

Untangling the Jurisdictional Challenges Posed by ‘AI’ in Conducting International Trade and Investment

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Abstract

The deployment of variegated forms of AI (Artificial Intelligence) systems in digital investment and trade has not only heightened the uncertainties about international investment and trade rules in goods and services but has also resulted in the conflation of long-established rules of jurisdiction. As a result, due to potential misclassification and non-classification of some goods and services, there could be confusion as to which investment and trade rules should apply in digital investment and trade. Undoubtedly, this transformation is now impacting how they are traded, distributed, and consumed and necessitates a complete overhaul of international investment and trade rules. As a general-purpose technology, AI is expected to bring about fundamental changes in the economy. As such, the increased use and deployment of AI systems in the digital ecosystem means its embedded systems should work seamlessly across international borders in real time. As a result, cross-border regulation, policy coordination, and cooperation have become vital instruments in realising opportunities and mitigating problems associated with digital investment and trade. Thus, the growing proliferation of cross-border data flows also raises critical legal questions regarding state jurisdiction and sovereignty, among other things. Besides data value and how it is collected, powerful states have scrambled to monopolise data governance to entrench their digital supremacy. Against the backdrop of this, this article looks at the vital legal aspects impacting the law of jurisdictions concerning digital sovereignty and challenges of a cross-jurisdictional nature.

Keywords: AI, digital sovereignty, digital supremacy, cross-border investment and trade and regulations.

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1. Introduction

At the heart of the rapidly expanding international digital investment and trade, we find the intricate interplay between Artificial Intelligence (AI) systems and expanding international digital investment and trade, a domain regulated under World

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Trade Organisation (WTO) rules. The fusion of these two elements presents pressing challenges to the international investment and trade legal order, particularly the international law of jurisdiction, necessitating immediate attention and action.³ These challenges are not just theoretical, but they have real-world implications. The lack of a robust framework that harmonises existing international investment and trade rules and AI regulations, beyond the soft law principles and the recent United Nations (UN) resolution, is a pressing issue.⁴ The introduction of diverse AI systems in digital investment and trade has not only amplified the uncertainties surrounding international investment and trade rules for goods and services but has also led to a confusion of long-standing jurisdictional rules. This conflation is a significant development that warrants in-depth study.

AI technologies ushered in the mid-1930s through to the 1950s, have evolved, and now form an integral part of all economic and trading sectors. The rapid advancements in computational power, data flows, and machine learning techniques have significantly contributed to these developments. The emergence and deployment of AI systems are poised to profoundly reshape how goods and services are conceived, developed, produced, and traded across borders. This transformation will impact how they are traded, distributed, and consumed and necessitate a complete overhaul of international investment and trade rules. As a general-purpose technology, AI is expected to bring about fundamental changes in the economy, much like the earlier industrial revolutions with their steam engines and electricity, leading to the displacement of traditional livelihoods.

As we are currently experiencing what is known as narrow AI, experts, and industry leaders have indicated that in the coming years, general AI will emerge, characterised by advanced chips, virtual reality, and big computers, marking a significant step in AI development. However, it's crucial to note that some, like Vold et al., have raised concerns about AI's potential for existential threats, underscoring the need for comprehensive research and regulation.⁵ According to McKinsey's report, AI is currently embedded in various economic devices and processes critical for voice and facial recognition, online shopping, customer care, and autonomous transportation, including generative AI or large language models (such as ChatGPT).⁶ All these and

³ Ferencz, J., J. et al., 'Artificial Intelligence and international trade: Some preliminary implications,' OECD Trade Policy Papers, No. 260, (2022) OECD Publishing, Paris, <https://doi.org/10.1787/13212d3e-en>. See in general Popa Tache, Cristina Elena. 2023. *Le dynamisme du droit international public contemporain et la transdisciplinarité*. Préface de Florent Pasquier. Paris: L'Harmattan, collection « Le droit aujourd'hui ».

⁴ Currently, the following constitute the core of the soft law principles, and they are shaping internationally. Norms for AI governance: the Universal Guidelines for AI (2018), OECD AI Principles/G20 AI Guidelines (2019), UNESCO Recommendation on the Ethics of AI (2021), US Executive Order on AI (2023), the EU AI Act (2024), UN Resolution on AI (2024), and the Council of Europe Convention on AI (anticipated 2024). Finally, the UN General Assembly adopted a landmark Resolution on the promotion of safe, secure, and trustworthy artificial intelligence (AI) systems on the 11th of March 2024 > <https://documents.un.org/doc/undoc/ltd/n24/065/92/pdf/n2406592.pdf?token=JQeaa8muCsPSFSeMTm&fe=true>. Accessed 15 March 2024.

