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The Uneasy Interplay between Digital Inequality and International Economic Law

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Abstract

This article addresses the questions of what role international economic law has played in the story of digital inequality's emergence and evolution and how international economic law can reduce digital inequality instead of enhancing it. The first part of this study illustrates the uneasy interplay between digital inequality and international economic law. At the network layer, the economic benefit of the General Agreement on Trade in Services' Mode 3 (foreign investment) market access commitments in the telecommunications sector has never been realized in many developing countries and least developed countries (LDCs). There is a missing link between the consequences of trade liberalization and broadband investment. At the application layer, today's platformization of services was an 'unforeseen development' at the time the World Trade Organization (WTO) was established. Through the pro-liberalization of WTO jurisprudence, members' decades-old Mode 1 (cross-border) market access commitments have played more than a marginal legal role in global datafication. The second part of this study discusses how international economic law can confront and potentially redress that inequality. In the context of trade and development, it remains to be seen how the WTO members can find the common ground needed to balance digital trade liberalization and development needs. Unless infrastructure concerns from developing countries and LDCs are addressed, the ongoing WTO e-commerce trade deal may end up being labelled the Digital 'Haves' Trade Agreement. In the context of trade and competition, the increasing inequality in digital platforms calls for a set of international competition rules to appropriately address market power in the data sector. By imposing cross-border disciplines for competition policy and thus curbing the power of big digital platforms, the proposed WTO Data Reference Paper may well be an effective instrument to address the second dimension of 'digital inequality' – data colonization.

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1 Introduction

The asymmetrical nature of the global digital economy calls for a balance between trade efficiency and digital equality. Currently, one primary challenge facing the World Trade Organization's (WTO) plurilateral electronic commerce trade negotiations,[1] also known as the Joint Statement Initiatives (which are hereinafter referred to as the WTO e-commerce trade negotiations),[2] is the allegation that the proposed text for e-commerce will benefit big tech companies at the expense of workers and small businesses, which will in turn hurt developing countries.[3] Developing countries have been pressing for 'development-focused digital industrialization',[4] stressing that needs that are more pressing than digital liberalization include the promotion of 'digital capacity' and the safeguarding of universal benefits of the digital economy.[5] They have also urged participating countries in the e-commerce talks to 'take into account the special constraints that developing countries faced'.[6]

At the regional level, 'special and differential treatment' has been incorporated into the realm of the e-commerce/digital trade chapters of the mega free trade agreements (FTAs).[7] Some developing countries have been extended a grace period, during which existing inconsistent measures will not be subject to dispute settlement under the trade agreements.[8] Despite the fact that neither the WTO nor the mega FTAs have trade rules that directly address the issues of digital inclusion and data capitalism, tension between trade liberalization and digital inequality is imminent.

The benefits of digitalization and datafication are not evenly distributed.[9] Digital transformation is underway, but its implications vary across countries and people. Ideally, a cross-border framework should be put into place to ensure that digitalization

1 G20 trade negotiators in June 2019 issued a joint statement on digital economic policies that has paved the way for the World Trade Organization's (WTO) plurilateral e-commerce talks. Since then, there have been intensive discussions among WTO members for and against a plurilateral agreement on e-commerce. A consolidated text had been distributed to WTO members in December 2020, which would be the basis for further discussions. WTO, Electronic Commerce (2019), available at www.wto.org/english/tratop_e/ecom_e/ecom_e.htm.

2 WTO, Joint Statement on Electronic Commerce, Doc. WT/L/1056, 25 January 2019.

3 Civil Society Letter against Digital Trade Rules in the World Trade Organization (2019), available at https://ourworldisnotforsale.net/.

4 WTO Work Programme on Electronic Commerce, Communication from the African Group, Report of Panel Discussion on Digital Industrial Policy and Development, Doc. JOB/GC/133, 21 July 2017. Non-Paper from Brazil, Doc. JOB/GC/98, 20 July 2016; see also Association for Women's Rights in Development, Urgent Opposition to the Digital Trade Rules in the World Trade Organization, 15 April 2019, available at www.awid.org/news-and-analysis/urgent-opposition-digital-trade-rules-world-trade-organization.

5 'WTO E-Commerce Talks Co-Convener: No Conclusions on Legal Path', *Inside U.S. Trade* (16 March 2021).

