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POLICY BRIEF

A Vision for the WTO's Global Digital Trade Rules

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At the 13th Ministerial Conference in 2024, World Trade Organization (WTO) members demonstrated their commitment to advancing digital trade rules—those which govern both the trade of digital products and the digital processes used in international trade—by calling for the revitalization of the 1998 work program on electronic commerce.[1] That directive is the foundation of the work that follows: a comprehensive and robust approach to creating a set of global rules that will support all member nations in maximizing the opportunities of the digital economy. The envisioned approach extends and enhances existing efforts.

This brief outlines three activities that WTO members could undertake to facilitate digital trade:

- Design an agreement on data for trade that sets clear guidelines for data exchange across borders
- Establish a governance structure for digital trade that keeps rules updated
- Create a community of practice that consolidates existing digital trade efforts

Each of these activities must acknowledge the realities of the digital divide for trade facilitation, the features of which are detailed in the final section.

Before considering the next steps in facilitating digital trade, it is important to establish the complexities in defining digital trade and the characteristics that differentiate it from traditional trade.

Gaps in the Definition of Digital Trade

It is essential that any approach to the global rule regime address the gaps in the definitions of digital trade terminology before diving into new activities. There are several imperfect definitions of digital trade in use today.[2] One that has been referenced in WTO documents is that "all international trade that is digitally ordered and/or digitally delivered."[3] In practice, a broader definition is often employed: the intentional application of digital technologies at any stage of the trade process.

From a technology perspective, both definitions are incomplete. They are rooted in the concept of physical trade, which assumes features about trade transactions that do not always hold true for today's internet-based technologies. Four ways that digital transactions differ from other types of trade are described in detail below.

Time

Digital trade operates on a different timescale from physical trade. Some internet-based technologies can execute atomic transactions where the contract is simultaneously executed and completed. The definitions of digital trade in use assume a sequential process of ordering and then delivering, which often does not align with the instantaneous nature of digital transactions. This discrepancy poses challenges for creating rules, such as the timing of taxation.[4] A precedent for adjusting infrastructure to respond to increased settlement speeds can be found in the 2023 United States Securities and Exchange Commission (SEC) rule that shortened settlement cycles of most securities from two business days to one.[5] The one-day settlement also allows some trades to be settled instantly. This change offers insights into how institutions and rules can be adapted to digital timelines.

Geography

Digital trade does not adhere to traditional notions of territoriality. There are some internet-based technologies that enable profit-making enterprises to exist digitally without a physical location. The lack of territoriality presents many problems. Can a group that exists only online bring a case to the WTO? What if, for example, an online group represents the citizens of a country that no longer exists? How would customs apply to a non-territory? These questions call for a deeper consideration of the concept of sovereignty that underpins trade rules. Many regulators have taken an approach to the digital economy that focuses on the on- and off-boarding points between the digital and traditional economies. This offers a potential model for the WTO that could consider regulating transactions via intermediaries.

Essential characteristics

Internet-based technologies complicate the definition of an essential characteristic, which is an attribute that defines a product.[6] Unlike tangible goods, digital products can carry intrinsic information about their processing. This can eliminate the need for third-party verification. This capability underscores a broader transition the WTO membership is managing at the moment: adapting to a global trading system increasingly dominated by digital trade while still accommodating advances in the trade of tangible goods. Since traders tend to forego the sometimes complicated origin and valuation calculations needed to access preferential tariffs, the potential for digital products to increase preferential tariff uptake is clear. The challenge will be to create rules that take advantage of digital products' ability to validate compliance with authenticity and origin rules directly rather than requiring them to follow rules intended for tangible goods.

Possession

The concept of possession in digital trade presents unique challenges. Traditional trade rules link possession to the physical act of controlling a product. This assumption does not hold when a product is digital, which complicates contracts. Significant progress has been made in jurisdictions like the United Kingdom, where rules about what it means to possess an intangible product, such as a token or a digital asset, have been redefined. Further consideration based on this progress is recommended.

These four unique characteristics of digital trade underline the urgent need for new rules that address digital trade's specific complexities and clearly define its terms.

