The Artificial Intelligence and International Trade Law: Regulatory Gaps, Policy Challenges, and the Need for Legal Integration

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***Abstract*—Artificial intelligence is upending international trade as we know it, redefining global value structures, digital ecosystems, and how services are delivered across borders. While AI enhances productivity, efficiency, and market access, it also exposes serious regulatory blunders in existing frameworks of international trade law. The relationship between artificial intelligence and international trade law is under study in this article, with a particular focus on the deficiencies of the World Trade Organization's classification of goods and services and the absence of trade rules addressing AI. It emphasizes the manner in which issues associated with cross-border data flows, data localization policies, and differing domestic regulations make for legal uncertainty and fragmentation in global trade governance.**

The research also considers the role of national regulation on artificial intelligence, data protection, and digital commerce in India within the framework of the Digital Personal Data Protection Act of 2023 and the focus of individual market- and sector-specific data localization solutions. Although they are undertaken with the intention to defend national interests, privacy, and economic sovereignty, the implications for trade obligations with other countries are alarming.

It also tackles the implications of AI-linked trade for developing countries, with the latter particularly revealing the dangers of digital dependence and an unfair distribution of economic fruits. The report argues that existing trading models need to evolve to address the unique threats created by AI.

It ends with the need for a unified, integrated, and inclusive international legal integration to create an environment on the world stage in which AI-triggered innovation, fairness, and sustained economic growth thrive without creating an inherent impediment to trade through AI.

***Index Terms*—Artificial Intelligence, global trade governance, AI-triggered innovation, WTO, AI-linked trade**

I. INTRODUCTION

Through assisting the growth of digital markets and platforms, the technological advancements in Information and Communication Technology (ICT) have greatly affected the way in which commodities, services, and information are purchased, sold, and traded in the past 30 years. The trend of digital cross-border trade is getting popular and gaining huge importance, which appears to likely continue in the future.

Artificial Intelligence has caused an evolutionary influence on international trade. By now, particular software in the field of data analytics and translation services is bringing down the obstructions to trade. Though Artificial Intelligence was invented around the 1950s, it gained prominence and recognition over the last few years. Similar to electricity and the steam engine, AI is also a mechanism for general purpose, and the economy is anticipated to be fundamentally changed. Along with the enhancement in innovation and productivity, it also has the capacity to improve welfare and well-being, but similarly has to face challenges raised by significant policies, as well as matters that can aggravate economic disparities and subvert human rights and democracy.

II. EFFECT OF AI ON INTERNATIONAL TRADE AND ECONOMIC DEVELOPMENT

In numerous ways, the growth of AI shall influence International Trade, such as the macroeconomic effect of AI and other similar effects of trade. For better understanding, consider an example where AI increases productivity development, which will lead to an enhancement in the economy and provide new options for International Trade or business. Presently, the rates of growth of global productivity are law and there are several causes put forward.[1]

In order to understand the strong link between productivity growth and AI, it is relevant to understand the reasons for low productivity. One of the reasons is that it consumes lot of time for the system of economy to adopt and utilize efficiently the new technologies, mainly complicated ones with wide economic impacts like AI.[2] Including the duration required to build a large capital stock to achieve a mass effect and to approve investments needed to realize the full benefit of AI investments, accompanied by the acquisition of business practices and skilled workers.[3]

III. AI AND INTERNATIONAL TRADE LAW: CHALLENGES UNDER WTO FRAMEWORKS

The very important legal challenges posed by artificial intelligence stem from its incompatibility with the present framework of the World Trade Organization (WTO). WTO agreements classify trade mainly into two categories: trade in goods, which is regulated by the General Agreement on Tariffs and Trade (GATT), and trade in services, which is governed under the General Agreement on Trade in Services (GATS). But, AI-based inventions often mix both services and goods, making this distinction ambiguous.

For instance, when AI software is developed into machines, it causes difficulty in deciding whether the products must be considered as a tangible good or as an online service. This confusion raises legal ambiguity for businesses and the government. It also creates difficulty in implementing significant trade laws like non-discrimination, market access, and tariff classification.[4]

Another significant problem is linked to cross-border data flows, which are required for creating and using AI systems. While WTO rules normally assist free trade, several countries have implemented data localization rules to safeguard cybersecurity, privacy, and national interests. These laws can limit the transfer of data beyond borders and may act as indirect restrictions to trade. Similarly, WTO law does not properly describe how to stabilize data safeguard problems with trade obligations.[5]