⁵ Vold et al, (2023). How does Artificial Intelligence Pose an Existential Risk? In Carissa Véliz (ed.), *The Oxford Handbook of Digital Ethics*. Oxford University Press. ><https://philpapers.org/archive/VOLHDA.pdf>. Accessed 20 November 2023.

⁶ McKinsey Report, *The economic potential of generative AI: The next productivity frontier*, June 14, 2023. > <https://www.mckinsey.com/capabilities/mckinsey-digital/our-insights/the-economic-potential-of->

more are often subject to international investment and trade across borders, facilitated by undersea cables and outer space. AI is embedded in the broader digital ecosystem, which amasses vast datasets for training algorithms; data flows are central in ensuring the real-time use of AI technologies.⁷

Similarly, the increased use and deployment of AI systems in the digital ecosystem means its embedded systems should work seamlessly across international borders in real time. As a result, cross-border regulation, policy coordination, and cooperation have become vital instruments in realising opportunities and mitigating problems associated with digital investment and trade. Thus, the growing proliferation of cross-border data flows also raises critical legal questions regarding state jurisdiction and sovereignty, amongst other things. Besides data value and how it is collected, powerful states have scrambled to monopolise data governance to entrench their digital supremacy.

In so doing, some have even imposed trade barriers on certain technology products, such as semiconductors and source codes, by legislating extraterritorially, among other things. In addition, international dimensions may also arise where AI policies implemented by one government may affect another. Intentionally or unintentionally, this could be regarded as an unjustified barrier to investment and trade. In justifying their actions, some states decry suspicious threats bordering on national security and infringement of fundamental rights. Amidst these are dominant corporate companies, most of which are solely driven by profit maximisation and have been found wanting in their quest for digital innovation. These companies operate across multiple jurisdictions, which apply no laws or different laws regulating digital technologies.

In responding to the need for a regulation aimed at updating international economic rules in the wake of AI, the state parties to the World Trade Organization (WTO) have engaged in negotiations that have since stalled for over five years now due to political bickering on policy direction and leadership tussles by some of the key members of the body. However, this has not kept individual states and governments from entering into free-trade agreements and partnerships to agree on substantive digital investment and trade rules, which may significantly influence how the international community handles international investment and trade.

As the study navigates and permeates various facets of international investment and trade rules, it also delves into the complex terrain of the impact of Industry's Fourth Industrial Revolution (4 IR) technologies on international law of jurisdiction. It does this by scrutinising the existing frameworks, identifying gaps and inadequacies, and proposing pathways for a more adaptive and inclusive legal landscape for the benefit of broader humanity.

As an emerging economic block, the article looks at the state of regulatory frameworks, the legal regulation of digital investment and trade, and more crucially reflects on vital legal aspects impacting the law of jurisdictions. The international network of submarine cables is crucial in facilitating global telecommunications

generative-AI-the-next-productivity-frontier#introduction. Accessed 20 November 2023.

⁷ Mitchell AD et al., *WTO Law, and Cross-Border Data Flows: An Unfinished Agenda*. In: Burri M., ed. *Big Data and Global Trade Law*. Cambridge University Press; 2021:83-112. > https://www.cambridge.org/core/services/aop-cambridge-core/content/view/FC0CF4A171B57CB6BF4F7CE96C5F1D45/9781108843591c4_83-112.pdf/wto-law-and-cross-border-data-flows.pdf. Accessed 12 December 2023.

connectivity, as it carries over 99% of all internet traffic.⁸ However, apart from their ownership structure concerning digital sovereignty and vulnerability to malicious attacks, submarine cables also pose challenges of a cross-jurisdictional nature.⁹

2. Definitions and conceptual clarifications

Jurisdiction denotes a manifestation of state sovereignty and its authority to make, enforce, and defend its laws on natural and judicial persons within its territorial space.¹⁰ In international investment and trade law, jurisdiction refers to the authority of a particular country, court, or body to regulate and adjudicate disputes arising from international investment and trade transactions.

One potential regulatory gap in adjudicating jurisdictional issues in investment and trade disputes is the need for more UNICTRAL model laws, especially for states that are non-signatories to Trade-Related Aspects of Intellectual Property Agreement (TRIPS), for instance. The SCA, in the *Gallo Africa* case turned down an application by appellants to interdict the respondent for infringement of intellectual property rights relating to *Umoja* the musical. The court agreed, except the particulars of the claim, which invoked about 19 foreign copyright laws instead of the South African Copyright Act 98 of 1978.¹¹

In examining and determining jurisdictional matters, certain considerations must be considered in the context of AI and international investment and trade laws. Firstly, the question of jurisdiction would arise when parties enter into a contractual agreement in carrying out a particular business transaction. Typically, these kinds of agreements include jurisdictional clauses in contracts stipulating the countries, courts, or choice of law that would be applicable in the event legal disputes emerge.

