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## The Missing Chapter: Integrating WTO-Aligned Digital Trade Rules into Future FTAs of Developing Countries

**Maseeh Ullah**

PhD scholar, school of law, Zhongnan University of Economics and Law, China

Email: advmaseehullah@yahoo.com

**Farid Ullah Khan**

School of law, Xiamen University, China

Email: farid.xmu@gmail.com

**Muhammad Abbas Jehan**

Master IP law, Zhongnan University of economic and law, China

Email: abbasjehan31@gmail.com

### Abstract

The rapid expansion of digital trade has transformed global commerce, yet many developing countries' Free Trade Agreements (FTAs) lack comprehensive and WTO-aligned digital trade rules. This omission—the “missing chapter”—creates regulatory uncertainty, limits market access, and impedes these countries' integration into the global digital economy. This study examines the gap in digital trade provisions within developing countries' FTAs by analysing existing agreements and the evolving WTO framework on digital trade. Employing doctrinal and comparative analysis, the research identifies key areas where WTO disciplines, such as cross-border data flows, data localization restrictions, electronic commerce facilitation, and cybersecurity, remain underrepresented in FTAs involving developing nations. The study proposes a framework for integrating WTO-consistent digital trade rules into future FTAs, emphasizing development-sensitive flexibilities, capacity building, and policy space preservation. Key findings highlight that aligning digital trade chapters with WTO standards can enhance regulatory coherence, promote digital inclusion, and strengthen developing countries' participation in the digital economy. This article contributes to the discourse on digital trade governance by offering actionable recommendations for negotiators seeking to bridge the digital trade divide in developing countries through more robust, harmonized trade agreements.

**Keywords:** cross-border data flows, regulatory coherence, digital economy inclusion, capacity building, e-commerce governance, trade policy flexibility, developing countries' trade integration

### Introduction

The digital revolution has fundamentally reshaped international trade, creating new opportunities and challenges for countries across the development spectrum. Digital trade—including electronic commerce, cross-border data flows, and digitally enabled services—has become a key driver of economic growth and global integration. However, many developing countries face a critical gap in



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their trade frameworks: the absence of comprehensive and WTO-aligned digital trade rules in their Free Trade Agreements (FTAs). This deficiency, which can be termed the “missing chapter” in their trade policy architecture, constrains these countries’ ability to fully participate in and benefit from the global digital economy. This article aims to examine the extent of this gap and explore how integrating WTO-consistent digital trade provisions into future FTAs can help developing countries overcome regulatory fragmentation, enhance market access, and safeguard policy space. The scope of this study includes an analysis of current FTA digital trade provisions involving developing countries, a review of the WTO’s evolving digital trade agenda, and the development of a practical framework for harmonizing these rules with international standards while addressing development priorities (Janow & Mavroidis, 2019).

The significance of this research lies in its potential to inform policymakers and trade negotiators in developing countries about strategic approaches to digital trade integration that balance openness with national development concerns. The central research questions are: Why do developing countries’ FTAs lack robust, WTO-aligned digital trade rules? What are the implications of this gap? How can future FTAs incorporate such rules effectively while respecting development imperatives?

Methodologically, this study adopts a doctrinal legal analysis combined with a comparative review of FTAs and WTO texts, supplemented by case studies of recent agreements incorporating digital trade chapters. The outcomes reveal that harmonization with WTO digital trade disciplines, combined with development-sensitive flexibilities, can strengthen developing countries’ digital trade participation and regulatory certainty.

The article is structured as follows: Section 1 contextualizes digital trade and its challenges for developing countries; Section 2 reviews the WTO’s emerging digital trade frameworks; Section 3 analyzes the current state of digital trade provisions in developing countries’ FTAs; Section 4 proposes a framework for integrating WTO-aligned digital trade rules; and Section 5 offers policy recommendations and concluding remarks.

