税费、费用或其他费用。

While some of these treaties give this benefit exclusively to products transmitted or delivered, or imported/exported by electronic means, others extend the moratorium to the content transmitted electronically between persons, regardless of whether digital products are fixed on a carrier medium or transmitted electronically. In certain PTAs, there is an explicit distinction between digital products (which are transmitted by electronic means) and those whose sale occur

online but are physically transported over borders. For example, according to some treaties—mainly concluded by Singapore and Colombia—a party shall not apply customs duties on digital products by electronic transmission, and when these are transmitted physically, the customs value is ‘only limited to the value of the carrier medium’ without including the value of the digital product stored in it. A variation of this provision, usually found in US agreements, uses ‘may’ instead of ‘shall,’ making the commitment somewhat less binding

虽然其中一些条约只对通过电子方式传输或交付或进口/出口的产品给予这种好处，但其他条约将暂停适用于人与人之间以电子方式传输的内容，无论数字产品是固定在载体介质上还是以电子方式传输。在某些 PTA 中，数字产品（通过电子方式传输）与在线销售但实际跨境运输的产品之间存在明确的区分。例如，根据一些主要由新加坡和哥伦比亚缔结的条约，一方不得对通过电子传输的数字产品征收关税，而当这些以物理方式传输时，关税价值“仅限于载体介质的价值”‘不包括存储在其中的数字产品的价值。该条款的变体通常在美国协议中使用，使用“may”而不是“shall”，使承诺的约束力有所降低

A carrier medium is commonly defined as ‘any physical object capable of storing a digital product by any method now known or later developed, and from which a digital product can be perceived, reproduced, or communicated, directly or indirectly, and includes, but is not limited to, an optical medium, a floppy disk, or a magnetic tape.’ In more recent agreements, the reference to a ‘floppy disk’ has been replaced by ‘electronic means.’ An alternative definition considers as carrier medium ‘any physical object, as listed under the WTO ITA-1 Attachment A, capable of storing a digital product by any method and from which a digital product can be perceived, reproduced, or communicated directly or indirectly.’ Other alternative definitions only consider that goods classified in specific subheadings of the Harmonized System can be considered digital products fixed on a carrier medium. Just one agreement in the dataset leaves the determination of the customs value of an imported carrier medium bearing a digital product to each party, in accordance with the WTO Customs Valuation Agreement. Such variations may seem somewhat technical and dull but they are not without legal impact—for instance, extending the obligation to all digital products regardless of source may be a very practical choice, as determining the origin of a digital product can be complicated, especially in a world where data necessary to create these products can be stored and transmitted through various jurisdictions. In a number of PTAs, the moratorium of customs duties, fees, or charges in connection with the exportation or importation of a digital product by electronic means is explicitly not extended to third countries on a most-favored-nation (MFN) basis. In such agreements, the origin of a digital product takes on additional importance, but only a small number of PTAs raise this issue. For example, in the 2009 Japan–Switzerland EPA, the Parties shall ‘foster the development of criteria determining the origin of a digital product, with a view to considering the incorporation of such criteria into the Agreement.’

载体媒体通常被定义为“能够通过任何现在已知或以后开发的方法存储数字产品的任何物理对象，并且可以直接或间接地感知、复制或传达数字产品，包括但不限于不限于光学介质、软盘或磁带。在最近的协议中，对“软盘”的提及已被“电子手段”取代。另一种定义认为载体介质“任何物理对象，如 WTO ITA-1 附件 A 中所列，能够以任何方法存储数字产品，并且可以直接或间接地感知、复制或传达数字产品。其他替代定义仅考虑归类于协调制度的特定子标题可被视为固定在载体介质上的数字产品。根据 WTO 海关估价协议，数据集中只有一项协议将承载数字产品的进口载体介质的海关价值确定给各方。这种变化可能看起来有些技术性和乏味，但它们并非没有法律影响——例如，将义务扩大到所有数字产品而不管来源可能是一个非常实际的选

择，因为确定数字产品的来源可能很复杂，尤其是在创造这些产品所需的数据可以通过不同的司法管辖区存储和传输的世界。在许多 PTA 中，与通过电子方式进出口数字产品有关的关税、费用或收费的暂停明确未在最惠国 (MFN) 基础上扩展到第三国。在此类协议中，数字产品的来源具有额外的重要性，但只有少数 PTA 提出了这个问题。例如，在 2009 年日本-瑞士 EPA 中，缔约方应“促进制定确定数字产品来源的标准，以考虑将此类标准纳入协议。”

Overall, the issue of the duty-free electronic transmissions shows the link between the WTO discussions and provisions in PTAs. The above brief taxonomy of how different PTAs address it also reveals the striking variations across PTAs with potentially diverging legal effects, despite the relatively narrow and unproblematic legal matter that such a ban on duties imposed on electronic transmissions actually entails.

总体而言，免税电子传输问题显示了 WTO 讨论与 PTA 条款之间的联系。上述关于不同 PTA 如何解决该问题的简要分类也揭示了 PTA 之间的显著差异，具有潜在的不同法律效力，尽管对电子传输征收关税的禁令实际上需要相对狭窄且没有问题的法律问题。

#### **4.1.3. Non-discriminatory treatment of digital products (数字产品非歧视性待遇)**

When it comes to specific WTO disciplines, the number of agreements including explicit commitments on non-discrimination is relatively small. Out of the 78 PTAs that have e-commerce chapters or side agreements, only 35 include commitments on NT and 32 agreements on the MFN treatment regarding electronic commerce. It is noteworthy that the large majority of these provisions is binding. Overall, PTAs' electronic commerce chapters tend to use a very similar wording for NT and MFN commitments. Some agreements, such as the 2014 Pacific Alliance Additional Protocol (PAAP), the 2016 Trans-Pacific Partnership (TPP), the 2018 Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP), the 2018 US-Mexico-Canada Agreement (USMCA) and the 2019 Japan-US DTA, address both NT and MFN in the same paragraph as part of a general commitment of a non-discriminatory treatment of digital products. Yet, the majority of PTAs lists NT and MFN obligations separately. On NT, the most common wording goes back to the 2003 Singapore-US FTA stipulating that a party shall not accord less favorable treatment to some digital products than it accords to other like digital products, on the basis that they are 'created, produced, published, stored, transmitted, contracted for, commissioned or first made available on commercial terms outside its territory,' or when the author, performer, producer, developer, or distributor of such products is a person of another party or a non-Party; so as otherwise to afford protection to other like digital products in its territory. A variation of this provision, often found in US agreements, uses 'may' instead of 'shall,' potentially making the commitment less binding. Another alternative found in earlier agreements, further narrows the NT obligation to products digitally delivered 'associated' with the territory of the other party or where the author, performer, producer, developer, or distributor is a person of the other party. A simpler drafting of NT provisions—found in some Japanese PTAs—merely stipulates that neither party shall adopt or maintain measures that accord less favorable treatment to digital products of the other party than it accords to its own like digital products. A somewhat indirect recognition of NT is found in Canada-Peru FTA, where the parties confirm the application of NT for goods to trade conducted by electronic means

当涉及到具体的 WTO 纪律时，包括明确承诺不歧视的协议数量相对较少。在有电子商务章节或附带协议的 78 个 PTA 中，只有 35 个包括关于 NT 的承诺和 32 个关于电子商务最惠国待遇的协议。值得注意的是，这些条款中的绝大多数都具有约束力。总体而言，PTA 的电子商