In this regard, the parties would also negotiate and include specific clauses to address AI use, its unique legal implications, and potential disputes. In this regard, plaintiffs are also given the latitude to resort to forum shopping and to solely elect convenient jurisdiction for their legal claims. Secondly, the element of virtual presence as opposed to physical presence also makes the concept of jurisdiction complex taking into account the location of goods, services, or individuals.¹² The fact that AI systems transcend physical boundaries and can operate virtually raises challenges in determining the relevant and appropriate jurisdiction to adjudicate international investment and trade disputes.¹³

⁸ Saunavaara, J. & Salminen, M. (2023). Geography of the global submarine fibre-optic cable network: The Case for Arctic Ocean solutions. *Geographical Review*, 113 (1), 1–19.

⁹ Ganz, A., Camellini, M., Hine, E., Novelli, C., Roberts, H., & Floridi, L. (2024). Submarine Cables and the Risks to Digital Sovereignty. *Available at SSRN*.

¹⁰ *Gallo Africa Ltd and Others v Sting Music (Pty) Ltd and Others* (40/2010) [2010] ZASCA 96; 2010 (6) SA 329 (SCA); [2011] 1 All SA 449 (SCA) (3 September 2010) <https://www.saflii.org/za/cases/ZASCA/2010/96.pdf>. Accessed 21 February 2024.

¹¹ Copyright Act 78, 1978. https://www.gov.za/sites/default/files/gcis_document/201504/act-98-1978.pdf. Accessed 3 May 2024.

¹² ‘Artificial understanding: a step toward robust AI | AI & SOCIETY – Springer.’ 15 Mar. 2023. <https://link.springer.com/article/10.1007/s00146-023-01631-2>. Accessed 9 May 2024.

¹³ Ibid 40. Also see Popa Tache, Cristina Elena, and Cătălin-Silviu Săraru. 2024. “Evaluating Today’s Multi-Dependencies in Digital Transformation, Corporate Governance and Public International Law Triad.” *Cogent Social Sciences* 10 (1). Taylor & Francis. <https://doi.org/10.1080/23311886.2024.2370945>.

Extraterritorial reach refers to a country's attempt to regulate activities that occur beyond its territorial boundaries.¹⁴ The impact of the jurisdiction's extraterritorial reach in disputes involving digital trade is significant and raises several concerns and challenges.¹⁵ In the context of digital trade dominated by disruptive technologies, this can have positive and negative effects.¹⁶

First, the extraterritorial reach of jurisdiction can lead to overlaps and conflicts between different legal systems, frameworks, and regulations. Second, extraterritoriality can also create a compliance burden, as it requires companies to adhere to the laws and regulations of not only their home countries but also the countries where their customers are located. In addition to a victim or defendant company's domicile in a particular case, the territoriality principle underscores state jurisdiction's significance. The principle emphasises that the power to adjudicate and determine applicable laws vests in the state where the act occurred. In this regard, the dominance of the territorial principle is an expression of consistent continuity¹⁷, especially considering the expansive nature into which the concept of jurisdiction turns out to be.

Digital governance entails the legal aspects and frameworks that govern the use, regulation, and oversight of digital technologies, data, and platforms. Several key legal aspects relating to data protection and privacy laws underscore the concept of digital governance. These laws aim to protect individuals' rights and are geared at ensuring that personal data is collected, processed, and stored securely and responsibly.¹⁸ Another aspect critical to digital governance relates to cybersecurity regulation, which is crucial for safeguarding digital infrastructure, networks, and systems from unauthorised access, data breaches, and control over cyberspace.¹⁹ According to *Akongburo et al.*, the inadequate regulation of the private sector's role in safeguarding cyberspace and cybersecurity in these selected jurisdictions also poses threats to digital trade that could manifest in data colonialism and mercantilism.²⁰ Another critical aspect of digital governance is equitable access to digital services and bridging the digital divide. Therefore, laws and policies should aim to promote equal access to digital infrastructure, affordable internet connectivity, and digital skills training programs.

The 4 IR denotes the integration and convergence of digital technologies, data analytics, and automation in manufacturing. This should not be confused with the 4IR which presents several legal impacts across various areas of law, such as potential defects in products resulting from software glitches, AI decision-making, or failures in

¹⁴ Scott J. 'The Global Reach of E U Law,' in Marise Cremona, and Joanne Scott (eds), *E U Law Beyond EU Borders: The Extraterritorial Reach of E U Law* (Oxford, 2019, 20 June 2019). > <https://doi.org/10.1093/oso/9780198842170.003.0002>. Accessed 9 May 2024.

¹⁵ Scott 66.

¹⁶ Scott 71.

¹⁷ Nico Krisch, Jurisdiction Unbound: (Extra)territorial Regulation as Global Governance, *European Journal of International Law*, Volume 33, Issue 2 May 2022, pp. 481 – 514, <https://doi.org/10.1093/ejil/chac028>. Accessed 3 January 2024.