6 See, e.g., China, Joint Statement on Electronic Commerce, Doc. INF/ECOM/19, 24 April 2019.

7 See, e.g., Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP), 8 March 2018, Art. 14.18, available at www.mfat.govt.nz/en/trade/free-trade-agreements/free-trade-agreements-in-force/comprehensive-and-progressive-agreement-for-trans-pacific-partnership-cptpp; see also Chapter 19, Annex 19-A to the United States-Mexico-Canada Agreement (USMCA) 2019, available at https://ustr.gov/usmca.

8 CPTPP, *supra* note 7, Art. 14.18.

9 The term 'datafication' has been used to describe the trend where social interactions are routinely transformed into a data format and put to social use. The term itself can have negative or positive connotations. Scholarly literature on datafication has been dominated by discussions surrounding the risks and perils of such a trend. Global governance of datafication, however, entails multifaceted endeavours. The potential 'benefits' and promises under such a trend should also be carefully considered.

and datafication yield benefits not only to the few.[10] This article addresses the question of how international economic law can reduce digital inequality instead of enhancing it. Here, however, a few premise questions are in order. What role has international economic law played in the story of digital inequality's emergence and evolution? Furthermore, why should solutions to digital inequality be sought under international economic law, which by any measure is not designed as the primary instrument for information society governance? Indeed, even though a significant component of the digital economy is embodied in goods and services, the WTO's primary competence lies in 'trade' issues. It is clearly not a 'development' or 'competition' agency. Despite a growing body of literature in international economic law that explores the legal and policy challenges surrounding digital trade, little ink has been spilled in an attempt to systematically explain existing inequalities in the digital world as well as how international economic law may have contributed to such inequalities and how it can also help to ease them.

Meanwhile, policy-makers are crafting the shape of a new paradigm for Internet governance, and many critical questions remain unanswered. What is the correlation between digital trade liberalization and digital inequality? How can we tackle the issue of digital trade and development? How can international trade agreements help to narrow the 'digital divide' or even to promote digital inclusion? How can we 'decolonize' data? How can we confront 'data capitalism' as a whole, and what is the role of international law? These are the primary inquiries that this article attempts to answer.

2 The Interplay between Digital Inequality and International Economic Law

This article relies on the Internet's architecture, which in this context can be understood through two major layers: the network layer (the broadband infrastructure) and the application layer (mainly, the digital platform).[11] Indeed, each of the two layers has its own challenges. Addressing the two major problems together, therefore, may be criticized for combining diverse topics in one article. Be that as it may, the merit of investigating the persistent unequal distributions at both layers is that this approach offers a more comprehensive view of digital inequality that is concerned not only with the development dimension but also with the competition dimension. As a result, a

[10] United Nations Conference on Trade and Development (UNCTAD), Trade and Development Report (2020), at 129, which suggests that '[t]he world needs a new framework, perhaps in the context of WTO reform, that seeks accommodation with the two largest trading nations but also broadens the space for development policy'.

[11] This article relies on network architecture, as illustrated by the International Organization for Standardization's Open Systems Interconnection (OSI) Reference Model, which originally contains seven layers. By clustering and transposing the OSI technical model into the context of digitization and datafication, this article focuses on two dimensions: first, the level of digital physical infrastructure that enables digitization and, second, the level of digital applications and, in particular, the digital platform that drives datafication.

holistic assessment of the 'digital divide' and 'data capitalism' in the context of international economic law will be systematically conducted.[12] After all, the remedy for the former (that is, broadband access) cannot be meaningfully realized without ensuring that it is in sync with the latter (that is, data usage), simply due to the fact that the more people that access the Internet, the more data the digital platforms gain. In other words, the issues of digital inequality at each layer are so intertwined that their independent solutions might lead to a contradiction. Addressing any layer alone may result in the failure to see the forest – the digital ecosystem – for the trees.