务章节倾向于对 NT 和 MFN 承诺使用非常相似的措辞。一些协议，例如 2014 年太平洋联盟附加议定书 (PAAP)、2016 年跨太平洋伙伴关系协定 (TPP)、2018 年跨太平洋伙伴关系全面进步协议 (CPTPP)、2018 年美墨加协定 (USMCA) 和 2019 年日美 DTA，在同一段落中同时处理新台币和最惠国待遇，作为对数字产品不歧视待遇的一般承诺的一部分。然而，大多数 PTA 分别列出了 NT 和 MFN 义务。在新台币上，最常见的措辞可以追溯到 2003 年的新加坡-美国自由贸易协定，其中规定一方不得以某些数字产品为“创造、生产、出版、存储、传播、签约、委托或首次在其领土以外的商业条款下提供”，或当此类产品的作者、表演者、生产者、开发商或分销商是另一方或非一方的人时；以免对其境内的其他类似数字产品提供保护。该条款的变体通常出现在美国协议中，使用“may”而不是“shall”，这可能会降低承诺的约束力。在早期协议中发现的另一个替代方案进一步将 NT 义务缩小到与另一方领土“相关”的数字交付产品，或者作者、表演者、生产者、开发商或分销商是另一方的人。一些日本 PTA 中的 NT 条款的起草较为简单，仅规定任何一方不得采取或维持对对方的数字产品给予低于其对自己的类似数字产品的优惠待遇的措施。在加拿大-秘鲁自由贸易协定中发现了对 NT 的某种间接承认，其中各方确认 NT 适用于通过电子方式进行的货物贸易

As for the MFN obligation, most agreements require that a party shall not accord less favorable treatment to digital products ‘created, produced, published, stored, transmitted, contracted for, commissioned or first made commercially available in the territory of another Party’ than it accords to like digital products in the territory of a non-party. In the same line, a party shall not accord less favorable treatment to digital products of which ‘the author, performer, producer, developer or distributor’ is a person of a non-Party. Sometimes ‘may’ is used instead of ‘shall,’ which signals a less binding nature. Again, some Japanese PTAs have a simpler wording in the sense that neither party shall adopt or maintain measures that accord less favorable treatment to digital products of the other party than it accords to like digital products of a non-party

至于最惠国义务，大多数协议要求一方对“在另一方境内创造、生产、出版、存储、传输、承包、委托或首次商业化”的数字产品给予的待遇不得低于其 同意在非一方境内的同类数码产品。同理，一方不得对“作者、表演者、生产者、开发商或发行人”为非当事人的数字产品给予较低优惠。有时使用“may”而不是“shall”，这表明约束力较小。同样，一些日本 PTA 的措辞更为简单，即任何一方均不得采取或维持给予对方数字产品的优惠待遇低于给予非缔约方同类数字产品的优惠待遇的措施。

In essentially all agreements, there are certain exceptions to the non-discrimination principles, which may relate to subsidies or grants provided by a party, including government-supported loans, guarantees and insurance, government procurement, services supplied in the exercise of governmental authority, broadcasting; or in broader terms to ‘electronic transmission of a series of text, video, images, sound recordings, and other products for aural and/or visual reception, and for which the content consumer has no choice over the scheduling of the series.

基本上在所有协议中，非歧视原则都有某些例外情况，这些例外情况可能与一方提供的补贴或赠款有关，包括政府支持的贷款、担保和保险、政府采购、在行使政府权力时提供的服务、广播；或更广泛地说，“以电子方式传输一系列文本、视频、图像、录音和其他用于听觉和/或视觉接收的产品，对于这些产品，内容消费者对系列节目的安排没有选择权。

To clarify these provisions on non-discrimination, several PTAs include a definition of a ‘digital product.’ This is normally understood as a computer program, text, video, image, sound recording, or other product that is digitally encoded. While some clarify that these are produced for



commercial sale or distribution, and can be transmitted electronically, others grant protection regardless of whether they are fixed on a carrier medium or transmitted electronically. Few agreements take the distinctive approach of considering digital products as such that are produced for commercial sale or distribution, and requires them to be transmitted electronically. Some of them explicitly provide that those products fixed on a carrier medium are under the general rules of trade in goods. Finally, certain PTAs apply this definition regardless of whether a Party treats such products as a good or a service under its domestic law. Furthermore, in several treaties, it is explicitly clarified that a digital product does not include a digitized representation of a financial instrument, including money.

为了澄清这些关于非歧视的规定，一些 PTA 包含了“数字产品”的定义。这通常被理解为计算机程序、文本、视频、图像、录音或其他数字编码的产品。虽然有些人澄清这些是为商业销售或分发而生产的，并且可以以电子方式传输，但其他人则提供保护，无论它们是固定在载体介质上还是以电子方式传输。很少有协议采用独特的方法来考虑为商业销售或分销而生产的数字产品，并要求它们以电子方式传输。其中一些明确规定，固定在载体介质上的产品属于货物贸易的一般规则。最后，某些优惠贸易协定适用这一定义，无论缔约方是否根据其国内法将此类产品视为商品或服务。此外，在一些条约中，明确阐明数字产品不包括金融工具（包括货币）的数字化表示。

## **4.2. Enabling digital trade（启用数字贸易）**

### **4.2.1. Promotion and facilitation of e-commerce（促进和便利电子商务）**

A group of PTAs with e-commerce chapters (47 treaties) includes provisions to promote and facilitate e-commerce. These provisions are largely non-binding and vary across PTAs. Several agreements explicitly agree to promote the development of electronic commerce only between the parties, or its wider global use or development. Many treaties aim somewhat more concretely to create a favorable environment for global electronic commerce, recognizing the importance of having clear, transparent, and predictable domestic regulation to foster electronic commerce. Other formulations include the need to create an environment of trust and confidence for e-commerce consumers or users; promote interoperability, innovation, and competition; adopt flexible policies taking into account the rapid changes in the technology environment; or address 'issues relevant to the electronic environment.'

一组带有电子商务章节（47 个条约）的 PTA 包括促进和促进电子商务的条款。这些规定在很大程度上不具约束力，并且因 PTA 而异。一些协议明确同意仅在双方之间促进电子商务的发展，或促进其在全球范围内的广泛使用或发展。许多条约更具体地旨在为全球电子商务创造有利环境，承认明确、透明和可预测的国内监管对促进电子商务的重要性。其他表述包括需要为电子商务消费者或用户创造信任和信心的环境；促进互操作性、创新和竞争；考虑到技术环境的快速变化，采取灵活的政策；或解决“与电子环境相关的问题”。

The 2018 EU-Japan Economic Partnership Agreement (EPA) is a notable case that includes specific commitments on domestic regulation, meaning that each party shall ensure that all its measures of general application affecting electronic commerce are administered in a reasonable, objective, and impartial manner. This is accompanied by a best effort commitment not to impose prior authorization or any other requirement having equivalent effect on the provision of services by electronic means. Unless otherwise provided for in its laws and regulations, parties also shall not adopt or maintain measures regulating electronic transactions that deny the legal effect, validity or enforceability of a contract, solely on the grounds that it is concluded by electronic

means; or otherwise create obstacles to the use of contracts concluded by electronic means. 2018 年欧盟-日本经济伙伴关系协定 (EPA) 是一个值得注意的案例, 其中包括对国内监管的具体承诺, 这意味着各方应确保以合理、客观和公正的方式管理其影响电子商务的所有普遍适用措施。这伴随着最大努力的承诺, 即不强加事先授权或任何其他对通过电子方式提供服务具有同等影响的要求。除法律、法规另有规定外, 当事人也不得仅以电子方式订立合同为由, 采取或维持否定合同的法律效力、有效性或可执行性的电子交易监管措施; 或以其他方式对使用以电子方式订立的合同造成障碍。

Facilitation of e-commerce requires more active policies that go beyond its mere promotion. While some PTAs plainly aim to 'facilitate trade in digital products' or through 'electronic means or technologies', and to improve the effectiveness and efficiency of electronic commerce, or consider e-commerce facilitation as part of general common cooperation activities, other agreements have concrete obligations in this regard. Several treaties include specific commitments to avoid or minimize legal and regulatory barriers to electronic trade, to assist the timeliness and reduce the cost of electronic commercial transactions, as well as apply the principle of technological neutrality. In some treaties, facilitation of e-commerce is taken to a supra-national level. The 2018 USMCA includes as part of the competences of the North American Competitiveness Committee, the identification of priority projects and policies to develop a modern digital trade and investment-related infrastructure. Some provisions on facilitation are targeted at specific countries or groups of users. A couple of agreements aim to facilitate the use of electronic commerce by developing countries; in certain agreements, Parties endeavor to promote access for persons with disabilities to information and communications technologies or, agree to work together to facilitate women participation in E-commerce.