Creating a WTO Agreement on Data for Trade

The creation of a new WTO agreement on data—both that which is traded and that which facilitates trade—could be central to supporting digital trade.[7] Expanding and solidifying rules in this area would enable members to simplify regulatory fragmentation and address the elevated security that dataflows require. It would also help members assess emerging trends well into the future.

Any new data agreement should align with the extensive work that has already been done by WTO committees as well as regionally by member states.[8] The primary objective of this agreement should be to harmonize the tangle of local, bilateral, regional, and sectoral rules that have proliferated in the absence of multilateral guidance. Establishing master data frameworks would not only integrate existing rules but set a baseline for the rules that are needed for digital trade to flourish. This would reduce trade costs and complexity.

The proposed agreement should address the two distinct functions of trade in data. The first is the process of trading data itself. The second is the movement of trade-related support data accompanying goods and services. It should draw from existing WTO work and regional trade agreements (RTAs), which have included digitally relevant trade rules since 1958.[9] Following are suggestions for how to address these two elements.

Trade of data

When data are traded across borders, ownership becomes complicated, especially as frontier technologies are more widely adopted. Any agreement on data should provide guidelines for defining ownership of data as a product. This will require an updated classification and measurement system. Close cooperation with other WTO partners will be essential. Looking at how past digital assets integrated, or failed to integrate, into capital markets can help identify the particular issues that need to be addressed. Such issues might include calculating the added value and determining the origin.

Trade-related data

Trade-related data support trade but are not traded, which is similar to how goods with an intellectual property component function.[10] When addressing trade-related data, the goal should be to establish a regulatory floor that ensures fairness, transparency, and reduced friction in dataflows. Any framework for digital trade rules should consider the three states in which data exists.[11]

1. **Data in use:** Data in use are actively processed by applications and include automated requests to buy products or real-time GPS tracking to ensure cargo ships do not make unscheduled stops. Regulatory concerns related to data in use focus on protecting it against unauthorized parties and safeguarding sensitive information. Artificial Intelligence (AI) could introduce challenges if it is used to process data that facilitate trade. Questions of jurisdiction over data in use across borders would benefit from clear regulatory guidelines.
2. **Data in transit:** Data in transit actively move from one location to another. Examples of trade data in transit can be found in logistics coordination, such as when shipping details are sent to a fulfillment center in another country after an order is confirmed. Other examples include order placement and payment processing. Regulatory efforts should prioritize encryption and communication protocols.
3. **Data at rest:** Data at rest are inactive and stored and could include details of executed trades, historical data, or client information, for example. Given the potential sensitivity of some trade-related data such as contracts, customer data, and payment details, rules should focus on protecting this stored data from breaches.

To conclude, a WTO agreement on digital trade should strictly adhere to the specific trade implications of data. Many of these issues are already under review by various WTO negotiating groups. This work should inform future agreements' issue coverage.

Updating Governance for the Digital Economy

Because digital trade is fundamentally different from traditional trade, a reassessment of existing governance is warranted to determine what is obsolete and what is lacking. A new digital trade agenda should feature updated governance structures that reflect this reassessment.

A review of the General Agreement on Trade in Services (GATS), Trade Related Intellectual Property Rights (TRIPS), the Information Technology Agreement (ITA), and the Trade Facilitation Agreement (TFA) reveals several areas in need of improvement. These fall into three categories that should be the focus of legal reform:

1. **Rules requiring paper:** Several WTO agreements assume the use of paper. Even the term "publication" in these agreements does not explicitly include online publication. The TFA refers to "information or documents" without considering digital forms of this data. The

TFA also focuses on streamlining paper processes instead of increasing automation. This should be remedied.

2. **Insufficient digital trade coverage:** Agreements like the ITA, which lists specific products, underrepresent digital products and services. TRIPS is another agreement that needs to be updated to cover the range of digital products being traded across borders, for example, non-fungible tokens (NFTs). Rules should also reflect that data need to be protected during processing.
3. **Non-acknowledgment of digital trade:** Some agreements do not acknowledge digital trade at all. For instance, GATS covers certain data issues but fails to address newer developments like cloud computing and the free flow of data across borders. Another source of inadequate coverage relates to non-tariff barriers (NTBs), which strongly impact digital trade. Any rules regarding NTBs must include a consideration of digital trade.