A *At the Network Layer*

1 Inequality of Broadband Infrastructure

In measuring digital development, it is important to note that only about half of the world's people access and use the Internet.[13] According to International Telecommunications Union (ITU) statistics,[14] although globally over 1 billion new Internet users have been added over the last four years, outstanding digital divides persist between 'more and less connected countries, communities, and people'.[15] Most often, such divides stem from insufficient or slow connectivity, which is closely correlated to geography and socio-economic status.[16] That said, substantial digital divides exist between countries, with nearly 87 per cent of people using the Internet in developed countries compared with 47 per cent in developing countries.[17] In least developed countries (LDCs) only 19 per cent of individuals were online in 2019.[18]

Evidently, the 'haves' – people who are connected to the Internet – are empowered. Being 'unconnected' means the 'have-nots' cannot access online health services, make payment via mobile phones or increase productivity with digital skills. Digital infrastructure allows people to participate in the digital economy, which, in return, increases their overall well-being in these countries.[19] The recent pandemic has convincingly demonstrated the glaring need to bridge the digital divide. The COVID-19 crisis has stimulated a surge in the use of digital services. In the USA, as an example, home broadband traffic has increased by roughly 20 to 40 per cent since the onset of

[12] However, complete comprehensiveness is impossible. It should be noted that 'data and inequality' are multifaceted issues. See generally Pistor, 'Rule by Data: The End of Markets?', 83 *Law and Contemporary Problems* (2020) 101, at 101–124; J. Haskel and S. Westlake, *Capitalism without Capital* (2018), at 118–143. This article identifies and focuses on the two priority issues – 'digital divide' and 'data capitalism'.

[13] International Telecommunications Union (ITU), Digital Inclusion of All (2019), available at www.itu.int/en/mediacentre/backgrounders/Pages/digital-inclusion-of-all.aspx.

[14] *Ibid.*

[15] ITU, Connect 2030: An Agenda to Connect All to a Better World (May 2020), available at www.itu.int/en/mediacentre/backgrounders/Pages/connect-2030-agenda.aspx. According to the ITU statistics, digital divides are also evident within countries. Male, urban residents and young people are more likely to access the Internet than women, rural residents and the elderly. The ITU statistics also reveal that the digital gender gap is more substantial in developing countries and in least developed countries.

[16] *Ibid.*

[17] ITU-D, Digital Inclusion (2020), available at www.itu.int/en/ITU-D/Digital-Inclusion/Pages/default.aspx.

[18] *Ibid.*

[19] ITU, *supra* note 13.

COVID-19.[20] The unprecedented demand for online delivery, including e-commerce, e-education and e-health, has underscored the need for efficient and affordable digital services.[21] Even in developed countries, Netflix and YouTube are required to reduce the streaming load by the telecommunications regulator, effectively preventing the Internet from collapsing under the strain of heavy usage due to the coronavirus pandemic.[22] The challenges that hamper greater digital inclusion in developing countries, particularly in LDCs, are now more urgent than ever.[23]

Looking to the future, the core idea behind Industry 4.0,[24] supported by the 5G network, is to connect machinery to the Internet, which encompasses technologies including 3D printing, the Internet of Things (IoT), artificial intelligence and big data analytics. The connected devices associated with the IoT, for example, will dramatically increase demands on digital networks.[25] Nearly every piece of technology we use will be part of an always-on, always-connected web of smart sensors and data-feedback devices, which, in turn, will unleash a torrent of data traffic across the Internet.[26] However, the reality is that current networks are nowhere near ready to accommodate this level of Internet traffic.[27] Accommodating the technology evolution and meeting the ensuing connectivity demands will require continued modernization of legacy telecommunications infrastructure as well as the building up of additional broadband networks.[28] Developed countries' early deployment of 5G networks is expected to exacerbate the current digital divide in light of the high levels of investment required to adopt 5G networks. According to industry estimations, the cost to deploy the 5G network may range from US $6.8 million to US $55.5 million, depending on the size of the city.[29] The ITU predicts that 5G penetration will be around 60 per cent in developed economies by 2025, whereas the same network connectivity during

[20] Information Technology Innovation Foundation, Lessons from the Pandemic: Broadband Policy after COVID-19 (2021), available at https://itif.org/publications/2020/07/13/lessons-pandemic-broadband-policy-after-covid-19.

[21] WTO, E-Commerce, Trade and the Covid-19 Pandemic Information Note (2020).

[22] 'Netflix and Youtube Are Slowing Down in Europe to Keep the Internet from Breaking', *CNN News* (20 March 2020), available at https://edition.cnn.com/2020/03/19/tech/netflix-internet-overload-eu/index.html.