电子商务的便利化需要更积极的政策, 而不仅仅是促销。虽然一些 PTA 明确旨在“促进数字产品贸易”或通过“电子手段或技术”, 提高电子商务的有效性和效率, 或将电子商务便利化视为一般共同合作活动的一部分, 但其他协议已经这方面的具体义务。一些条约包括具体承诺避免或尽量减少电子贸易的法律和监管壁垒, 协助及时性和降低电子商务交易的成本, 以及适用技术中立原则。在一些条约中, 电子商务的便利化被带到了超国家层面。2018 年 USMCA 包括作为北美竞争力委员会职责的一部分, 确定优先项目和政策, 以发展现代数字贸易和投资相关基础设施。一些关于便利化的规定是针对特定国家或用户群体的。一些协议旨在促进发展中国家使用电子商务; 在某些协议中, 缔约方努力促进残疾人获得信息和通信技术, 或同意共同努力促进妇女参与电子商务。

An important number of agreements (45 PTAs) include specific provisions to address the needs of small and medium-sized enterprises (SMEs) in facilitating their use of e-commerce, supporting their growth, or assisting them to overcome obstacles or challenges encountered in the use of e-commerce, usually in non-binding terms under the framework of cooperation activities, like technical assistance. Furthermore, both the USMCA and the Japan-US DTA recognize the importance of SMEs' access to open government data, as well as to interactive computer services

许多重要的协议 (45 个 PTA) 包括具体条款, 以解决中小型企业 (SME) 在促进其使用电子商务、支持其发展或帮助他们克服在电子商务中遇到的障碍或挑战方面的需求。电子商务的使用, 通常在合作活动框架下以非约束性条款使用, 例如技术援助。此外, USMCA 和日美 DTA 都认识到中小企业获取开放政府数据以及交互式计算机服务的重要性

#### 4.2.2. Paperless trading (无纸化贸易)

A significant number of treaties (56 PTAs) includes provisions on paperless trading, which typically cover commitments to make trade administration documents available to the public in electronic form, or accept trade administration documents submitted electronically as the legal equivalent of their paper version. Paperless trading could be applicable between states, between a state and a private entity, or between private entities. These provisions are generally seen as a factor that contributes to the promotion of trade between the parties and significantly enhances the efficiency of trade through the reduction of cost and time. There are three basic types of paperless trading provisions found in PTAs: one typically in the trade in goods chapter, another as part of the cooperation activities between parties, and a third one as part of the ecommerce chapter. These provisions are not mutually exclusive and some agreements include more than one type. 大量条约 (56 个 PTA) 包括关于无纸贸易的规定, 通常包括承诺以电子形式向公众提供贸易管理文件, 或接受以电子方式提交的贸易管理文件作为其纸质版本的法律等效文件。无纸化交易可能适用于国家之间、国家与私人实体之间或私人实体之间。这些规定通常被视为有助于促进双方贸易并通过降低成本和时间显著提高贸易效率的一个因素。在 PTA 中可以找到三种基本类型的无纸贸易条款: 一种通常在货物贸易章节中, 另一种作为各方合作活动的一部分, 第三种作为电子商务章节的一部分。这些规定不是相互排斥的, 有些协议包括不止一种类型。

The first agreement with a provision on paperless trading is the 2000 New Zealand– Singapore CEPA, found in the trade in goods chapter, as a way of implementing the Paperless Trading Initiative of Asia-Pacific Economic Cooperation (APEC) Blueprint for Action on Electronic Commerce. Under this provision, customs administrations shall have in place an electronic environment that supports electronic business applications between them and the trading community. Later agreements make explicit that in implementing such initiatives, customs administrations shall take into account the methodologies agreed by international organizations, such as the World Customs Organization or APEC. A couple of agreements also consider the development of a single governmental customs window following relevant international standards, but recognize that each party shall have its own requirements and conditions. Some PTAs add commitments to exchange views and information between customs administrations and their trading communities, to employ information technology to the greatest extent possible, and electronic means for customs reporting requirements as soon as practicable. Another group of PTAs includes paperless trade provisions as part of cooperation commitments. While some only mention it as one of many collaboration issues, others include a more comprehensive set of rules in a dedicated chapter promoting paper less trading between the parties as one of the overall objectives of the agreement. Some agreements also include cooperation at the international level to enhance the acceptance or use of paperless trading, or taking into account the methods agreed by international organizations

第一个规定无纸贸易的协议是 2000 年新西兰-新加坡 CEPA, 见于货物贸易章节, 作为实施亚太经合组织 (APEC) 电子商务行动蓝图的无纸贸易倡议的一种方式。根据本规定, 海关应当建立电子环境, 支持其与贸易界之间的电子商务应用。后来的协议明确规定, 在实施此类举措时, 海关当局应考虑世界海关组织或 APEC 等国际组织商定的方法。一些协议还考虑按照相关国际标准开发单一的政府海关窗口, 但承认各方应有自己的要求和条件。一些 PTA 承诺在海关管理部门及其贸易团体之间交换意见和信息, 最大限度地利用信息技术, 并在可行的情况下尽快以电子方式满足海关报告要求。另一组 PTA 将无纸贸易条款作为合作承诺的一部分。虽然有些人仅将其作为众多合作问题之一提及, 但其他人在专门的章节中包含了一套更全面的规则, 以促

进双方之间的无纸交易作为协议的总体目标之一。一些协议还包括国际层面的合作，以加强对无纸交易的接受或使用，或考虑到国际组织商定的方法

Another type of commitments on paperless trade, usually found in e-commerce chapters, consists of accepting electronic trade administration documents as the legal equivalent of their paper version. Such provisions are usually formulated as best efforts, but can sometimes be mandatory. A group of PTAs also considers making available trade administration documents to the public in electronic form. However, some agreements include exceptions to these commitments—for example, if there is a domestic or international legal requirement to the contrary, or doing so would reduce the effectiveness of the trade administration process

另一种关于无纸贸易的承诺，通常出现在电子商务章节中，包括接受电子贸易管理文件作为其纸质版本的法律等价物。此类规定通常被表述为尽力而为，但有时可能是强制性的。一组 PTA 还考虑以电子形式向公众提供贸易管理文件。但是，一些协议包含这些承诺的例外情况——例如，如果国内或国际法律要求相反，或者这样做会降低贸易管理程序的有效性

#### **4.2.3. Electronic authentication (电子认证)**

An important number of trade agreements (68 PTAs) include provisions on electronic authentication, which typically allow authentication technologies and mutual recognition of digital certificates and signatures. The evolution of these provisions goes from earlier treaties having best effort commitments to more binding and mandatory clauses in recent agreements. In 2000, in the very first US-led PTA with e-commerce elements, Jordan and the US declared that their governments should work toward a global approach that supports the recognition and enforcement of electronic transactions and methods of electronic authentication (including electronic signatures), both domestically and internationally. The latter includes joint work on a convention or other arrangements to achieve a common legal approach to support electronic transactions, authentication technologies and implementation models, by adopting relevant provisions from the United Nations Commission on International Trade Law (UNCITRAL) Model Law on Electronic Commerce. Following the US lead, in 2001, Canada and Costa Rica acknowledged too the necessity of policies to facilitate the use of technologies for authentication and for the conduct of secure e-commerce. In simpler terms, other agreements started to include cooperation commitments on electronic authentication. These cover activities to share information and experiences on laws, regulations, and programs on electronic signatures or secure electronic authentication; and to 'maintain a dialog' on a number of regulatory issues that include the recognition of certificates of electronic signatures issued to the public. Some PTAs specifically address the facilitation of cross-border certification services digital accreditation, or the recognition and facilitation of interoperable cross-border electronic trust and authentication services. Other cooperation activities include research and training activities on electronic signatures and the electronic authentication, dedicated seminars and expert meetings on security and interoperability, and in general, activities to encourage the use of electronic signatures and certification.