¹⁸ The examples include the European Union's General Data Protection Regulation (GDPR), the California Consumer Privacy Act (CCPA), and POPIA in South Africa.

¹⁹ Farrand, B., Carrapico H., *Digital sovereignty and taking back control: from regulatory capitalism to regulatory mercantilism in EU*, *European Security*, (2022) 31:3, 435–453, DOI: 10.1080/09662839.2022.2102896 Accessed 19 December 2023.

²⁰ Akongburo A. *et al.*, *African Data Protection Laws: Regulation, Policy, and Practice*, Boston: De Gruyter, 2024, 33. <https://doi.org/10.1515/9783110797909>. Accessed 17 December 2023.

automated system product liability.²¹ Therefore, legal aspects around standard development and conformity assessments become essential to ensure compatibility, safety, and efficiency across different technologies and equipment.

Broadly, digital investment and trade can be defined to include traditional e-commerce activities, whereby tangible and intangible products are traded, invested and delivered online, and physically delivered in some instances. Over and above this, digital trade also includes modern intangible digital products, sold and transmitted electronically online. In this regard, as a critical policy subject, digital investment and trade can be construed in two ways, both narrow and broad.²²

The implications and significance of these differences can be located within the ongoing WTO negotiations. On the one hand, China is seen to be promoting a narrow view of digital trade, focusing on trade in goods online with stricter data flows, while on the other the US and others are said to have adopted an inclusive approach to digital trade, especially insofar as flexibility on data localisation, data flows, and data protections are concerned.²³

Digital sovereignty is a characterisation of a nation's ability to exercise control and authority over its digital assets, infrastructure, data, and technological capabilities.²⁴ It encompasses legal, policy, and regulatory considerations related to safeguarding a country's interests in the digital sphere. One of the key legal issues around digital sovereignty arises when certain countries impose restrictions on cross-border data flows and manage data localisation to ensure the protection of their citizens' data within the country's borders, thus reducing dependency on foreign sources of data.

Digital sovereignty also manifests itself when countries enact regulations to protect domestic industries through export and import controls on goods and services within the digital trade. It must be acknowledged that while digital expansionism is distinctive from digital colonialism, the two are also intertwined²⁵. According to Couture, digital colonialism's primary purpose is resource extraction or exploitation, resulting in digital expansionism.²⁶

3. Literature review

Any discussion venturing into the space of AI systems is bound to reflect on its definition, legal personality status, and legal implications. This is critical in assessing and determining legal liability and accountability issues in their variegated forms,

²¹ Körber, T., König, C. (2022). Liability Law 4.0. In: Frenz, W. (eds) Handbook Industry 4.0. Springer, Berlin, Heidelberg. https://doi.org/10.1007/978-3-662-64448-5_12.

²² Burri M. and Polanco R., Digital Trade Provisions in Preferential Trade Agreements: Introducing a New Dataset, Journal of International Economic Law, 2020. > <https://boris.unibe.ch/139789/1/jgz044.pdf>. Accessed 6 December 2023.

²³ Ibid.

²⁴ Roberts, H. et al., *Digital Sovereignty, Digital Expansionism and the Prospects for Global AI Governance*. In: Timoteo, M., Verri, B., Nanni, R. (eds) Quo Vadis, Sovereignty? Philosophical Studies Series, (20,230 Vol. 154. Springer. https://doi.org/10.1007/978-3-031-41566-1_4. Accessed 10 December 2023.

²⁵ Couture, S., Toupin S. 2019. *What does the notion of 'Sovereignty' mean when referring to the digital realm?* New Media & Society. https://link.springer.com/chapter/10.1007/978-3-031-41566-1_4#ref-CR18. Accessed, 8 December 2023.

²⁶ Couture et al., 2306.

including jurisdiction. The focus of this study is centred on its role in influencing jurisdictional issues amidst international trade law. In doing so, the discussion further reflects on the theoretical, philosophical, and conceptual frameworks underpinning its conception, production, operation and deployment in various areas of trade in goods and services within the international trade law context.

From a conceptual perspective, AI refers to the intelligence exhibited by machines in imitating human cognitive functions, such as learning and problem-solving. It involves algorithms and machine learning techniques to allow computer systems to process data and perform tasks. Amongst others, key concepts constituting the basis of AI theoretical underpinnings include machine learning, neural networks, natural language processing, and deep learning.²⁷

It feeds on a compendium of data and resources indexed over time in the black box; then software comes into play to use pattern recognition to perform given tasks. While an aggregation of these would meet the requirements for intelligence, it needs to meet consciousness. In this way, both the principle of *mens rea* and control theory can be invoked, as systems involve an ‘input-output’ relationship with the element of a human element. This inextricable relationship would, therefore, be critical when litigation in both civil and criminal law ensues, as the algorithms used would address questions of geolocation and, thus, jurisdiction.