[23] WTO, *supra* note 21.

[24] Industry 4.0 stands for the Fourth Industrial Revolution. Price Waterhouse Cooper, Industry 4.0: Building the Digital Enterprise (2016), at 7, available at www.pwc.com/gx/en/industries/industries-4.0/landing-page/industry-4.0-building-your-digital-enterprise-april-2016.pdf.

[25] The Internet of Things (IoT) refers to 'a global, distributed network of physical objects that are capable of sensing or acting on their environment, and able to communicate with each other, other machines or computers'. The IoT should be seen as the aggregation of many machine-to-machine connections that focus on the 'sharing of data' and processing that takes place between these devices. R. Buyya *et al.*, *Internet of Things: Principles and Paradigms* (2016), at 3–23.

[26] A. Bureca, *The Role of the Internet of Things from a Servitization Perspective* (2017), at 18.

[27] ITU, Regulation and the Internet of Things (2015), available at www.itu.int/en/ITU-D/Conferences/GSR/Documents/GSR2015/Discussion_papers_and_Presentations/GSR_DiscussionPaper_IoT.pdf.

[28] ITU, Setting the Scene for 5G: Opportunities and Challenges (2018), at 30, available at www.itu.int/pub/D-PREF-BB.5G_01.

[29] *Ibid.*

the same period will be below 10 per cent in Latin America and below 5 per cent in African countries.[30]

2 Telecommunications Liberalization and Broadband Equality: The Missing Link

The pre-Uruguay Round of the General Agreement on Tariffs and Trade's (GATT) system applied only to trade in goods.[31] In light of the increased potential for international trade in services, the elimination of trade barriers to services sectors became a major priority of a number of developed countries in the Uruguay Round of trade negotiations in the early 1990s.[32] The conclusion of the General Agreement on Trade in Services (GATS) in 1994 formed an essential component of the legal framework for the global trading system.[33] The GATS is the first multilateral trade agreement to cover trade in services, through which WTO members commit to the liberalization of the service sectors. In scheduling their market access commitments, members indicate the limitations on market access for each service sector scheduled with regard to each of the 'four modes of supply'.[34] Arguably, the GATS opened the global telecommunications markets for multinational telecom companies in such a way that a critical mass of WTO members were able to include telecommunications services in their schedules of commitments. According to the WTO Secretariat, overall, emerging economies have recorded a high incidence of commitments on Mode 3 (foreign investment).[35] Such unique patterns of commitments by emerging economies 'illustrate the importance they have attached to foreign direct investment (FDI) as a means of improving and extending national telecom networks and universal access'.[36]

For a long time, even before the broadband era, developing countries and LDCs have required injections of foreign capital into their digital infrastructures. In the pre-GATS world, most states maintained state-monopoly control over the telecommunications infrastructure. Despite the enormous demand for capital to build large-scale digital networks, the telecommunications services sector in most developing countries was closed to FDI. When the GATS became effective, market forces were unleashed, and monopoly telecom incumbents began to face both domestic and foreign competition. In theory, competition driven by market forces should deliver broadband Internet

[30] UNCTAD, Digital Economy Report (2019), at 7, available at https://unctad.org/webflyer/digital-economy-report-2019.

[31] General Agreement on Tariffs and Trade 1947, 55 UNTS 194.

[32] Lang, 'GATS', in D. Bethlehem *et al.* (eds), *The Oxford Handbook of International Trade Law* (2009) 157, at 160.

[33] *Ibid.* General Agreement on Trade in Services 1994 (GATS), 1869 UNTS 183.

[34] Lang, *supra* note 32, at 160–161. At the most general level, the conceptual cornerstone of the GATS is its definition of trade in services. For the purposes of the GATS, trade in services is defined in Art. I:2 by reference to four different ways in which such trade can occur: cross-border supply (Mode 1); consumption abroad (Mode 2); supply through commercial presence – that is, foreign investment (Mode 3); and supply through presence of natural persons (Mode 4).

[35] WTO Secretariat, Guide to the GATS (2000), at 540.