一些重要的贸易协定 (68 个 PTA) 包括关于电子认证的条款，这些条款通常允许认证技术以及数字证书和签名的相互承认。这些条款的演变从早期的条约具有最大努力承诺到最近协议中更具约束力和强制性的条款。2000 年，在美国牵头的第一个包含电子商务元素的 PTA 中，约旦和美国宣布他们的政府应努力制定支持电子交易和电子认证方法（包括电子签名）的识别和执行的全球方法，无论是国内还是国际。后者包括通过采用联合国国际贸易法委员会 (UNCITRAL)

电子商务示范法的相关规定，就公约或其他安排开展联合工作，以实现支持电子交易、认证技术和实施模式的共同法律方法。继美国之后，2001 年，加拿大和哥斯达黎加也承认有必要制定政策来促进使用技术进行身份验证和进行安全电子商务。简而言之，其他协议开始包括关于电子认证的合作承诺。这些包括分享有关电子签名或安全电子认证的法律、法规和计划的信息和经验的的活动；并就一些监管问题“保持对话”，包括承认向公众颁发的电子签名证书。一些 PTA 专门针对跨境认证服务数字认证的便利化，或可互操作的跨境电子信任和认证服务的认可和便利化。其他合作活动包括关于电子签名和电子认证的研究和培训活动、关于安全和互操作性的专题研讨会和专家会议，以及总体上鼓励使用电子签名和认证的活动。

More binding commitments on authentication and digital certificates appear since 2004, establishing restrictions on legislation about electronic authentication using both negative and positive obligations. According to the first group of agreements, countries may not adopt or maintain legislation that prevent or prohibit parties to an electronic transaction: (i) from mutually determining appropriate authentication methods; or (ii) from having the opportunity to prove in court that their electronic transaction complies with any legal requirements with respect to authentication. Further commitments on electronic signatures establish that neither party may adopt or maintain legislation that would prevent parties to an electronic transaction from choosing the court or tribunal to which they bring a dispute concerning the transaction, nor denying the legal validity of a signature solely on the basis that the signature is in electronic form, following the framework of the 2005 United Nations Convention on the Use of Electronic Communications in International Contracts. Some of these treaties inscribe this obligation in binding terms ('no Party shall adopt or maintain')

自 2004 年以来，出现了对认证和数字证书更具约束力的承诺，对使用消极和积极义务的电子认证立法进行了限制。根据第一组协议，各国不得通过或维持立法来阻止或禁止电子交易各方：(i) 相互确定适当的认证方法；(ii) 没有机会在法庭上证明他们的电子交易符合有关认证的任何法律要求。关于电子签名的进一步承诺规定，任何一方均不得通过或维持立法，以阻止电子交易各方选择他们就交易提出争议的法院或法庭，也不得仅基于以下理由否认签名的法律有效性：签名采用电子形式，遵循 2005 年《联合国国际合同中电子通信公约》的框架。其中一些条约以具有约束力的条款规定了这一义务（“任何一方均不得采用或维持”）

In a second group of agreements, each Party has the positive obligation ('each Party shall adopt or maintain') to apply domestic legislation for electronic authentication that allows Parties to electronic transactions to: (i) determine the appropriate authentication technologies and implementation models, without limiting their recognition and implementation models; and (ii) to have the opportunity to prove in court that their electronic transactions comply with any legal requirements. Some of these agreements add the obligation to adopt measures on electronic authentication that do not limit the recognition of authentication technologies and implementation models. However, many agreements include exceptions to these commitments—for instance, through a requirement of certain performance standards for electronic signatures or methods of authentication in a particular category of sensitive transactions or communications, through certification by an authority or a supplier of certification services accredited under the Party's regulations. Some PTAs explicitly mandate that such requirements are objective, transparent, and non-discriminatory and relate only to the specific characteristics of the category of transactions concerned. In others, such certification must serve a legitimate governmental objective and be substantially related to achieving that objective. One example, where such a

higher degree of reliability and security is required is electronic financial transactions. Another set of exceptions applies to transactions or communications, which cannot be made electronically under each party's laws and regulations, or where the validity of electronic signatures may be denied according to its law.

在第二组协议中，每一方都有积极的义务（“每一方应采用或维持”）适用电子认证的国内立法，允许电子交易各方：(i) 确定适当的认证技术和实施模式，在不限制其识别和实施模式的情况下；(ii) 有机会在法庭上证明他们的电子交易符合任何法律要求。其中一些协议增加了对电子认证采取措施的义务，这些措施不限制对认证技术和实施模式的认可。但是，许多协议包括这些承诺的例外情况——例如，通过对特定类别的敏感交易或通信中的电子签名或认证方法的某些性能标准的要求，通过权威机构或认证服务供应商的认证党的规定。一些 PTA 明确要求此类要求是客观、透明和非歧视性的，并且仅与相关交易类别的具体特征相关。在其他情况下，此类认证必须服务于合法的政府目标，并且与实现该目标密切相关。需要这种更高程度的可靠性和安全性的一个例子是电子金融交易。另一组例外情况适用于根据各方法律法规不能以电子方式进行的交易或通信，或者根据其法律可能拒绝电子签名的有效性的交易或通信。

Additional commitments on electronic authentication are referred to the recognition of digital certificates, either publicly or privately issued. On public authentication, some agreements consider working toward the recognition of digital certificates at government level, which may be based on internationally accepted standards or on cooperation mechanisms between national accreditation and digital certification authorities for electronic transactions. Some of these mechanisms seek to facilitate the understanding of their electronic signature frameworks by making available relevant information to the other party's competent authorities, or examine the feasibility of mutual recognition agreements on digital/electronic signatures. On private authentication, some PTAs encourage the use of interoperable electronic authentication, electronic trust services, digital certificates, as well as the mutual recognition of digital certificates and electronic signatures, which may include a trusted third-party service and advanced or qualified certificates. For that purpose, Parties may endeavor to facilitate the procedure of accreditation or recognition of suppliers of certification services. The Chile–China FTA (as amended in 2018) also considers the possibility to require electronic signature for specific certificates following international standards to ensure the security of the commercial process.

对电子认证的附加承诺涉及对公开或私人颁发的数字证书的承认。在公共认证方面，一些协议考虑在政府层面努力承认数字证书，这可能基于国际公认的标准或国家认可和数字认证机构之间的电子交易合作机制。其中一些机制旨在通过向另一方主管当局提供相关信息来促进对其电子签名框架的理解，或检查数字/电子签名互认协议的可行性。在私人认证方面，一些 PTA 鼓励使用可互操作的电子认证、电子信任服务、数字证书，以及数字证书和电子签名的互认，其中可能包括受信任的第三方服务和高级或合格证书。为此目的，缔约方可努力促进认证服务供应商的认证或认可程序。智利-中国自由贸易协定（2018 年修订）还考虑了要求按照国际标准对特定证书进行电子签名以确保商业流程安全的可能性。

Very few trade agreements contain references to specific international standards and these are notably found in treaties concluded by Australia. When this happens, the most referenced is the UNCITRAL Model Law on Electronic Commerce, which is mentioned in 17 treaties. These provisions have several variations: while some agreements stipulate that each party shall 'maintain' laws and regulations governing electronic transactions based on the 1996 Model Law, others extend that commitment also to the 'adoption' of domestic laws and regulations on that subject

matter. Some treaties merely refer to certain aspects of the Model Law, while others seek to ‘maintain consistency’ with the principles contained in that Model Law. In less binding terms, some PTAs cover best efforts to adopt or maintain such model law, or to do so ‘as soon as practicable,’ ‘as appropriate,’ or ‘to the extent possible.’