The current discussions under the WTO's Work Programme on Electronic Commerce present how tough it has been for countries to get convinced to reach an agreement on digital trade and data-related problems. As there are no particular WTO rules relating to AI, countries mainly depend on their own domestic legislation and regional trade agreements. This has caused fragmentation and a biased legal system, undermining certainty and uniformity in international trade law.[6]

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[1] Remes Jaana. et al, "Solving the productivity puzzle: the role of demand and the promise of digitization", McKinsey Global Institute, February 2018; Byrne, David M, J.G. Fernald and M.B. Reindorf. 2016. "Does the United States Have a Productivity Slowdown or a Measurement Problem?" Brookings Papers on Economic Activity, (Spring) 109

[2] Erik Brynjolfsson et al., "Artificial Intelligence and the Modern Productivity Paradox: A Clash of Expectations and Statistics", NBER Working Paper no. 24001, October 2017 (revised December 2017), p. 10.

[3] Homi Kharas Jennifer L. Cohen et al., THE IMPACT OF ARTIFICIAL INTELLIGENCE ON INTERNATIONAL TRADE, BROOKINGS (2022), https://www.brookings.edu/articles/the-impact-of-artificial-intelligence-on-international-trade/ (last visited Feb 21, 2024).

[4] Ubaid Ur Rehman, Reinterpreting WTO Rules in the Algorithmic Age: AI, Digital Platforms, and the Future of Trade Law, 3 (2025).

5 Andrew D Mitchell & Neha Mishra, Regulating Cross-Border Data Flows in a Data-Driven World: How WTO Law Can Contribute, 22 J. Int. Econ. Law 389 (2019), https://academic.oup.com/jiel/article/22/3/389/5521020.

6Joshua P. Meltzer, The impact of artificial intelligence on international trade, Brookings (Dec. 13, 2018), https://www.brookings.edu/articles/the-impact-of-artificial-intelligence-on-international-trade/?

IV. INDIA'S REGULATORY APPROACH TO AI DATA, AND DIGITAL TRADE

India in the global digital economy plays a significant but challenging role. India produces a huge quantity of data and actively takes part in digital trade. As a developing country, on the other hand, it wants to ensure control over its laws and policies, particularly to safeguard national interests and the rights of its people. As a consequence, India's negotiations on artificial intelligence and data governance concentrate on problems like digital sovereignty, economic development, and data safeguard.

The Digital Personal Data Protection Act, 2023, is a significant step in India's data protection framework. The Act permits personal data to be processed legally; it also provides the government with the power to govern the movement of data outside India. These laws directly impact international trade, specifically AI systems that rely on a huge amount of data transferred beyond national borders.[7]

India has implemented sector-specific laws as well, like data localization needs granted by the Reserve Bank of India for payment and financial information. These methods show that India adopts a conservative approach to transferring sensitive data abroad. From the viewpoint of international trade legislation, such prohibitions pose questions regarding whether they are compatible with global trade duties or whether they may be justified based on security, public interest, or privacy.[8]

At the global level, India's perspective in the World Trade Organization e-commerce discussions shows its liking for administrative discretion instead of strong legal adherence to free data flows. Wherein this viewpoint assists India in protecting its policy independence, it furthermore demonstrates the requirement for clear legal rules that stabilize free trade with legitimate objectives in the era of artificial intelligence.[9]

V. SPECIFIC AI APPLICATIONS TO INTERNATIONAL TRADE

i. AI and Global Value Chains:

The effect on the development and management of global value chains is something that is observed even now, with changes in Consumer demands, and to more wisely control uncertainties together with the chain of supplies, AI can be used to improve forecasting of future trends. Altogether, the regulation of Global Value Chains can be modified by letting ventures to better regulate intricate and dispersed production units. For instance, trade like warehouse management, demand prediction, and the accuracy of just-in-time manufacturing and delivery can be boosted through AI. Productivity and efficiency can be improved by implementing robotics in functions such as packing and inventory inspection. AI can be used in a business for refining upkeep of assets and physical inspection accompanying supply chains.[10]

ii. Trade Using Digital Platforms:

eBay is one of the areas of digital platforms adopting AI. Also, digital platforms provide an exceptional opportunity, particularly for small businesses, to go global. For example, in the US, about 97% of small businesses on eBay export, compared to precisely 4% of offline rivals.[11]

Digital platforms are considered drivers of International Trade due to the assistance of AI-developed translation services. For instance, eBay-based marketing overseas to Spanish-speaking Latin America rose by 17.5%, following eBay's machine translation service.[12]

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[7] *India's Cross-Border Data Transfer Regulation*, ITIF (June 9, 2025), https://itif.org/publications/2025/06/09/india-cross-border-data-transfer-regulation/.