[36] *Ibid.*

services more effectively than monopoly-based schemes. The economic assumption was that government-owned telecommunications companies would be privatized, and when confronted with the threat of entry from new competitors, these monopolies would become more efficient. At the same time, openness to foreign capital in the telecommunications industry can result in increased infrastructure investment and thus bridge the digital divide.

The economic benefit of market access commitments, however, has never been realized in many developing countries and LDCs. There is a missing link between the consequences of telecommunications liberalization and broadband investment. Before the WTO opened the global telecommunications market, cross-subsidization within a monopolized market was the traditional means of pursuing universal service goals.[37] Under such a monopoly scheme, losses incurred from less lucrative activities were financed by income earned from more profitable ones.[38] The trend of telecommunications liberalization brought about by the GATS, however, has posed a significant threat to cross-subsidies.[39] In competitive telecommunications markets, cross-subsidies have been squeezed out of the rate structure because prices in low-profit areas have not been rebalanced to competitive levels.[40] As a result, market forces may even broaden the digital divide. Without governmental intervention, profit-motivated telecom network operators will focus on serving high-usage businesses in dense urban areas, not rural areas or low-usage households – the so-called 'cream-skimming' or 'cherry-picking' effect.[41] After all, although competition delivers broadband in 'abundance', it distributes it unequally.

To conclude, market liberalization alone cannot guarantee equality. To bridge the digital divide, governments have turned to public policies that aim to both promote market efficiency and improve social welfare – namely, pro-competitive regulations complemented by digital inclusion programmes that mitigate the digital divide between commercially viable and non-viable areas.[42] In order to promote affordable access to physical networks, the challenge for governments is how to utilize competition to maximize access while enforcing a digital inclusion policy to minimize geographic inequalities. It has been generally recognized by regulators around the world that increased competition, coupled with a domestic universal service fund, may provide a state with the best opportunity to achieve the goal of digital inclusion.[43] As discussed in Section 3.A of this article, the domestic 'funding' mechanism, therefore, becomes the central issue in the alleviation of the digital divide.

[37] See sections 3.A and 3.B in this article.

[38] S. Benjamin and J. Speta, *Internet and Telecommunication Regulation* (2019), at 670.

[39] See generally WTO Secretariat, *supra* note 35, at 531–533.

[40] *Ibid.*, at 672; see also Sidak and Spulber, 'Deregulation and Managed Competition in Network Industries', 15 *Yale Journal on Regulation* (1998) 117, at 120–125.

[41] *Ibid.* (explaining why the cost of providing service per subscriber is lower in more densely populated areas).

[42] *Ibid.*, at 117.

[43] For best practices in universal services funds, see ITU, Universal Service Funds and Digital Inclusion for All (2013), available at www.itu.int/en/ITU-D/Digital-Inclusion/Documents/USF_final-en.pdf.

B *At the Application Layer*

1 Inequality of Digital Platforms

We now turn to the application layer of the Internet: digital platforms. In a similar, but somehow broader, context, the benefits of datafication are also not evenly distributed. Inequality at the application layer – mainly, the digital platform – is quickly increasing. The USA and East Asia account for 90 per cent of the market for large-scale digital platforms, whereas Africa and Latin America's combined share comprises only 1 per cent of the market.[44] The uneven, if not one-way, transnational data flows indicate that 'data' – the input for artificial intelligence and other technologies – has largely originated abroad for data analysis. Given the inordinate concentration of digital technologies in developed economies and a few Asian countries, most developing countries are becoming 'net data exporters' that consistently supply valuable data without fairly benefiting from the digital economy.[45]

To illustrate, the most important feature of a digital platform is scale. In other words, a platform can only provide value to users if it grows to a significant size.[46] When a digital platform reaches a certain scale, it gains access to more and more of its users' data. Of course, this feature is not even remotely novel because larger factories have always been more efficient than smaller ones, even in the 'old economy'. However, digitalization forces this economic logic to the extreme.[47] Notwithstanding, companies in smaller countries are disadvantaged *vis-à-vis* companies in larger countries simply because of the constraints of smaller markets in terms of efficiencies of scale and volume of data.[48] The leading platforms, including Google, Facebook, Amazon, Baidu and Alibaba, were launched in the USA or China, where they could operate and reach the necessary scale in a large domestic market before they went global.[49]

More importantly, these big tech companies have the ability to commoditize our data, which is the key ingredient of many digital services, including artificial intelligence.[50] As commentators have rightly pointed out, data is the single-largest lasting asset of these globally dominant companies.[51] Indeed, data is now becoming a form of capital.[52] The ability to collect, use and apply data is a competitive parameter whose

44 India and South Africa, Work Programme on Electronic Commerce, The E-Commerce Moratorium: Scope and Impact (E-Commerce Moratorium), Doc. WT/GC/W798, 10 March 2020, para. 3.4.