To demonstrate the different approaches and interpretations when classifying products as goods or services, the European Commission (EC) interpreted WTO law and held that ‘electronic deliveries consist of supplies of services which fall within the scope of the GATS’.²⁸ On the contrary, the US disagreed and adopted a different posture, starting from the premise that ‘there may be an advantage to a GATT versus GATS approach to [digital] products, which could provide for a more trade-liberalising outcome for electronic commerce’.²⁹ This apparent conflict underscores the need for a neutral system to classify digital products and a positive framework for classifying some digital technologies as goods or services.³⁰

While technological determinism plays a central role in the Marxist conception of historical materialism, his comrades also had contradictions and exegetical disagreements on the significance of technology, and now AI. According to *Jones*, the interplay between labour, capital, and power in capitalist societies is at the heart of Marx’s concerns. He suggested that the capitalists who controlled the means of production and the economic system were exploiting workers.

The exploitation resulted from the alienation of labour, which occurs when workers become disconnected from the products they create and the tools and resources they use to produce them. *Marx* argued that this alienation resulted in workers’ estrangement from their human essence and spawned various social problems. One of

²⁷ Negneyitsky M., ‘Artificial intelligence: A Guide to Intelligent Systems,’ 1 Jun. 2021, <https://archive.org/details/artificialintell0000negn>. Accessed 26 March 2024.

²⁸ The Council for Trade in Services, *Communication from the European Communities and their Member States: Electronic Commerce Work Programme* (Nov. 30, 2000).

²⁹ *The Work Programme on Electronic Commerce: Submission by the United States* (Feb. 12, 1999).

³⁰ Sam S, ‘The Role of Digital Products Under the WTO: A New Framework for GATT and GATS Classification’, Chicago, *Journal of International Law*: Vol. 17: No. 1, 2016> <https://chicagounbound.uchicago.edu/cjil/vol17/iss1/5>. Accessed 27 November 2023.

the major concerns around digital technologies is the replacement of human labour by machines and the emphasis on trustworthy, algorithmic transparency and ethical AI.³¹

In navigating this discussion, one would also reflect on the goods-and-service nexus impact of AI on professional services, such as threats and opportunities in the legal profession in particular, where ‘law bots’ analyse large volumes of case law as part of legal advice.³² Consequently, applying Marxist theory in this respect will assist in understanding the relationship between AI and productive forces. The notion of productive forces is essential to the creation of goods and services and relates to elements involved in the production process, such as labour power, raw materials, and machines and tools used to transform raw materials into finished goods.³³

The World Trade Organization (WTO) acknowledges that its current regulations align with its agreements, but some of these regulations need to be revised to better align with the changing landscape of digital commerce. This can be seen from the definition of e-commerce as ‘the production, distribution, marketing, sale, or delivery of goods and services by electronic means’, as provided for in the 1998 WTO Work Programme on Electronic Commerce.³⁴

The 1998 World Trade Organization (WTO) Declaration on Global Electronic Commerce contains references to three terms related to digital trade, namely goods, services, electronic commerce, and electronic transmissions. It’s worth noting that the terms ‘goods’ and ‘services’ are not explicitly defined in the General Agreement on Tariffs and Trade (GATT) and the General Agreement on Trade in Services (GATS).

The term ‘electronic transmissions’ was first introduced in the 1998 Declaration on Global Electronic Commerce without a specific definition, despite the existence of e-commerce. While the relevance of the WTO agreements to digital trade is widely recognised and reflected in various regional and bilateral agreements, there is still uncertainty about whether digitised products should be categorised as goods or services. This lack of clarity raises questions about whether the General Agreement on Tariffs and Trade (GATT) or the General Agreement on Trade in Services (GATS) is applicable.³⁵

Some of the regional and bilateral agreements in question include the United States-Mexico-Canada Agreement (USMCA), which covers digital trade, cross-border data flow, and consumer protection, among other provisions.³⁶ The EU has also established the *EU-United Kingdom (UK) Trade and Cooperation Agreement (TCA)*, which came into force in December 2020 and also focuses on e-commerce space, cross-

³¹ Hötte K. et al. Technology and jobs: A systematic literature review, *Technological Forecasting and Social Change*, Volume 194, 2023. > (<https://www.sciencedirect.com/science/article/pii/S0040162523004353>). Accessed 10 May 2024.

³² Generative AI in the Legal Profession – Harvard Law School. <https://clp.law.harvard.edu/knowledge-hub/magazine/issues/generative-ai-in-the-legal-profession/>. Accessed 10 April 2024.

³³ van Ree, E. (2020). Productive forces, the passions, and natural philosophy: Karl Marx, 1841–1846. *Journal of Political Ideologies*, 25(3), 274–293. <https://doi.org/10.1080/13569317.2020.1773069>. Accessed 10 May 2024.