很少有贸易协定提及具体的国际标准，这些在澳大利亚缔结的条约中尤为明显。发生这种情况时，引用最多的是《贸易法委员会电子商务示范法》，它在 17 项条约中都有提及。这些规定有几个不同之处：虽然一些协议规定各方应根据 1996 年《示范法》“维护”管理电子交易的法律和法规，但其他协议也将该承诺扩展到“通过”有关该主题的国内法律和法规。一些条约仅提及《示范法》的某些方面，而另一些条约则力求与《示范法》中包含的原则“保持一致”。在约束力较小的条款中，一些 PTA 涵盖了为采用或维护此类示范法所做的最大努力，或“尽快”、“酌情”或“尽可能”这样做。

#### 4.3. New rules on digital trade, in particular on digital flows（数字贸易的新规则，尤其是数据流动）

##### 4.3.1. Data-related provisions（数据相关规定）

Data-related provisions are a relatively new phenomenon and can be found primarily in dedicated e-commerce chapters of PTAs. These are rules either referring to the crossborder flow of data or such banning or limiting data localization requirements. Provisions on the cross-border flow of data can however be also found in chapters, dealing with discrete services sectors, where data flows are key or indeed inherent to the very definition of those services —this is particularly valid for the telecommunications and the financial services sectors, as shown in Table 1 below.

与数据相关的规定是一个相对较新的现象，主要可以在 PTA 的专门电子商务章节中找到。这些规则要么涉及数据的跨境流动，要么涉及禁止或限制数据本地化要求。然而，关于数据跨境流动的规定也可以在涉及离散服务部门的章节中找到，其中数据流动是这些服务定义的关键或确实是固有的——这对电信和金融服务尤其有效 部门，如下表1所示。

**Table 1.** Overview of data-related provisions in PTAs

	Data flows			
	General	Financial services	Telecommunication services	Data localization
Soft commitments	10	0	1	1
Intermediate commitments	5	0	0	0
Hard commitments	12	69	63	12
Total number of provisions	27	69	64	13

##### 4.3.1(a). Rules on data flows（数据流动规则）

If we look at the evolution of data flow provisions in PTAs, there has been a sea change over the years. Non-binding provisions on data flows appeared actually quite early. Already in the 2000 Jordan-US FTA, the Joint Statement on Electronic Commerce highlighted the ‘need to continue the free flow of information,’ although it fell short of including an explicit provision in this regard. The first agreement having such a provision is the 2006 Taiwan–Nicaragua FTA, where as part of the cooperation activities, the parties affirmed the importance of working ‘to maintain cross-

border flows of information as an essential element to promote a dynamic environment for electronic commerce.’ A similar wording is used in the 2008 Canada–Peru FTA, the 2011 Korea–Peru FTA, the 2011 Central America–Mexico FTA, the 2013 Colombia–Costa Rica FTA, the 2013 Canada–Honduras FTA, the 2014 Canada–Korea FTA, and the 2015 Japan–Mongolia FTA. In the same line, in the 2010 Hong–Kong–New Zealand FTA, the parties agreed to ensure that ‘their regulatory regimes support the free flow of services, including the development of innovative ways of developing services, using electronic means.’

如果我们看一下 PTA 中数据流规定的演变，这些年来发生了翻天覆地的变化。关于数据流的非约束性规定实际上出现得很早。早在 2000 年约旦-美国自由贸易协定中，电子商务联合声明就强调了“需要继续信息自由流动”，尽管它没有在这方面包含明确的规定。第一个有此类条款的协议是 2006 年台湾-尼加拉瓜自由贸易协定，作为合作活动的一部分，双方重申了努力“维持跨境信息流动作为促进电子行业动态环境的基本要素”的重要性。2008 年加拿大-秘鲁 FTA、2011 年韩国-秘鲁 FTA、2011 年中美洲-墨西哥 FTA、2013 年哥伦比亚-哥斯达黎加 FTA、2013 年加拿大-洪都拉斯 FTA、2014 年加拿大-韩国自由贸易协定和 2015 年日本-蒙古自由贸易协定。同样，在 2010 年香港-新西兰自由贸易协定中，各方同意确保“其监管制度支持服务的自由流动，包括使用电子手段开发创新的服务开发方式”。

An intermediate type of provisions between ‘hard’ and ‘soft’ commitments is found in the 2007 South Korea–US FTA, where the parties, after ‘recognizing the importance of the free flow of information in facilitating trade, and acknowledging the importance of protecting personal information,’ declare that they ‘shall endeavor to refrain from imposing or maintaining unnecessary barriers to electronic information flows across borders.’ The 2015 Korea–Vietnam FTA, although without a general provision on data flows, considers that each party shall, to the extent possible, make cooperative efforts with competent authorities when personal data transferred across its borders are leaked.

在 2007 年韩美 FTA 中可以找到介于“硬”和“软”承诺之间的一种中间类型的条款，其中各方在“认识到信息自由流动在促进贸易方面的重要性，并承认保护个人信息，”声明他们“应努力避免对跨境电子信息流动施加或维持不必要的障碍。”2015 年韩越 FTA 虽然没有关于数据流动的一般规定，但认为各方应在可能的情况下，在跨境传输的个人数据泄露时与主管部门合作。

The first agreement having a binding provision on cross-border information flows is the 2014 Mexico–Panama FTA. According to this treaty, each Party ‘shall allow its persons and the persons of the other party to transmit electronic information, from and to its territory, when required by said person, in accordance with the applicable legislation on the protection of personal data and taking into consideration international practices.’ A much more detailed provision in this regard is found in the 2015 amended version of the PAAP, which is similar to the 2016 TPP that was negotiated at the same time and has since largely influenced all subsequent agreements having data flows provisions.

第一个对跨境信息流动具有约束力条款的协议是 2014 年墨西哥-巴拿马自由贸易协定。根据该条约，每一方应允许其人员和另一方人员在其要求时，根据有关保护个人数据和获取 2015 年修订版的 PAAP 对此有更详细的规定，这与同时谈判的 2016 年 TPP 类似，此后在很大程度上影响了所有具有数据流的后续协议规定。

After recognizing that each Party may have its own regulatory requirements concerning the transfer of information by electronic means, both the PAAP (2015) and the TPP stipulate that each



party 'shall allow the cross-border transfer of information by electronic means, including personal information,' when it is for the conduct of the business of a covered person. This shall not prevent a Party from 'adopting or maintaining measures to achieve a legitimate public policy objective, provided that the measure is not applied in a manner which would constitute a means of arbitrary or unjustifiable discrimination or a disguised restriction on trade; and does not impose restrictions on transfers of information greater than are required to achieve the objective.' This provision and indeed the entire e-commerce chapter of TPP were kept without changes in the 2018 CPTPP.