45 *Ibid.*

46 European Union (EU), Digital Platform's Market Power (EU Digital Platform), 30 September 2019, available at https://ec.europa.eu/competition/information/digitisation_2018/contributions/emag.pdf.

47 EU, Competition Policy for the Digital Era (EU Competition Policy), 20 May 2019, available at https://op.europa.eu/en/publication-detail/-/publication/21dc175c-7b76-11e9-9f05-01aa75ed71a1/language-en.

48 E-Commerce Moratorium, *supra* note 44, para. 3.2.

49 EU Digital Platform, *supra* note 46, at 3.

50 See generally T. Taulli, *Artificial Intelligence Basics* (2019), at 36; C. Skinner, *Digital Human* (2018), at 58–60.

51 See, e.g., A. Moazed and N. Johnson, *Modern Monopolies* (2016), at 99; see also MIT Technology Review Insights, The Rise of Data Capital, 21 March 2016, available at www.technologyreview.com/2016/03/21/161487/the-rise-of-data-capital.

52 R. Baldwin, *The Globotics Upheaval* (2019), at 216–217. As Baldwin quoted the comments of Eric Posner and Glen Weyl, once we give our data to the big tech companies, it is theirs to keep. They can use it as much as they like. Such practice is governed by the 'data-as-capital' view. However, under the 'data-as-labour' view, we maintain the data ownership and the big tech companies would have to pay us for the data we 'create'.

relevance is quickly increasing.[53] The data held by these leading platforms is particularly valuable due to the scale and scope of user data collected, which further provides these big players with strong competitive advantages, allowing them to dominate in the relevant market, create entrance barriers to potential competitors, attract more and more users, build richer and richer data sets and reinforce their market power.[54]

The reality of this battle is clear: big platforms' business practices interlock with a combination of forces to dominate the data market, presenting a new type of modern monopoly.[55] To some extent, the emerging phenomenon of leading platforms that appropriate and extract data for profit can be conceptualized as 'data colonialism'.[56] The overwhelming 'economies of scope' empower these large incumbent platforms, giving them a strong competitive advantage.[57] Platformized transactions further enable the expansion of data capitalism, which works both domestically on countries' home populations and also on a global scale. In this 21st-century version of data colonialism, big tech companies benefit from colonization all over the world, representing 'digital equality' at the application level. In this regard, the North–South divide does not seem to matter as much as it usually does.[58]

2 *Digital Trade Market Access and Data Colonization: An Unforeseen Development*

Today's platformization of services was an 'unforeseen development' at the time the WTO was established in the early 1990s. During the Uruguay Round negotiations, the GATS drafters could not have been aware of the future existence and features of digital platforms. In those days, Mode 1 (cross-border) services trade through the Internet was considered irrelevant to most of the service sectors.[59] Today, technological innovations have brought about exponential growth in data generation and use. This raises the question of whether the GATS' market access commitments (which were made decades ago) remain tenable in the age of data.[60]

Digital services measures have been repeatedly challenged before the Dispute Settlement Body of the WTO. In the *China – Audiovisual Services* dispute,[61] the Appellate

[53] EU Competition Policy, *supra* note 47; see also S. Zuboff, *The Age of Surveillance Capitalism* (2019), at 338.

[54] Australian Competition and Consumer Commission (ACCC), Digital Platforms Inquiry: Final Report (2019), at 57, available at www.accc.gov.au/publications/digital-platforms-inquiry-final-report.

[55] Moazed and Johnson, *supra* note 51, at 99; see also F. Ducci, *Natural Monopolies in Digital Platform Markets* (2020), at 24.

[56] See N. Couldry and U. Mejias, *The Cost of Connection* (2019), at 83–85, 187–196; see also West, 'Data Capitalism: Redefining the Logics of Surveillance and Privacy', 58(1) *Business and Society* (2019) 20, at 24.