³⁴ The general acceptance is that the reference to e-commerce also refers to digital trade.

³⁵ For instance, the United States-Mexico-Canada Agreement (USMCA), the European Union (EU) and Asia-Pacific Economic Cooperation (APEC), and *The African Continental Free Trade Area (AfCFTA) agreement*.

³⁶ The United States – Mexico – Canada Agreement. <https://ustr.gov/trade-agreements/free-trade-agreements/united-states-mexico-canada-agreement>. Accessed 10 May 2024.

data flows, data protection, and consumer protection.³⁷ In the year 2000, the EU – South African Trade and Development Cooperation Agreement came into force. While the agreement does not specifically cover e-commerce, it is focused on free trade and serving as a cornerstone shaping the trading landscape and facilitating trade between the two and its interpretation may include digital trade.³⁸ These are some of the multilateral and bilateral agreements which seek to regulate digital trade in goods and services, in the absence of an agreed global regulatory regime.

4. Overview of potential factors presenting jurisdictional challenges

The emergence of digital trade has also witnessed the emergence of what is known as the subsidiary jurisdiction of adjudicative bodies in the terrain of international trade and investment. In advancing the theory of 'reasonable jurisdiction, *Ryngaert* suggests that the possibility exists that reasonable jurisdiction may merge transnational digital networks with wired or connected states, including international and private actors, thus bringing them into unfold.³⁹

It should be noted that over the past few decades, the continuity and stability of the law of jurisdiction have undergone rapid and extensive changes. However, the emergence and deployment of AI systems into e-commerce have fundamentally affected the law of jurisdiction in international trade, thus necessitating calls for its reorientation.⁴⁰ In this regard, it is envisaged that states would opt to apply their laws on a 'subsidiary basis'. They will do this by restraining and surrendering the exercise of their right to jurisdiction to other states having the strongest nexus to the act in question. In this regard, a corresponding duty also exists where a subsidiary state may step in to advance both sovereign and global interests for the sake of the global community.

In the US, the concept of forum shopping has existed for a while. In forum shopping, a plaintiff chooses the court where to institute a legal action.⁴¹ This choice would be based on the prospect of the most favourable outcome, even when there is no connection or just a tenuous connection between the legal issues and the jurisdiction.⁴² Forum shopping is available to plaintiffs who regularly bring cases to courts, seeking damages for harms that have occurred abroad based or depending on contractual provisions.⁴³

The concept of forum shopping is said to have implications for various legal

³⁷ The EU – UK Trade and Cooperation Agreement.> https://commission.europa.eu/strategy-and-policy/relations-non-eu-countries/relations-united-kingdom/eu-uk-trade-and-cooperation-agreement_en. Accessed 10 May 2024.

³⁸ Bezuidenhout, H. & Claassen, C. (2013). South African trade hegemony: Is the South Africa – EU Trade, Development and Cooperation Agreement heading for a BRICS wall? *South African Journal of International Affairs*, 20(2), 227–246. <https://doi.org/10.1080/10220461.2013.811338>. Accessed 11 May 2024.

³⁹ Cedric R, 'A New Theory of Jurisdiction in International Law', *Jurisdiction in International Law*, Oxford Monographs in International Law (Oxford, 2008) 1 Jan. 2009), <https://doi.org/10.1093/acprof:oso/9780199544714.003.0006>, Accessed 10 Apr. 2024.

⁴⁰ Krisch 484.

⁴¹ Sykes A., Transnational Forum Shopping as a Trade and Investment Issue, *The Journal of Legal Studies* Volume 37, Number 2, June 2008. <https://doi.org/10.1086/589664>. Accessed 8 April 2024.

⁴² Sykes 16.

⁴³ Sykes 16.

doctrines, such as the doctrine of *forum non conveniens*, including the rules governing choice of law in transnational tort cases.⁴⁴ The pitfalls associated with forum shopping relate to its potential distortion of trade and investment patterns. For these reasons, Sykes has argued that distortions can result from implicit discrimination in the application of liability rules affecting producers or investors of different nationalities, especially when imposing tariffs and taxes.⁴⁵

What also becomes problematic is the fact that while the regulation of multinational organisations and companies is assumed to be on equal footing, framed on the basis of horizontal relations among sovereign equals, few powerful countries wield massive powers over weaker ones.⁴⁶ This turns out to undermine the whole notion of sovereignty and ultimately compromises the principles upon which jurisdiction is based.