在认识到各方可能对通过电子方式传输信息有各自的监管要求后，PAAP（2015）和TPP均规定各方应允许通过电子方式跨境传输信息，包括个人信息；当它是为了进行被保险人的业务时。这不应阻止缔约方“采取或维持措施以实现合法的公共政策目标，前提是该措施的实施方式不会构成任意或不合理的歧视或变相限制贸易的手段；并且不会对超过实现目标所需的信息传输施加限制。这一条款以及实际上是 TPP 的整个电子商务章节在 2018 年 CPTPP 中保持不变。

Post-TPP/CPTPP, a similarly hard rule on data flows has been incorporated into other trade agreements, largely following the same wording, which include the 2016 Chile–Uruguay FTA, the 2016 Updated SAFTA, the 2017 Argentina–Chile FTA, the 2018 Singapore–Sri Lanka FTA, the 2018 Australia–Peru FTA, the 2018 USMCA, the 2018 Brazil–Chile FTA, the 2019 Australia–Indonesia FTA, and in the 2019 Japan-US DTA. In couple of agreements, such as notably the USMCA, it is further clarified that a measure on restriction of data flows is not considered to achieve a legitimate public policy objective, if it accords different treatment of data transfers solely on the basis that they are cross-border in a manner that modifies the conditions of competition to the detriment of a covered person or the service suppliers of the other party. More recently, different countries have agreed to consider in future negotiations commitments related to cross-border flow of information. Such a clause is found for instance in the 2018 EU-Japan EPA and in the EU-Mexico Global Agreement, currently under negotiation. There, the Parties commit to 'reassess' within three years of the entry into force of the agreement, the need for inclusion of provisions on the free flow of data into the treaty. This is new language is an excellent example of the repositioning of the EU on the issue of data flows, as well as of its wish to couple in due time this deeper commitment with the high standards of the General Data Protection Regulation.

在 TPP/CPTPP 之后，关于数据流的类似硬性规则已被纳入其他贸易协定，其措辞大致相同，其中包括 2016 年智利-乌拉圭 FTA、2016 年更新的 SAFTA、2017 年阿根廷-智利 FTA、2018 年新加坡-斯里兰卡 FTA、2018 年澳大利亚-秘鲁 FTA、2018 年 USMCA、2018 年巴西-智利 FTA、2019 年澳大利亚-印度尼西亚 FTA 以及 2019 年日本-美国 DTA。在一些协议中，尤其是 USMCA，进一步阐明了限制数据流的措施如果仅仅基于数据传输是交叉的而对数据传输给予不同的处理，则不能被视为实现合法的公共政策目标。 - 以某种方式改变竞争条件，损害被保险人或另一方的服务供应商的利益。最近，不同国家同意在未来的谈判中考虑与跨境信息流动有关的承诺。例如，在 2018 年欧盟-日本 EPA 和目前正在谈判的欧盟-墨西哥全球协议中可以找到这样的条款。在那里，缔约方承诺在协议生效后三年内“重新评估”是否需要将关于数据自由流动的规定纳入条约。这种新语言是欧盟在数据流问题上重新定位的一个很好的例子，也是它希望在适当的时候将这一更深层次的承诺与通用数据保护条例的高标准结合起来的一个很好的例子

#### **4.3.1 (b). Data localization(数据本地化)**

In recent years, some PTAs have also started to include provisions on data localization, either banning or limiting requirements on the location or use of data. An important difference with the

data flows provisions analyzed above is that almost all data localization clauses found in PTAs are of a binding nature. The first agreement including such type of provisions is the 2015 Japan–Mongolia FTA, according to which neither Party ‘shall require a service supplier of the other party, an investor of the other party, or an investment of an investor of the other party in the area of the former party, to use or locate computing facilities in that area as a condition for conducting its business’. Later the same year, the 2015 amended version of the PAAP included a similar provision on the use and location of computer facilities, stipulating that no party may require a covered person to use or locate computer facilities in the territory of that party, as a condition for the exercise of its business activity. The agreement adds however that nothing shall prevent a Party from adopting or maintaining measures to achieve a legitimate public policy objective, provided that they are not applied in a manner that constitutes a means of arbitrary or unjustifiable discrimination, or a disguised restriction to trade.

近年来，一些 PTA 也开始纳入有关数据本地化的规定，禁止或限制对数据位置或使用的要求。与上面分析的数据流规定的一个重要区别是，在 PTA 中发现的几乎所有数据本地化条款都具有约束力。第一个包含此类条款的协议是 2015 年日蒙 FTA，根据该协议，任何一方均不得要求对方的服务提供者、对方的投资者或对方的投资者投资前一方的地区，使用或定位该地区的计算设施，作为开展业务的条件”。同年晚些时候，PAAP 的 2015 年修订版包括关于计算机设施的使用和位置的类似规定，规定任何一方不得要求受保护的人在其领土内使用或定位计算机设施作为条件为行使其业务活动。然而，该协议补充说，任何事情都不应阻止缔约方采取或维持措施以实现合法的公共政策目标，前提是这些措施的实施方式不构成任意或不合理的歧视，或变相限制贸易。

In 2016, the TPP included a similar provision on location of computing facilities. After recognizing that each Party may have its own regulatory requirements regarding the use of computing facilities, such as those to ensure the security and confidentiality of communications, the TPP stipulates that a covered person shall not be required to use or locate computing facilities in a party’s territory as a condition for conducting business in that country. The TPP also considers a legitimate public policy objective exception. Additionally, the TPP requires that such measure does not impose restrictions on the use or location of computing facilities greater than are required to achieve the objective. This provision has been kept without change in the CPTPP.

2016 年，TPP 包括了关于计算设施位置的类似规定。在认识到每一方可能对计算设施的使用有自己的监管要求后，例如确保通信的安全性和机密性的要求，TPP 规定，不应要求受保护的人在一方的计算机上使用或定位计算设施。领土作为在该国开展业务的条件。TPP 还认为合法的公共政策目标例外。此外，TPP 要求此类措施不得对计算设施的使用或位置施加超过实现目标所需的限制。该条款在 CPTPP 中保持不变。

After the TPP/CPTPP, a hard rule on data localization largely following the same wording has been included in the 2016 Chile–Uruguay FTA and the 2016 updated SAFTA. A variation is found in the 2019 Australia–Indonesia FTA, which stipulates that nothing in the agreement shall prevent a Party from adopting or maintaining any measure that it considers necessary for the protection of its ‘essential security interests.’ An alternative is found in the 2018 Singapore–Sri Lanka FTA, the 2018 Australia–Peru FTA and the 2018 Brazil–Chile FTA, where there is no least restrictive measure requirement, thus coming closer to the PAAP wording than to the TPP/CPTPP template. The USMCA and the Japan-US DTA include yet another variation of these provisions, stipulating that ‘no party shall require a covered person to use or locate computing facilities in that party’s

territory as a condition for conducting business in that territory,' without considering any further exception, except in the latter agreement which includes a special rule for financial services.

在 TPP/CPTPP 之后, 2016 年智利-乌拉圭 FTA 和 2016 年更新的 SAFTA 中包含了基本遵循相同措辞的数据本地化硬性规则。2019 年澳大利亚-印度尼西亚自由贸易协定有一个变化, 该协定规定协议中的任何内容均不得阻止缔约方采取或维持其认为保护其“基本安全利益”所必需的任何措施。2018 年新加坡 - 斯里兰卡 FTA、2018 年澳大利亚 - 秘鲁 FTA 和 2018 年巴西 - 智利 FTA, 其中没有最不严格的措施要求, 因此更接近 PAAP 措辞而不是 TPP/CPTPP 模板。USMCA 和日美 DTA 包含了这些条款的另一个变体, 规定“任何一方不得要求受保护的人在该方领土内使用或定位计算设施作为在该领土内开展业务的条件”, 而不考虑任何进一步的例外情况, 但后一项协议中包含金融服务的特殊规则除外。

One of the few provisions on data localization that are not directly binding is found in the 2017 Argentina–Chile FTA. Under this treaty, the parties just ‘recognize the importance’ of not requiring a person of the other party to use or locate the computer facilities in the territory of that party, as a condition for conducting business in that territory, and pledge to undertake to exchange good practices and current regulatory frameworks regarding location of servers.