[57] Zuboff, *supra* note 53, at 128–137; Haskel and Westlake, *supra* note 12, at 118–119.

[58] Segura and Waisbord, 'Between Data Capitalism and Data Citizenship', 20(4) *Television and New Media* (2019) 412, at 412–419.

[59] 'Mode 1' refers to services supplied cross-border. See note 34 above.

[60] Ciuriak, 'Do WTO Commitments Remain Tenable in the Age of Data? Renegotiating the Rules-Based System for the Data-Driven Economy' (2021), available at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3879150.

[61] WTO, *China – Measures Affecting Trading Rights and Distribution Services for Certain Publications and Audiovisual Entertainment Products* (*China – Audiovisual Services*) – *Report of the Appellate Body*, 19 January 2010, WT/DS363/AB/R. The dispute concerns China's national treatment limitations under Mode 3.

Body rejected China's arguments regarding the factual situation and the significance of the circumstances of the conclusion of the treaty, implying that the technical and commercial reality at the time of China's accession was not relevant.[62] To illustrate, in its GATS Schedule, China opened its market to 'sound recording distribution services'.[63] The Chinese domestic legal framework, however, restricted foreign-invested enterprises from engaging in online music service platforms. The USA, therefore, claimed that China's measures were inconsistent with the GATS obligations.[64] China, in turn, argued that the first online music service platforms in China were launched in the early 2000s. In other words, such digital platforms were a new phenomenon that did not exist at the time of China's WTO accession. China therefore asserted that online music service platforms were not covered by China's GATS market access commitments.[65] On this issue, the Appellate Body concluded that the Chinese commitments in dispute are 'generic terms' whose content may 'change over time' – namely, from physical to digital.[66]

In brief, the WTO jurisprudence has confirmed that, where GATS market access commitments exist, they encompass the delivery of the services through electronic means.[67] A market access commitment for Mode 1 therefore implies the right of other members' businesses to supply a service through all means of delivery, including digital platforms on the Internet.[68] Under such a broad, if not overbroad, interpretative approach, many of the existing market access commitments can be seen as, to a certain degree, 'future proof', covering platform-based, data-driven e-commerce.[69] To conclude, 'platformization' was an unforeseen phenomenon when WTO members made the GATS market access commitments. However, as evidenced by the *China – Audiovisual Services* dispute, these decades-old commitments have certainly played more than a marginal role in the story of the evolution of datafication. Regardless of whether or not it is a 'historical accident', most states have undertaken the obligations

[62] *China – Audiovisual Services – Report of the Appellate Body*, *supra* note 61, paras 407–410.

[63] *China – Audiovisual Services – Report of the Panel*, 12 August 2009, WT/DS363/R, paras 7.1300–7.1311.

[64] To be more specific, national treatment commitments under Mode 3. *China – Audiovisual Services – First Written Submission of the United States of America*, 13 May 2008, WT/DS363, paras 140–155, 357.

[65] *China – Audiovisual Services – First Written Submission of the People's Republic of China*, 20 June 2008, WT/DS363, paras 389–403.

[66] *China – Audiovisual Services – Report of the Appellate Body*, *supra* note 61, para. 396.

[67] WTO, *United States – Measures Affecting the Cross-Border Supply of Gambling and Betting Services (US – Gambling) – Report of the Appellate Body*, 20 April 2005, WT/DS285/AB/R, paras 218–220.

[68] Peng, 'Digital Trade', in D. Bethlehem *et al.* (eds), *The Oxford Handbook of International Trade Law* (2nd edn, 2022), Chapter 29 (discussing whether the GATS is sufficiently dynamic to cover every new technological innovation given its positive-list architecture).