This can be demonstrated by a 2023 US District Court ruling, where *Argentina* was ordered to pay \$16.1 billion to former private investors in a state-owned oil company after it was nationalised.⁴⁷ When shares were offered to investors, one of the contractual provisions was that a tender should be offered to all shareholders if the state sought to assume its majority shareholding in terms of the entity's bylaws.⁴⁸ However, the government of *Argentina* could not do so. In its ruling, the court asserted that *Argentina* is not entitled to enjoy state immunity, as it did not act as a sovereign entity but as a commercial entity. Sovereign immunity, geared at protecting states and their property, is derived from customary international law and codified in the UN Convention on Jurisdictional Immunities of States and Their Property.⁴⁹

Considering existing and future areas of business regulation to accommodate digital technologies, *Krisch* argues that this would largely 'unbound territoriality from its constraining aspects, opening the door to an exercise of jurisdiction based on 'thin connections' with the issue at hand and, thus resulting in a 'jurisdictional assemblage'.⁵⁰ From the international law perspective, the concept of 'jurisdictional assemblages' relates to the transformation of core jurisdictional principles and categories, in view of the globalising world and emerging digital trade, away from the traditional jurisdiction based on territoriality. As a result, the concept of unbound jurisdiction has emerged in regulating global business with a multiplicity of states having overlapping claims over jurisdiction.⁵¹

The problem with 'thin connections' of unbound jurisdiction is that this would probably result in the abuse of jurisdiction by dominant economies for narrow selfish interests.⁵² This undermines the whole notion of sovereignty and ultimately compromises the principles upon which jurisdiction is based. According to *Andrew* –

⁴⁴ Sykes 09.

⁴⁵ Sykes 09.

⁴⁶ Krisch 98.

⁴⁷ *Petersen Energía Inversora, S.A.U. v. Argentine Republic*, 15 Civ. 2739 (LAP) (S.D.N.Y. Dec. 28, 2020). > <https://cases.justia.com/federal/appellate-courts/ca2/16-3303/16-3303-2018-07-10.pdf?ts=1531233032>. Accessed 10 May 2024.

⁴⁸ Petersen 5–6.

⁴⁹ The UN Convention on Jurisdictional Immunities of States and Their Properties. > https://treaties.un.org/doc/source/recenttexts/english_3_13.pdf. Accessed 10 May 2024.

⁵⁰ Krisch 98.

⁵¹ *Krisch* 98.

⁵² *Krisch* 98.

Keane,⁵³ potential jurisdictional conflicts and extraterritorial reach underpinned by a data-driven global economy pose challenges to digital trade.

Much has also been made of the ongoing US-China trade war and the US leadership's hostility toward international institutions supporting economic globalisation.⁵⁴ However, this runs against the grain of decades of relatively unrestrained flows of goods and services across borders. For instance, at the core of digital investment and trade, the two are wrestling for control and dominance of the semiconductor commercial landscape.⁵⁵ This hostility manifests, among other things, through the enactment of legislative instruments that have the effect of an extraterritorial reach, especially by the US in the form of Export Control Laws and Foreign Direct Product Rules, which mainly target China and Russia.⁵⁶ These export control measures consist of special rules underpinned by extraterritorial applications aimed at subjecting foreign-made/produced products within the stranglehold of its export control laws.⁵⁷ These legislative manoeuvres bring into question new variants of jurisdiction rules, such as unbound jurisdiction and jurisdictional assemblages.⁵⁸

Another interesting aspect of international investment and trade law is the regulation of jurisdictional powers in outer space.⁵⁹ Contrary to international law principles, jurisdiction has been criticised by the likes of *Elon Musk*, who has gone to the extent of branding outer space as a *terra nullius* or 'no man's land',⁶⁰ thus, bringing to the fore theoretical questions on the rule of law. Currently, outer space is inadequately regulated, as the Outer Space Treaty was adopted when new digital technologies were not in place.⁶¹

Nevertheless, Article VII of the Treaty provides that a state that launches or arranges for the launch of an object into space or a state from whose territory or facility an object is launched bears international responsibility as a launching state.⁶² While these

⁵³ Krisch 101.

⁵⁴ Grosse, R. et al., *China's Rise, World Order, and the Implications for International Business*. *Manag Int Rev* 61, 1–26 (2021). > <https://doi.org/10.1007/s11575-020-00433-8>. Accessed 2 January 2024.

⁵⁵ Beeres R. et al., Netherlands Annual Review of Military Studies 2021, *Compliance and Integrity in International Military Trade*. Springer 2022. > <https://link.springer.com/book/10.1007/978-94-6265-471-6>. Accessed 2 January 2024.

⁵⁶ Beeres 23.

⁵⁷ Voetelink, J. (2022). *Limits on the Extraterritoriality of United States Export Control and Sanctions Legislation*. In: Beeres, R., Bertrand, R., Klomp, J., Timmermans, J., Voetelink, J. (eds) NL ARMS Netherlands Annual Review of Military Studies 2021. NL ARMS. T. M. C. Asser Press, The Hague. https://doi.org/10.1007/978-94-6265-471-6_11. Accessed 3 January 2024.