在 2017 年阿根廷-智利自由贸易协定中可以找到少数不直接具有约束力的数据本地化条款之一。根据该条约, 各方仅“认识到”不要求对方人员在该方领土内使用或定位计算机设施的重要性, 作为在该领土内开展业务的条件, 并承诺承诺 交流有关服务器位置的良好做法和当前监管框架。

4.3.2. Privacy and data protection(隐私和数据保护)

82 PTAs in our dataset include provisions on privacy, usually under the concept of ‘data protection.’ Yet, the way this data is protected varies considerably and can include a truly mixed bag of binding and non-binding provisions (see Table 2), which is of course symptomatic of the very different positions of the major actors and the inherent tensions between the regulatory goals of data innovation and data protection. We sketch here the general rules found in e-commerce chapters; however, many relevant specific provisions can also be found in the financial and telecommunication services chapters or in dedicated annexes.

我们数据集中的 82 个 PTA 包括隐私条款, 通常在“数据保护”的概念下。然而, 保护这些数据的方式差异很大, 可能包括真正混合的约束性和非约束性条款 (见表 2), 这当然是主要参与者立场截然不同以及数据创新和数据保护的监管目标之间内在紧张关系的症状。我们在这里概述了电子商务章节中的一般规则; 然而, 许多相关的具体规定也可以在金融和电信服务章节或专门的附件中找到。

Table 2. Overview of privacy-related provisions in PTAs

	Privacy issues
Soft commitments	30
Intermediate commitments	28
Hard commitments	25
Total no. of provisions	84

Earlier agreements dealing with privacy issues consist of side non-binding declarations of mere programmatic nature. The 2000 Jordan–US FTA includes a Joint Statement on Electronic Commerce, where Parties deem it necessary to ensure the effective protection of privacy in the processing of personal data on global information networks. However, the means for privacy protection are kept ‘flexible,’ considering that content, usage, and the method for collection of private information differs from industry to industry. Governments should ‘encourage’ private sector development and implementation of enforcement mechanisms, including preparing guidelines and developing verification and recourse methodologies, recommending the OECD Privacy Guidelines as an appropriate basis for policy development. Similarly, the 2001 Canada–Costa Rica FTA includes a provision on privacy as part of a Joint Statement on Global Electronic Commerce, declaring that privacy ‘should be effectively protected with regards to the processing of personal data on global networks,’ with both parties agreeing to share information on the functioning of their respective data protection regimes.

处理隐私问题的早期协议包括仅具有程序性质的非约束性声明。2000 年约旦-美国自由贸易协定包括一份关于电子商务的联合声明，缔约方认为有必要确保在全球信息网络上处理个人数据时有效保护隐私。然而，考虑到隐私信息的内容、使用和收集方法因行业而异，隐私保护的手段保持“灵活”。政府应“鼓励”私营部门发展和实施执法机制，包括制定指导方针和制定核查和追索方法，建议将经合组织隐私指南作为政策制定的适当基础。同样，2001 年加拿大-哥斯达黎加自由贸易协定包括一项隐私条款，作为全球电子商务联合声明的一部分，宣布隐私“在全球网络上处理个人数据时应得到有效保护”，双方同意分享有关其各自数据保护制度运作的信息。

Later agreements include cooperation activities on enhancing the security of personal data at the international level, in order to improve the level of privacy protection in electronic communications and avoid obstacles to trade that requires transfers of personal data. These activities include sharing information and experiences on regulations, laws, and programs on data protection, or on the overall domestic regime for the protection of personal information; technical assistance in the form of exchange of information and experts, research and training activities; the establishment of joint programs and projects, a ‘dialog’ or ‘consultations’ on matters of data protection; or in general, other cooperation mechanisms to ensure the protection of personal data. In a handful of treaties, Parties commit to publish information on personal data protection to users of e-commerce, including how individuals can pursue remedies and how businesses can comply with any legal requirements.

后来的协议包括在国际层面加强个人数据安全的合作活动，以提高电子通信中的隐私保护水平，避免需要传输个人数据的贸易障碍。这些活动包括分享有关数据保护的法规、法律和计划或国内个人信息保护总体制度的信息和经验；以交流信息和专家、研究和培训活动的形式提供技术援助；建立联合计划和项目，就数据保护问题进行“对话”或“协商”；或一般而言，确保个人数据保护的其他合作机制。在少数条约中，缔约方承诺向电子商务用户发布有关个人数据保护的信息，包括个人如何寻求补救措施以及企业如何遵守任何法律要求。

PTAs have also dealt with personal data protection with reference to the adoption of domestic standards. While some agreements merely recognize the importance or the benefits of protecting personal information online, in several treaties parties specifically commit to adopt or maintain legislation or regulations that protect the personal data or privacy of users. These measures are usually in relation to the processing and dissemination of data, which may also include administrative measures or the adoption of non-discriminatory practices. When included, few

agreements consider qualifications to this commitment, which may include taking measures deemed 'appropriate and necessary considering the differences in existing systems for personal data protection,' or that the Parties have 'the right to define or regulate their own levels of protection of personal data in pursuit or furtherance of public policy objectives,' and shall not be required to disclose confidential or sensitive information or data.

PTA 还参照采用国内标准处理个人数据保护问题。虽然一些协议仅仅承认保护在线个人信息的重要性或好处，但在一些条约中，缔约方明确承诺通过或维持保护用户个人数据或隐私的立法或法规。这些措施通常与数据的处理和传播有关，其中还可能包括行政措施或采取非歧视性做法。当包括在内时，很少有协议会考虑对这一承诺的限制，其中可能包括采取被认为“考虑到现有个人数据保护系统的差异的适当和必要的措施”，或者缔约方有权“定义或规范他们自己的保护水平”个人数据以追求或促进公共政策目标”，并且不应被要求披露机密或敏感信息或数据。

Some PTAs add that in the development of online personal data protection standards, each Party shall take into account existing international standards, as well as criteria or guidelines of relevant international organizations or bodies —such as the APEC Privacy Framework and the OECD Recommendation of the Council concerning Guidelines governing the Protection of Privacy and Transborder Flows of Personal Data (2013). In recognition that the Parties may take different legal approaches to protecting personal information, some agreements declare that each party should encourage the development of mechanisms to promote compatibility between different regimes. These may include the recognition of regulatory outcomes, whether accorded autonomously or by mutual arrangement, or through broader international frameworks. To this end, the Parties shall endeavor to exchange information on any such mechanisms applied in their jurisdictions and explore ways to extend these or other suitable arrangements to promote compatibility between them. In this context, the 2018 USMCA explicitly recognizes that the APEC Cross-Border Privacy Rules system is a valid mechanism to facilitate cross-border information transfers while protecting personal information.

一些 PTA 补充说，在制定在线个人数据保护标准时，各方应考虑现有的国际标准，以及相关国际组织或机构的标准或指南——例如 APEC 隐私框架和经合组织理事会的建议关于保护隐私和个人数据跨境流动的指南（2013 年）。鉴于各方可能采取不同的法律方法来保护个人信息，一些协议声明各方应鼓励发展机制以促进不同制度之间的兼容性。这可能包括对监管结果的认可，无论是自主给予还是通过相互安排，或者通过更广泛的国际框架给予。为此，双方应努力就其管辖范围内适用的任何此类机制交换信息，并探索扩展这些或其他适当安排的方法，以促进它们之间的兼容性。在此背景下，2018 年 USMCA 明确承认 APEC 跨境隐私规则体系是促进跨境信息传输同时保护个人信息的有效机制。

Yet, PTA Parties have also employed more binding tools to protect personal information online. A first option considers the protection of individual privacy in the processing and dissemination of personal data and the protection of confidentiality of individual records and accounts as an exception in specific chapters of the agreement— such as for trade in services, investment or establishment, movement of persons, telecommunications ,and financial services. Certain agreements, mostly EU-led, even have special chapters on protection of personal data, including discrete principles—such as: purpose limitation, data quality and proportionality, transparency, security, right to access, rectification and opposition, restrictions on onward transfers, protection of sensitive data, as well as provisions on enforcement mechanisms, coherence with international commitments and cooperation between the parties in order to ensure an adequate level of

protection of personal data. Other agreements merely recognize principles for the collection, processing, and storage of personal data, such as prior consent, legitimacy, purpose, proportionality, quality, safety, responsibility, and information, but without any further detail. The 2018 USMCA was the first US-led PTA to include such a provision recognizing the key principles of limitation on collection, choice, data quality, purpose specification, use limitation, security safeguards, transparency, individual participation, and accountability. That agreement also adds that any restrictions on cross-border flows of personal information are necessary and proportionate to the risks presented.