[8] *Interplay Between India's DPDP Act and (e.g., RBI, IRDAI, SEBI, TRAI)*, (Jan. 5, 2026), https://www.dpo-india.com/Blogs/interplay-india%E2%80%99s-dpdp-act/.

[9] Andrew D. Mitchell & Elizabeth Chin, *The WTO Joint Statement Initiative on E-Commerce: Navigating Digital Trade Rules in a Fragmented World*, 57 J. WORLD TRADE 971 (2023), https://kluwerlawonline.com/journalarticle/Journal+of+World+Trade/57.6/TRAD2023041.

[10] ibid

[11] eBay 2015. "Empowering People and Creating Opportunity in the Digital Single Market" An eBay report on Europe's potential, October 2015.

[12] Brynjolfsson, E, X Hui and Meng Liu (2018), "Does Machine Translation Affect International Trade? Evidence from a Large Digital Platform".

iii. Trade Negotiations:

The results of International Trade negotiations are also improved by using AI that has the capacity to do so. Comprising the unanticipated results of Trade Negotiations, how these results are causing effects in a multiplayer situation where trade sanctions are altered at contrasting figures, besides ascertaining the business response from nations not party to the negotiation. An Intelligent Tech and Trade initiative has already been set up in Brazil that comprises making use of AI to modify the Trade Negotiations.[13]

VI. DISCLOSURE OF TRADE POLICY FOR AI

It is observed that in 2023, AI has grabbed political interest, followed by prominent growth in the field.[14] both the initial stage of the authoritative domain in which it unfolds[15] as well as the major obligation that AI would have to take part in upcoming negotiations over scripless trading and cross-border stream processing.[16] Extracting large amounts of data for training and to bring about practical understanding, along with maintaining the materiality of regulations for being in charge of cross-border data transfers, is required by AI.[17] Other Data-oriented cross-border activities that depend on digital trade regulations also include on-demand computing facilities and data collection from the Internet of Everything (IOE). Apart from the requirement of data and digital resources, the growth of AI relies on the use of equipment, for example, the use of super-modern semiconductors, which are also the base for current trade rules measures.[18]

VII. POLICY GAPS IN INTERNATIONAL TRADE REGULATION

Goods-services variance is one of the frequent problems caused by emerging AI, such as in the case of digital goods, which is a case considered to be impossible. The WTO's work program on E-commerce, which aims to resolve the doubt extensively, is even after 25 years still being negotiated, even though WTO case law has illuminated how to decide whether a product is a good or a service. It will be greatly significant where AI is embodied into more goods, thus formulating principles for Universal application to decide if General Agreement on Tariffs and Trade or General Agreement on Trade in Services (GATS) fidelity commands. The free trade agreements form a shattered landscape that appears to lift trade expenses.[19]

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[13] http://itti-global.org.

[14] Staff in the Office of Technology and The Division of Privacy and Identity Protection et al., GENERATIVE AI RAISES COMPETITION CONCERNS FEDERAL TRADE COMMISSION (2024), https://www.ftc.gov/policy/advocacy-research/tech-at-ftc/2023/06/generative-ai-raises-competition-concerns (last visited Feb 21, 2024).

[15] Cecilia Kang & Adam Satariano, AS A.I. BOOMS, LAWMAKERS STRUGGLE TO UNDERSTAND THE TECHNOLOGY THE NEW YORK TIMES (2023), https://www.nytimes.com/2023/03/03/technology/artificial-intelligence-regulation-congress.html (last visited Feb 21, 2024).

[16] Frank Schweitzer | Ian Saccomanno| Naoto (Nelson) Saika, THE RISE OF ARTIFICIAL INTELLIGENCE, BIG DATA, AND THE NEXT GENERATION OF INTERNATIONAL RULES GOVERNING CROSS-BORDER DATA FLOWS AND DIGITAL TRADE WHITE & CASE LLP (2023), https://www.whitecase.com/insight-our-thinking/rise-artificial-intelligence-big-data-next-generation-international-rules#2-emergence-of-trade-policy-for-ai (last visited Feb 22, 2024).

[17] HINRICHFOUNDATION, https://www.hinrichfoundation.com/media/2bxltgzf/meltzerai-and-trade_final.pdf (last visited Feb 22, 2024).

[18] Ibid. (pg.no.3, para. 1)

[19] Pascal Krummenacher on April 14 & Pascal Krummenacher, INTERNATIONAL TRADE AND ARTIFICIAL INTELLIGENCE: IS TRADE POLICY READY FOR CHAT GPT? INTERNATIONAL INSTITUTE FOR SUSTAINABLE DEVELOPMENT, https://www.iisd.org/articles/policy-analysis/international-trade-artificial-intelligence-chatgpt (last visited Feb 22, 2024).