### **1. Digital Trade and Developing Countries: Context and Challenges**

#### **1.1 Digital Trade: Definition and Importance**

Digital trade broadly refers to the exchange of goods, services, and data through electronic means across national borders. It encompasses various activities such as cross-border electronic commerce (e-commerce), provision of digital services, transmission of data, and digitally enabled commercial transactions. Examples include online purchases of physical goods, cloud computing and software-as-a-service, cross-border data flows, electronic payments, and the distribution of digital content like music, films, and publications (Elsig & Klotz, 2021).

This multidimensional nature of digital trade blurs traditional boundaries between goods and services, introducing new complexities and opportunities in international commerce. Unlike conventional trade, digital trade relies heavily on the seamless flow of information and data, secure digital infrastructure, and harmonized legal frameworks. For developing countries, digital trade represents a transformative opportunity to bypass certain structural barriers inherent in traditional trade, such as limited physical infrastructure and high entry costs. By leveraging digital technologies, these countries can access broader international



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markets, diversify exports, and stimulate entrepreneurship and innovation at a lower cost. Small and medium enterprises (SMEs), in particular, stand to benefit from digital platforms that enable direct market access (Cheng & Brandi, 2019). Moreover, the COVID-19 pandemic has accelerated the adoption of digital technologies globally, reinforcing digital trade's importance in ensuring economic continuity, resilience, and growth. With restrictions on physical movement and disruptions in supply chains, digital trade became a vital channel for businesses and consumers alike. Despite its potential, realizing the full benefits of digital trade for developing countries requires coherent regulatory frameworks that facilitate cross-border digital transactions while addressing concerns such as data privacy, cybersecurity, and digital inclusion (정유원, 2023).

### 1.2 Challenges Faced by Developing Countries in Digital Trade

While digital trade offers promising opportunities, developing countries face multiple significant challenges that hinder their effective participation in the global digital economy.

- **Regulatory Fragmentation:** One of the foremost obstacles is the absence of uniform digital trade regulations. The regulatory landscape for digital trade remains fragmented both domestically and internationally, resulting in legal uncertainty for businesses and investors. Divergent rules on data flows, electronic transactions, and digital consumer protection create barriers to seamless cross-border trade and raise compliance costs (Mitchell & Mishra, 2020).
- **Infrastructure and Capacity Gaps:** Many developing countries struggle with underdeveloped information and communication technology (ICT) infrastructure, limited access to affordable high-speed internet, and low levels of digital literacy. These infrastructural and capacity deficits inhibit the ability of firms, especially small and medium-sized enterprises (SMEs), to engage effectively in digital trade. Additionally, financial inclusion challenges restrict access to digital payment systems crucial for e-commerce growth (Froese, 2019).
- **Data Sovereignty and Privacy Concerns:** Developing countries face the complex task of balancing the facilitation of cross-border data flows—essential for digital trade—with legitimate concerns regarding data privacy, cybersecurity, and national security. Crafting regulations that protect citizens' data and uphold sovereignty without imposing overly restrictive data localization measures remains a delicate policy challenge (Obiora, 2023).
- **Limited Negotiating Power:** In multilateral and bilateral trade negotiations, developing countries often lack the bargaining leverage and technical expertise required to secure favorable digital trade commitments. This imbalance results in FTAs with weak or absent digital trade provisions, leaving these countries at a disadvantage in setting the rules that govern the digital economy (Gao, 2018).

These challenges underscore the urgent need for digital trade rules that not only align with WTO principles to ensure coherence and predictability but also incorporate flexibility and support mechanisms tailored to the unique



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developmental circumstances of these countries. Such an approach can foster more inclusive and sustainable digital trade integration.

### **2. The WTO and Digital Trade: Emerging Frameworks and Standards**

#### **2.1 WTO's Current Digital Trade Agenda**

The World Trade Organization (WTO) has historically focused on regulating trade in goods and services, but in recent years, it has increasingly engaged with the complex and rapidly evolving domain of digital trade. This shift reflects the recognition that digital commerce is integral to modern international trade and economic growth. Several key developments illustrate the WTO's emerging digital trade agenda:

- **Joint Statement Initiative on E-commerce (JSI):** Launched in 2017, the JSI is a plurilateral negotiation involving over 80 WTO members. Its goal is to develop a set of multilateral rules governing e-commerce that address issues such as cross-border data flows, electronic authentication, consumer protection, and cybersecurity. The initiative seeks to establish harmonized standards that promote trust and predictability in digital trade, although negotiations are still ongoing (Khan, 2023).
- **Trade Facilitation Agreement (TFA):** While not exclusively focused on digital trade, the TFA plays a critical role by simplifying and streamlining customs procedures. By promoting paperless trading, enhancing transparency, and reducing administrative delays, the TFA indirectly facilitates cross-border digital commerce and supports the movement of goods ordered electronically (Meltzer, 2019).
- **Moratorium on Customs Duties on Electronic Transmissions:** Since 1998, WTO members have repeatedly agreed to a moratorium on imposing customs duties on electronic transmissions, such as software, music, and digital services delivered online. This moratorium underpins digital trade liberalization by preventing new tariffs that could hinder the flow of digital products (Micallef, 2019).
- **Information Technology Agreement (ITA):** The ITA eliminates tariffs on a wide range of information and communication technology products, including computers, semiconductors, and telecommunications equipment. By reducing costs and enabling access to essential digital infrastructure, the ITA supports the growth of digital trade globally (Malkawi, 2019).

Although formal negotiations on comprehensive digital trade rules at the WTO remain in progress, these initiatives collectively provide a foundational framework. They signal growing international consensus on the importance of digital trade governance and set the stage for integrating digital trade disciplines into broader trade agreements.

#### **2.2 WTO Digital Trade Disciplines: Core Elements**

As digital trade discussions advance within the WTO framework, several core disciplines have emerged as central to establishing a coherent and balanced regulatory environment. These disciplines aim to promote seamless digital commerce while safeguarding legitimate national interests. The key elements under active consideration include:



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- **Cross-border Data Flows:** Ensuring the free and secure flow of data across borders is fundamental to digital trade. WTO discussions emphasize minimizing restrictions on data transfers to facilitate international transactions, innovation, and global value chains, while simultaneously respecting data privacy and protection obligations (Khan et al., 2025).
- **Prohibition of Data Localization Requirements:** Data localization mandates—rules requiring data to be stored or processed within a country—are seen as significant barriers to digital trade. WTO digital trade disciplines advocate for the reduction or elimination of such requirements to lower compliance costs, encourage investment, and enhance efficiency in cross-border data use (Khan & Ullah, 2024).
- **Non-discrimination and National Treatment:** Consistent with core WTO principles, these disciplines seek to ensure that digital products, services, and service suppliers from foreign countries receive treatment no less favorable than that accorded to domestic counterparts. This promotes fair competition and market access in the digital economy (Khan, 2024).
- **Consumer Protection, Cybersecurity, and Privacy:** Digital trade governance requires a delicate balance between openness and the protection of consumers and critical infrastructure. WTO discussions highlight the importance of establishing safeguards against fraud, cyber threats, and misuse of personal data, thus fostering trust and confidence in digital transactions (Khan, 2024).
- **Electronic Authentication and Signatures:** The recognition and facilitation of electronic authentication methods and digital signatures are essential for validating digital transactions. These measures enhance security, reduce transaction costs, and support legal certainty in cross-border e-commerce (Khan & Jiliani, 2023).

Collectively, these core disciplines form a baseline for digital trade rules consistent with WTO principles. They offer a framework that developing countries can adopt and adapt within their FTAs to promote digital trade while addressing domestic policy concerns.

### **3. Digital Trade in Developing Countries' FTAs: The Missing Chapter**

#### **3.1 Review of Digital Trade Provisions in FTAs of Developing Countries**

A comprehensive survey of Free Trade Agreements (FTAs) entered into by developing countries reveals several notable patterns and shortcomings in the treatment of digital trade provisions.

- **Limited or Fragmented Provisions:** A significant number of FTAs involving developing countries either entirely omit dedicated digital trade chapters or contain only narrowly focused e-commerce provisions. Where digital trade is addressed, the scope tends to be limited, covering only basic aspects such as electronic signatures or consumer protection, without addressing broader digital trade issues comprehensively (Khan & Usman, 2023).
- **Lack of WTO Alignment:** Many of these provisions diverge from the emerging standards under the WTO's digital trade agenda. This misalignment results in regulatory inconsistencies that can confuse businesses, reduce legal certainty, and inhibit seamless digital commerce



across borders. The absence of harmonization also limits the potential benefits of multilateral cooperation (Khan et al., 2023).