然而，PTA 缔约方也采用了更具约束力的工具来保护在线个人信息。第一种选择将在处理和传播个人数据时保护个人隐私以及保护个人记录和账户的机密性作为协议特定章节的例外——例如服务贸易、投资或设立、转移人员、电信和金融服务。某些协议，主要是欧盟主导的，甚至有关于保护个人数据的特殊章节，包括离散原则——例如：目的限制、数据质量和相称性、透明度、安全性、访问权、纠正和反对、对向前传输的限制、保护敏感数据，以及关于执法机制的规定，与国际承诺的一致性以及各方之间的合作，以确保对个人数据的充分保护。其他协议仅承认收集、处理和存储个人数据的原则，例如事先同意、合法性、目的、相称性、质量、安全性、责任和信息，但没有任何进一步的细节。2018 年 USMCA 是第一个包含此类条款的美国主导的 PTA，该条款承认收集限制、选择、数据质量、目的规范、使用限制、安全保障、透明度、个人参与和问责制的关键原则。该协议还补充说，对个人信息跨境流动的任何限制都是必要的，并且与所面临的风险相称。

A second option lets countries adopt appropriate measures to ensure the privacy protection while allowing the free movement of data, establishing a criterion of 'equivalence' —meaning that countries agree that personal data may be exchanged only where the receiving party undertakes to protect such data in at least an equivalent, similar or adequate way to the one applicable to that particular case in the party that supplies it. This has been largely the EU approach and to that end, Parties commit to inform each other of their applicable rules and negotiate reciprocal, general, or specific agreements. In the same line, under the Argentina–Chile FTA, Parties undertake to apply to data from the other Party, a level of protection that is 'at least similar to that applicable to the Party from which the data originates,' through mutual, general, or specific agreements

第二种选择让各国采取适当措施确保隐私保护，同时允许数据自由流动，建立“等效”标准——这意味着各国同意只有在接收方承诺保护此类数据的情况下才能交换个人数据。至少与提供方适用于该特定情况的方法具有同等、相似或充分的方法。这在很大程度上是欧盟的做法，为此，缔约方承诺相互告知其适用的规则，并就互惠、一般或特定协议进行谈判。同样，根据阿根廷-智利自由贸易协定，各方承诺通过相互、通用的方式对来自另一方的数据适用“至少类似于适用于数据来源方的保护级别”，或特定协议

A third, but less used option, leaves the development of rules on data protection to a treaty body. The 2012 Colombia–EU–Peru FTA (which also now includes Ecuador), allows the trade committee to establish a working group with the task of proposing guidelines and strategies enabling the signatory Andean countries 'to become a safe harbor for the protection of personal data.' To this end, the working group shall adopt a cooperation agenda 'that defines priority aspects for accomplishing that purpose, especially regarding the respective homologation processes of data protection systems.'

第三种但较少使用的选项是将数据保护规则的制定留给条约机构。2012 年哥伦比亚-欧盟-秘

鲁自由贸易协定（现在还包括厄瓜多尔）允许贸易委员会成立一个工作组，其任务是提出指导方针和战略，使签署安第斯国家“成为保护个人数据的安全港”。<sup>1</sup>为此，工作组应通过合作议程，确定实现该目的的优先方面，特别是关于数据保护系统的相应认证过程。

Overall, with regard to data protection, we see how privacy and data protection have become a trade topic and how PTAs strive to interface domestic regulatory regimes, which can be quite diverging across jurisdictions. We can also observe the role of the EU and the US as major actors pushing for the adoption of certain regulatory standards or templates, as well as their repositioning over time—with the EU agreeing on the inclusion of data flows language and the US subscribing to certain international standards and principles of data collection and processing. 总体而言，在数据保护方面，我们看到隐私和数据保护如何成为一个贸易话题，以及 PTA 如何努力与国内监管制度对接，这在不同司法管辖区可能存在很大差异。我们还可以观察到欧盟和美国作为推动采用某些监管标准或模板的主要参与者所扮演的角色，以及随着时间的推移它们的重新定位——欧盟同意纳入数据流语言，美国订阅 数据收集和处理的某些国际标准和原则。

## **5.Conclusion**

In the past two decades, countries have increasingly included digital trade provisions in their PTAs. The newly emerged framework of digital trade governance is however fragmented, patchy, and complex. Even on relatively simple issues, such as the customs duty moratorium on electronic transmissions or electronic authentication, there is a great variety of rules and formulations, possibly with differing legal effects. We could also observe that despite these variations, there are important levels of regulatory convergence on certain objectives and principles (like the facilitation of e-commerce, reduction of unnecessary barriers, and considering the needs of SMEs), as well as on distinct topics, such as transparency, paperless trading, and electronic authentication. Yet, significant differences remain, in particular with regard to the treatment of cross border data flows, data localization, and personal data protection.

在过去的二十年里，各国越来越多地将数字贸易条款纳入其 PTA 中。然而，新出现的数字贸易治理框架是分散的、不完整的和复杂的。即使在相对简单的问题上，例如关税暂停电子传输或电子认证，也有各种各样的规则和表述，可能具有不同的法律效力。我们还可以观察到，尽管存在这些差异，但在某些目标和原则（如促进电子商务、减少不必要的障碍和考虑中小企业的需求）以及不同的主题上，监管趋同程度很重要，例如透明度、无纸化交易和电子认证。然而，仍然存在显著差异，特别是在处理跨境数据流、数据本地化和个人数据保护方面。

As the importance of the data-driven economy grows, moving forward with an apt legal design becomes critical. Policy-makers are now well aware of this and we see it reflected both in the reinvigorated efforts under the umbrella of the WTO to reach an agreement on electronic commerce, as well as in new bolder deals that go beyond existing commitments and look at a range of emerging issues, such as digital identity, artificial intelligence, electronic invoicing, and open data. In any of these efforts, it is essential that there are comprehensive data and analyses of all the relevant norms. We hope that our TAPED dataset, bits of which this article presented, can be an important step in providing such information. We also trust that the dataset can be useful for researchers in different areas, such as law, economics, or political science, as well as for governments, international, and non-governmental organization officials, who may use it as a tool for evidence-based policy-making but also for normative analyses of how things should be, so as to ensure that data innovation is fostered but at the same time certain fundamental values,

such as national security and privacy protection, are adequately safeguarded

随着数据驱动型经济的重要性与日俱增，推进恰当的法律设计变得至关重要。政策制定者现在很清楚这一点，我们看到它反映在 WTO 框架下为达成电子商务协议而重振旗鼓的努力，以及超越现有承诺并着眼于一系列新的更大胆的交易中。新兴问题，例如数字身份、人工智能、电子发票和开放数据。在任何这些努力中，对所有相关规范都有全面的数据和分析是至关重要的。我们希望我们的 TAPED 数据集（本文介绍的部分内容）可以成为提供此类信息的重要一步。我们还相信，该数据集可用于不同领域的研究人员，例如法律、经济学或政治学，以及政府、国际和非政府组织官员，他们可以将其用作证据工具——基于政策制定，也用于规范分析事物应该如何，以确保促进数据创新，但同时充分保护某些基本价值观，例如国家安全和隐私保护