In addition to considering legal gaps, a new governance structure could extend the WTO's influence over RTAs. The WTO already has an RTA governance mechanism through the notifications and review processes in GATT Article XXIV and GATS Article V. This RTA governance mechanism could be extended to establish a model law for RTAs or Digital Economy Partnership Agreements (DEPAs). Such a model law would serve as a standard to ensure consistent and equitable treatment of digital trade issues.

Every member country is a part of at least one RTA, and RTA agreements have an important impact on the work of the WTO and international trade flows. However, no global governance structure currently guides countries in RTA negotiations. Members' varying capacities for these negotiations can create unbalanced results. An RTA model law for digital economy agreements could draw on existing agreements like the DEPA as well as models emerging from current negotiations. The WTO is uniquely positioned to develop a model law that utilizes its notified agreements.

Organizing a Digital Trade Community of Practice

The WTO should establish a thematic group on digital trade. While this may not be central to the immediate progress needed, such a group would mobilize resources and knowledge within the institution, facilitating the adoption of a digital trade vision. The primary objective of this thematic group would be to create a community that advances a multifaceted digital agenda and maintains coherence over time. This approach aligns with how other international institutions tackle cross-cutting issues like climate change and community-driven development.

By establishing a thematic group, the WTO would highlight its commitment to transparent, inclusive trade and to economic development.[12] Additionally, a thematic group could serve as a unifying hub for the various digital trade clauses dispersed among the existing WTO agreements. It could keep track of the agreements that are directly relevant to digital trade such as the ITA and the Joint

Services Initiative (JSI) ecommerce work. A thematic group could pool intellectual resources in the attempt to create the necessary and neutral digital governance framework.

The thematic group could consider the Bank for International Settlements (BIS) Innovation Hub as a model and include a center for relevant research and experimentation around digital economy issues.[13] It could also function as a center for digital trade advocates, which could unlock additional private sector interest and funding.

In short, establishing a digital trade theme within the WTO would advance a coherent digital trade agenda and create the environment of certainty needed to facilitate research, to experiment, and to attract private sector participation.

Digital Divide Considerations

With the correct set of tools, digital technologies can be used by anyone, anywhere, at any time. Digital trade thus has enormous potential to allow for technological leapfrogging, particularly for states where geography is a binding constraint to development.[14] At the same time, the assistance needed to promote digital infrastructure requires a slightly different approach to trade facilitation and security.[15]

It is important to note that developing economies have exhibited a different leadership dynamic in the digital space than in goods trade. Developing countries are operating at the frontier in several critical digital spaces. Central Bank Digital Currencies (CBDCs) are a prime example. Countries and regions with live circulating CBDCs are all developing economies, such as the Bahamas, China, the Eastern Caribbean Customs Union, Jamaica, and Nigeria. Notably, no advanced economy has yet achieved this. Additionally, countries such as El Salvador and (briefly) the Central African Republic have allowed bitcoin as legal tender.

Leadership in regional digital trade rulemaking is another area where developing economies have surged ahead. For example, the African Continental Free Trade Agreement (AfCFTA) has a protocol on digital trade. Such rules function as a roadmap for future digitization. The Association of Southeast Asian Nations has the Digital Masterplan 2025, which functions in the same way.

Given that many emerging economies are already engaged in digital trade, trade facilitation assistance could focus on two key areas: improving financial infrastructure and protecting critical digital infrastructure once it has been built.

Digital trade infrastructure is typically developed through partnerships between the private and public sectors. However, without sufficiently deep capital markets, few developing economies have a vibrant venture-capital environment. Assistance aimed at promoting a domestic financial

environment that encourages innovation and supports entrepreneurs will directly enhance the creation and quality of digital infrastructure.

Equally important is the protection of critical digital infrastructure once it is in place. While support for capacity and infrastructure development has already begun through traditional donor channels, more targeted funding is needed. This funding could be directed toward cross-border simulations of cyberattacks to identify readiness gaps, participation in digital trade sandbox environments to test domestic response mechanisms, and hackathons to assess and improve trade platform resilience.