VIII. INTERNATIONAL TRADE IN ARTIFICIAL INTELLIGENCE AND DEVELOPING COUNTRIES

With respect to transnational data flows and AI, it has grabbed much attention, mainly over the peculiarities of developing countries, in the last few years.[20] Companies established in Countries with large data protection rules are attracted due to the data derived from jurisdictions of developing countries. About training algorithms, as a matter of fact, there is a desire to make use of datasets from such jurisdictions, provided that they consist of information that can impossible be prepared elsewhere, because of legal restrictions.[21] Companies abroad acquire data along with personal data from their people in order to do different types of data analysis, which is considered to be illegal in their own jurisdiction.

It is observed that there are certain perturbations regarding developing countries that are supposed to be suppliers of data, putting their own citizens at risk because of the lack of economic and societal benefits by way of AI. It may give in. Countries that are net exporters of data may not necessarily benefit from the free flow of data. Thus, few jurisdictions had constituted policies preventing data exports. Considering India itself, about the effect of necessitating certain types of data must be preserved that are within Indian territory, is one of the policies discussed by our country.[22] It has been found that, presently, such policies have been implemented for payment data.[23] This points out the problems taking place in global trade that may cause unsatisfying profits, as to data for these jurisdictions, and the major beneficiaries of the crypto-economy are presently the most advanced countries and a small number of countries in Asia, because of the accumulation of digital technologies in these developed nations and the skill-based sort of digitalization.[24]

IX. BARRIERS TO INTERNATIONAL TRADE IN GOODS AND SERVICES THAT INTEGRATE ARTIFICIAL INTELLIGENCE

With respect to major components of AI, i.e., data, algorithms, and computing power, measures are taken that hinder or burden the international movement of AI, also including numerous components that have been adopted by several jurisdictions in the past few years.

These barriers, including localization measures, or national and/or regional regulations, comprise different strategies to data protection and privacy requirements[25] or censorship rules are all non-tariff barriers to digital trade. Technology standards on the other side can be controlled to support local companies as many applications of AI consist of compatible technologies, where standards may not yet exist.[26]

X. THE POLICY RELEVANCE OF AI FOR INTERNATIONAL TRADE IS A CONTEMPORARY REALITY

When trade policy and AI, as per the customary view, the trade rules must be out of the way of technology. AI in this idea creates unconstrained output if just restrictions in trade can be caused, since the growth of technology from advanced economies to the Global South. The Organization for Economic Co-operation and Development expresses its view, stating that

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[20] Developing countries are classified self-declare as such in the WTO system.

[21] DIGITAL SOVEREIGNTY OR DIGITAL COLONIALISM? - SUR ..., https://sur.conectas.org/wp-content/uploads/2018/07/sur-27-ingles-renata-avila-pinto.pdf (last visited Feb 24, 2024).

[22] THE LOCALISATION GAMBIT, https://cis-india.org/internet-governance/resources/the-localisation-gambit.pdf (last visited Feb 23, 2024).

[23] M.RBI.ORG.IN, https://m.rbi.org.in/Scripts/FAQView.aspx?Id=130 (last visited Feb 23, 2024).

[24] FES, https://library.fes.de/pdf-files/bueros/genf/15602.pdf (last visited Feb 23, 2024).

[25] The fact that data privacy requirements privacy and data protection may sometimes be considered a barrier to trade does of course not mean that these are undesirable. Indeed, privacy and data protection are fundamental rights protected by the EU Charter of Fundamental Rights

[26] NBER WORKING PAPER SERIES, https://www.nber.org/system/files/working_papers/w24254/w24254.pdf (last visited Feb 24, 2024).

policy endorsements involve information and communication technology goods trade to be further liberalized, also reducing barriers to digital services, and synchronizing data flow management. Therefore, policy recommendations shall indeed help the expansion of AI technology in international trade.[27]

XI. CONCLUSION

Every government around the world is striving hard to keep pace with technology. The advancement in AI decision-making provokes administrative functions. Consumer protection, law enforcement, and privacy, which are traditional administrative objectives under AI, are to be regulated by Governments. AI rules that disfavor foreign enterprises can, however, be enforced by Governments. And, AI should not be regulated in a way that creates another trade restriction behind the border.

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[7] Meltzer, J. P. (2018). The impact of artificial intelligence on international trade. Brookings Institution, December 13. Available at: https://www.brookings.edu/articles/the-impact-of-artificial-intelligence-on-international-trade/

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