- **Focus on Traditional Trade Areas:** Despite the growing importance of digital commerce, most FTAs remain primarily focused on traditional areas such as trade in goods, services, and investment. Digital trade remains an underrepresented component, reflecting either a lack of negotiating capacity or prioritization challenges among developing country negotiators (Khan & Ximei, 2022).
- **Minimal Flexibility for Development:** Few FTAs explicitly incorporate provisions or flexibilities that recognize the unique developmental challenges faced by developing countries, such as infrastructure deficits, capacity constraints, or data sovereignty concerns. The absence of tailored flexibilities limits these countries' ability to craft balanced and context-sensitive digital trade regulations (Khan et al., 2022).

Examples from South-South FTAs and regional agreements—such as those within the African Continental Free Trade Area (AfCFTA), ASEAN, and Mercosur—illustrate these gaps. While some progress has been made in including digital trade-related language, these agreements often fall short of providing a comprehensive and WTO-consistent digital trade framework that addresses development imperatives.

### **3.2 Implications of the Missing Digital Trade Chapter**

The omission of WTO-aligned digital trade provisions in Free Trade Agreements (FTAs) involving developing countries carries significant repercussions that affect both their domestic economies and their international trade relations.

- **Legal and Regulatory Uncertainty:** The absence of clear, harmonized digital trade rules creates ambiguity for businesses operating across borders. This regulatory uncertainty undermines investor and consumer confidence, increases transaction costs, and discourages digital entrepreneurship. Without standardized provisions, digital service providers and e-commerce operators face complex compliance challenges that hinder cross-border digital transactions (Khan, 2022).
- **Reduced Market Access:** Developing countries without commitments on digital trade in their FTAs find it difficult to gain meaningful access to foreign digital markets. Key issues such as data flow restrictions, discriminatory treatment of digital products, and barriers to online services remain unaddressed, limiting export opportunities and reducing competitive parity in global digital commerce (Khan & Wu, 2021).
- **Limited Domestic Policy Space:** In the absence of clear rules on data governance, privacy, and cybersecurity, developing countries risk either overregulating—potentially stifling innovation and digital growth—or underregulating, which may expose them to data breaches, cyber threats, and misuse of personal information. The missing chapter leaves a regulatory void that complicates efforts to balance openness with national security and privacy concerns (Abdelrehim Hammad et al., 2021).
- **Missed Opportunities for Capacity Building:** FTAs that lack digital trade provisions often fail to incorporate mechanisms for technical assistance, knowledge sharing, or support for developing digital infrastructure. This omission deprives developing countries of critical opportunities to build



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institutional capacity, upgrade digital infrastructure, and enhance digital literacy, all of which are essential for sustainable digital trade participation (Khan & Wu, 2021).

Collectively, these implications highlight the urgent need for developing countries to integrate WTO-consistent digital trade rules into future FTAs. Doing so would provide greater legal clarity, enhance market access, preserve necessary policy flexibility, and facilitate capacity-building initiatives critical to digital economic development.

### **4. Towards Integrating WTO-Aligned Digital Trade Rules in Future FTAs**

#### **4.1 Principles for Integration**

The successful integration of digital trade rules into Free Trade Agreements (FTAs) of developing countries must be grounded in several key principles that balance global coherence with domestic development needs:

- **WTO Consistency:** Digital trade provisions should align closely with ongoing WTO negotiations and established multilateral frameworks. This alignment ensures legal coherence, reduces risks of conflicting obligations, and facilitates broader international acceptance and support. Adopting WTO-consistent rules also enhances predictability and trust for trade partners and investors (Khan et al., 2021).
- **Development Sensitivity:** Recognizing the unique challenges faced by developing countries, FTAs should incorporate flexibilities that allow for phased implementation, technical assistance, and safeguards for regulatory autonomy. Provisions should accommodate infrastructure constraints, capacity gaps, and the need for tailored digital governance frameworks that support national development objectives (Khan, et al., 2021).
- **Inclusive Stakeholder Engagement:** The formulation of digital trade rules must actively involve a broad range of domestic stakeholders, including government agencies, private sector actors, civil society, and technical experts. Such inclusive consultation ensures that agreements reflect national priorities, address real-world challenges, and garner broader political and social support (Khan et al., 2020).
- **Comprehensive Scope:** To be effective, digital trade chapters should encompass a wide range of critical areas, including the facilitation of cross-border data flows, protection of data privacy, cybersecurity measures, recognition of electronic authentication and signatures, and safeguards for digital consumer protection. This comprehensive approach ensures balanced governance that supports innovation, trust, and fair competition (Kahn & Wu, 2020).

By adhering to these principles, developing countries can craft digital trade provisions within FTAs that foster integration into the global digital economy while safeguarding developmental goals and policy space.

#### **4.2 Proposed Framework for Future FTAs**

To bridge the existing gaps and empower developing countries in the digital economy, a model digital trade chapter for future Free Trade Agreements (FTAs) should encompass the following key components:



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- **Cross-border Data Flows and Data Localization:** The chapter should promote the free flow of data across borders to facilitate seamless digital trade. At the same time, it must allow for reasonable exceptions that protect legitimate public policy objectives such as data privacy, national security, and cybersecurity. These exceptions should be clearly defined and narrowly tailored to avoid unnecessary restrictions that could hinder digital commerce.
- **Consumer Protection and Cybersecurity:** FTAs must include robust commitments to safeguard digital consumers by addressing issues such as fraud prevention, transparent information disclosure, dispute resolution mechanisms, and protection of personal data. Additionally, they should promote measures to secure digital infrastructures and networks, reducing vulnerabilities to cyber threats and enhancing trust in digital transactions.
- **Electronic Commerce Facilitation:** The framework should recognize and facilitate the use of electronic contracts, digital signatures, and paperless trading processes. These provisions help lower transaction costs, increase efficiency, and provide legal certainty for cross-border e-commerce activities, benefiting businesses and consumers alike.
- **Cooperation and Capacity Building:** Recognizing the capacity constraints faced by many developing countries, the chapter should establish mechanisms for technical assistance, knowledge sharing, and collaborative initiatives to build digital infrastructure and enhance digital skills. These provisions can help bridge the digital divide and enable more inclusive participation in digital trade.
- **Safeguards and Exceptions:** To maintain necessary policy space, the framework must clearly articulate carve-outs and exceptions for national security, privacy protection, public order, and other critical concerns. Such safeguards ensure that countries retain the flexibility to respond to evolving digital risks and societal priorities without violating their trade commitments.

This proposed framework balances the need for open, rules-based digital trade with the practical realities and policy priorities of developing countries, providing a path for more effective and equitable integration into the global digital economy (Grinspun et al., 1994).

### **4.3 Case Studies of Emerging Digital Trade Chapters**

Recent Free Trade Agreements (FTAs) involving developing countries provide valuable insights into the evolving integration of digital trade disciplines aligned with WTO principles. These agreements offer practical examples and lessons that can guide future FTA negotiations for developing countries seeking to strengthen their digital trade frameworks.

- **Comprehensive and Progressive Trans-Pacific Partnership (CPTPP):** Although predominantly involving developed economies, the CPTPP includes several developing countries such as Vietnam and Malaysia. Its digital trade chapter is notable for its broad scope, covering cross-border data flows, prohibitions on data localization requirements, electronic authentication, consumer protection, and cybersecurity measures. The CPTPP sets a high standard for WTO-consistent digital trade rules while



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allowing some flexibilities, demonstrating how emerging economies can participate in shaping advanced digital trade norms.