⁵⁸ For instance, it must be of (i) US origin, (ii) located in the US (e.g. foreign origin software/data stored on a US server), (iii) foreign-made with certain levels of US content, and (iv) certain foreign-made items based on controlled US technology or software.

⁵⁹ The Outer Space Treaty, otherwise known as the Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies, was adopted by the General Assembly in its resolution 2222 (XXI), opened for signature on 27 January 1967 and entered into force on 10 October 1967.

⁶⁰ Krisch N., 481 – 514.

⁶¹ Krisch, 483.

⁶² Article VII of the Treaty provides that "Each State Party to the Treaty that launches or procures the launching of an object into outer space, including the moon and other celestial bodies, and each State Party from whose territory or facility an object is launched, is internationally liable for damage to another State Party to the Treaty or to its natural or juridical persons by such object or its component parts on the Earth, in air or in outer space, including the moon and other celestial bodies."

provisions underline the location of jurisdictional powers at any position in outer space, there are still complexities regarding components and equipment used to assemble and build satellites and legal rules regulating digital trade in outer space.⁶³

However, the fact that international space law does not strictly define what constitutes a ‘space object’ also compounds matters. Existing Conventions only define the term as ‘including parts of a space object as well as its launch vehicle and the parts thereof’.⁶⁴ Thus, they allow for a broad interpretation of what a ‘space object’ actually encompasses. The increased involvement of corporate interests in outer space has also drawn contestation from key money spinners, including *Eon Musk* himself, challenging the legal jurisdiction of outer space.⁶⁵ Thus, stretching the debate on jurisdiction in international trade law much wider.

5. Conclusions

Notably, deploying AI systems in digital trade presents insurmountable challenges to the international legal order in general and the international law of jurisdiction in particular. The fact that there is no solid synergy between existing investment and trade rules and AI regulations further compounds the situation.

The deployment and operations of AI systems in digital trade have opened a legislative lacuna in the traditional distinction between investment and trade in goods and services. As we grapple with the 4 IR era, there is a thin line distinguishing which products can be classified as goods or services. Similarly, the rapid advancement of digital or disruptive technologies and the rise of 4 IR have significantly transformed the international investment and trade landscape. Therefore, understanding and addressing the jurisdictional challenges associated with these technologies is crucial to facilitating smooth and efficient cross-border investment and trade in the digital age. The smooth facilitation of cross-border trade often requires the enactment of specific legislation and regulations. This is because the current legal and regulatory frameworks governing international investment and trade were primarily created for traditional international trade before the introduction of 4 IR technologies.

As digital technologies transcend national boundaries, there is a need for harmonising legal frameworks, international agreements, investment, and trade policies. This can lead to greater consistency and cooperation between countries, strengthening global trade relations. Most importantly, businesses engaged in international investment and trade need clarity and guidance on navigating jurisdictional challenges in the 4 IR era. Therefore, a need for best practices, legal support systems, and strategies that enable businesses to adapt, comply, and thrive in the digital trade landscape.

In the final analysis, it is noteworthy that research on jurisdictional challenges

⁶³ Rapp L. et al., *Which Jurisdiction for Private In-space Assembled Autonomous Platforms?*, Space Policy, Volume 56, 2021. > <https://doi.org/10.1016/j.spacepol.2021.101413>. Accessed 22 November 2023.

⁶⁴ Gorove S, *Toward a Clarification of the Term ‘Space Object’ – An International Legal and Policy Imperative*, Journal of Space Law. 21 (1993) 11–26. <https://airandspace.law.olemiss.edu/pdfs/jsl-21-1.pdf>. Accessed 25 November 2023.

⁶⁵ Mirmina S., *Elon Musk’s ‘Starman’: Is it Really Legal for Billionaires to Launch Their Roadsters into Space*. Environmental Law Blog, 11 April 2018. > <https://harvardlawreview.org/blog/2018/04/elon-musks-starman-is-it-really-legal-for-billionaires-to-launch-their-roadsters-into-space/>. Accessed 22 November 2023.

can inform policymakers and lawmakers in developing and adopting policies and strategies to address the legal gaps and complexities associated with 4 IR technologies in international trade.

In summary, there is a need to explore and resolve jurisdictional challenges posed by digital technologies in conducting international investment and trade in the 4IR era is crucial to fostering a supportive legal environment, promoting economic growth, protecting rights, facilitating cross-border trade, and addressing emerging complexities in the digital trade landscape.

6. Recommendations

The existing WTO rules need to be revised to regulate and classify some technologies within the Model C areas as services within the parameters of international investment and trade law. Therefore, this implies that there is a regulatory gap in dealing with the distinction between the provision and categorisation of certain services driven by AI in international trade, and as such individual member states are left to deal with them through regional and bilateral trade agreements.

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