Conclusion

Trade is in a period of flux. It is becoming more digital but also more volatile. To date, the need for structure has been met with regional and national rules. This presents the WTO membership with an unprecedented opportunity to consolidate the considerable work that has already been done by the membership into a multilateral rules structure.

The one caveat is that digital trade, conducted through internet-based technologies, significantly differs from traditional forms of trade. As a result, conventional approaches to regulating trade are often inadequate for addressing digital trade. If the WTO is to remain the leading institution on this topic, it must explore new governance structures that are suited to the instant and nonterritorial features of the digital space. By embracing the 1998 work program as a guiding principle, WTO members can create the environment for robust global digital regulation.

About the Author

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Notes

1. The ministerial decision specifically calls on members to "hold further discussions and examine additional empirical evidence on the scope, definition, and the impact that a moratorium on customs duties on electronic transmissions might have on development, and how to level the playing field for developing and least-developed country Members to advance their digital industrialization" (World Trade Organization, Ministerial Decision, "Work Programme on Electronic Commerce" [WT/MIN(24)/38 WT/L/1193, March 4, 2024]).
2. The diversity of definitions stems from the wide variety of activities included in digital trade. Products such as podcasts and streamed movies, as well as processes like ordering a bicycle online are included.
3. The International Monetary Fund, the Organisation for Economic Co-operation and Development, the United Nations, and the World Trade Organization, *Handbook on Measuring Digital Trade*, Second Edition (WTO, 2023).

4. This issue has been dealt with before by the WTO in the negotiations of services. The definitions of the different modes of trade services were rooted in the time aspect, meaning that it was assumed that there was nonstorability of services, so a service had to be consumed as it was produced.

5. While Canada, Mexico, and the United States were the first to shorten settlement cycles, countries worldwide are adopting the practice. For more information on the US experience, see The Depository Trust and Clearing Corporation, *Accelerated Settlement (T+1): DTC, NSCC and ITP Functional Changes*, (DTCC, 2024).

6. This terminology is taken from the Agreement on Technical Barriers to Trade (TBT) Annex 1.1 where "essential characteristics" is used to describe attributes that define a product. World Trade Organization, *Agreement on Technical Barriers to Trade* (WTO, 1995).

7. Such an agreement would be just as appropriately housed within the GATS.

8. Within the WTO, this includes common disciplines such as the Joint Services Initiative (JSI), e-commerce capacity-building framework, Technical Barriers to Trade (TBT), the Information Technology Agreement (ITA), and the work program on electronic commerce.

9. Jose-Antonio Monteiro, "Hold the Line: The Evolution of Telecommunications Provisions in Regional Trade Agreements" (WTO Staff Working Paper No. 2021-7, World Trade Organization, February 24, 2021).

10. Antony Taubman, "The Shifting Contours of Trade in Knowledge: The New 'Trade-Related Aspects' of Intellectual Property" (WTO Staff Working Paper No. ERSD-2020-14, WTO, Geneva, Switzerland, August 9, 2020), https://www.wto.org/english/res_e/reser_e/ersd202014_e.pdf.

11. This is in line with the EU's General Data Protection Regulation, which also adopts this framework.

12. Nearly every regulatory institution has a rule about digitalization. The history of intellectual property regulation at the global level reminds us that there are many issues to be regulated and there is room and need for everyone to be involved. For more, see Wolf Meier-Ewert and Jorge Gutierrez, "Intellectual Property and Digital Trade—Mapping International Regulatory Responses to Emerging Issues" (WTO Staff Working Paper No. ERSD-2021-4, WTO, February 3, 2021).

13. For more information, see "About the BIS Innovation Hub," BIS, last updated September 16, 2024, https://www.bis.org/about/bisih/about.htm.

14. Technological leapfrogging is when an economy does not adopt the intermediate stages of an available technology but skips directly to utilizing the most recent innovation. For a survey of the benefits of digital connectivity, see Chiara Bellucci, Stela Rubinova, and Roberta Piermartini, "Better Together: How Digital Connectivity and Regulation Reduce Trade Costs" (WTO Staff Working Paper No. ERSD-2023-7, WTO, November 14, 2023).

15. International Chamber of Commerce, "Protecting the Cybersecurity of Critical Infrastructures and Their Supply Chains" (ICC Working Paper, ICC, July 2024).