- **Regional Comprehensive Economic Partnership (RCEP):** RCEP, which includes developing countries like Indonesia, the Philippines, and Thailand, represents a landmark regional trade agreement with a specific chapter dedicated to e-commerce. It emphasizes paperless trading, electronic authentication, consumer protection, and cooperation on cybercrime and personal data protection. RCEP's approach reflects a pragmatic balance between facilitating digital trade and accommodating diverse levels of digital readiness among its members.
- **China's Free Trade Agreements:** China's FTAs, particularly those with countries in Asia, Africa, and Latin America, increasingly incorporate digital trade provisions that align with WTO disciplines. These agreements promote cross-border data flows with certain exceptions, electronic commerce facilitation, and capacity-building initiatives, reflecting China's dual focus on promoting its digital economy and supporting partner countries' development objectives.

These case studies reveal a growing trend of integrating WTO-consistent digital trade rules within FTAs involving developing countries. They highlight the importance of combining comprehensive digital trade commitments with development-sensitive flexibilities and capacity-building measures. Drawing from these examples, future FTAs can be designed to enhance digital trade integration while addressing the specific needs and challenges of developing countries (Bhagwati & Hudec, 1996).

### **5. Policy Recommendations**

In light of the analysis presented, the following recommendations aim to guide developing countries in integrating effective and WTO-aligned digital trade rules into their future Free Trade Agreements (FTAs):

- **Prioritize WTO-Aligned Digital Trade Rules:** Negotiators should emphasize the inclusion of digital trade provisions consistent with evolving WTO frameworks. Aligning FTA commitments with multilateral standards enhances legal coherence, reduces trade frictions, and positions developing countries to benefit from broader global digital trade integration.
- **Seek Balanced Provisions Protecting Policy Space:** Developing countries must negotiate provisions that strike a balance between promoting digital market access and preserving regulatory autonomy. Flexibilities to safeguard national security, data privacy, and public policy objectives are essential to accommodate developmental and sovereignty concerns.
- **Embed Capacity-Building Mechanisms:** FTAs should incorporate explicit provisions for technical assistance, knowledge transfer, and support for digital infrastructure development. These mechanisms are crucial for addressing capacity gaps and enabling developing countries to implement and benefit from digital trade commitments effectively.
- **Promote Regional Cooperation:** Strengthening regional alliances can enhance collective bargaining power in digital trade negotiations. Harmonizing digital trade regulations within regional blocs helps create



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larger, integrated markets, reducing compliance costs and fostering deeper economic integration.

- **Ensure Inclusive Domestic Consultations:** Comprehensive stakeholder engagement involving government, industry, civil society, and technical experts is vital. Inclusive consultations ensure that digital trade rules reflect national priorities, address practical challenges, and garner broad-based support, facilitating smoother implementation.

By adopting these recommendations, developing countries can advance their digital trade agendas in ways that are development-sensitive, coherent with global norms, and conducive to inclusive economic growth (Yao et al., 2019).

### 5.2 Conclusion

The integration of WTO-aligned digital trade rules into the Free Trade Agreements (FTAs) of developing countries represents a crucial yet often overlooked chapter in shaping the future of global commerce. This research underscores that without comprehensive, coherent, and development-sensitive digital trade provisions, developing countries risk missing out on the transformative opportunities of the digital economy. The absence of such rules creates legal uncertainty, limits market access, restricts domestic policy space, and undermines capacity-building efforts essential for digital growth.

By aligning digital trade disciplines with ongoing WTO initiatives and embedding flexibilities that recognize the unique challenges faced by developing countries, future FTAs can foster a more inclusive, resilient, and equitable global digital marketplace. Lessons drawn from emerging FTAs like the CPTPP, RCEP, and China's bilateral agreements demonstrate practical pathways for balancing multilateral coherence with national development goals.

Looking ahead, further research is needed to explore the dynamic interplay between digital sovereignty and trade liberalization, particularly how data governance frameworks can evolve without erecting protectionist barriers. Additionally, empirical studies on the implementation impacts of digital trade chapters in developing country contexts would provide valuable insights for fine-tuning policy design.

Ultimately, this research calls on policymakers, negotiators, and scholars to prioritize the “missing chapter” of digital trade in FTAs—ensuring developing countries are not only participants but also active architects of the global digital economy.

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