[69] Gao, 'Google's China Problem: A Case Study on Trade, Technology and Human Rights under the GATS', 6 *Asian Journal of WTO and International Health Law and Policy* (2011) 349, at 364 (discussing the most appropriate classification for Google's search services); see also 'China Accuses U.S. of Violating WTO Rules in TikTok, WeChat Moves', *Inside U.S. Trade* (2 October 2020). The Trump administration imposed restrictions on Chinese-owned social media platforms TikTok and WeChat. China claimed that the US actions violate its commitments under the GATS. China maintained that the two platforms provide services covered under GATS obligations – for example, advertising services, computer-related services, telecommunications, audio-video services and entertainment services.

through the GATS market access commitments to leave the door open for the big tech companies.[70]

3 Inequality in Broadband Infrastructure: Trade and Development

A *Digital Divide: 'Broadband Human Right' Is Not Enough*

A long-debated concern expressed by developing economies is the inability to take advantage of evolving digital technology. Generally, this inability underscores the importance of greater 'digital inclusion', which is defined as bridging the gap between individuals and groups as well as economies.[71] Efficient and affordable digital infrastructure is the prerequisite that enables people to meaningfully participate in the digital economy. In this broadband era, people who are connected are empowered in a manner that allows them to access information, online education, health and banking services and so on.

Broadband Internet access has been advocated as a 'fundamental right'.[72] Finland, as a utopian example, is the first country in the world to enshrine broadband access as a right in law, legally guaranteeing the Finnish people a one megabyte speed in 2010 and a 100 megabyte per second (Mbps) broadband connection by the end of 2015.[73] Similarly, the United Kingdom (UK) government recognized that access to the Internet is 'the passport to the information society'[74] and an 'essential element to participate in the economy' – that is, 'as vital as access to electricity a century ago'. In practice, the UK government announced a new 'legal right' to 25 Mbps broadband, which ensures that all residents and businesses in the UK have access to broadband through a 'Universal Broadband Obligation'.[75] The government has also used 'coverage obligations' attached to the 4G operators' licences and has required operators to reach 95

[70] The GATS explicitly recognizes the right of members to pursue policy objectives through regulation, even in sectors where they have undertaken full commitments on market access. As discussed in section 4.C, this article argues that the (unintentional) opening of the data market needs to be accompanied by the introduction of new competition rules.

[71] Sidak and Spulber, *supra* note 40, at 117.

[72] For example, Satya Nadella, the chief executive officer of Microsoft, is the advocator of 'broadband fundamental rights'. 'Broadband Internet Access Is a Fundamental Right', *CNN Business* (15 July 2020), available at https://edition.cnn.com/2020/07/15/tech/microsoft-land-olakes-broadband-access/index.html.

[73] See, e.g., 'Finland Makes Broadband a "Legal Right"', *BBC News* (1 July 2010), available at www.bbc.com/news/10461048. Finland became the first country in the world to make broadband a legal right for every citizen. Since 1 July 2010, every Finn has the right to access to a one megabyte per second (Mbps) broadband connection.

[74] UK Parliament, Universal Broadband Obligation, 14 January 2009, available at https://edm.parliament.uk/early-day-motion/37476/universal-broadband-obligation.

[75] 'UK Government Makes 10Mbps Universal Broadband Obligation', *Telecoms News* (9 November 2015), available at https://telecoms.com/451742/uk-government-makes-10mbps-universal-broadband-obligation/.

per cent of the UK by 2025.[76] In this context, Taiwan, which is classified as a developing country, is also set to ensure 'broadband human rights' to 'all disadvantaged people', enabling access to 25Mbps broadband services by 2025.[77] At the other end of the spectrum, however, the United Nations' (UN) 2025 targets for 25 Mbps broadband-Internet user penetration are to reach 65 per cent in developing countries and 35 per cent in LDCs.[78]

It should be noted, however, that this human rights-oriented approach was to guarantee minimum broadband access to disadvantaged groups in rural areas. The reality, however, is that a 'broadband human right' is 'not enough' in developed countries. Despite the low floor set by developed countries in terms of standards,[79] the European Union (EU) also has ambitious digital plans for 2025, including gigabyte (1,000 Mbps) connectivity connecting all main socio-economic drivers, such as schools, transport hubs, hospitals and public administrations.[80] On the other side of the Atlantic, the US Federal Communications Commission has allocated US $9.2 billion from its Rural Digital Opportunity Fund for high-speed broadband services – with the vast majority of locations receiving gigabyte broadband.[81]

Indeed, as Samuel Moyn has pointed out, it is critical to note that 'sufficiency' and 'equality' are different.[82] The 'basic needs' and 'human rights'-oriented solutions to digital inclusion – providing the minimum broadband speed – 'coexist with a crisis of material inequality'.[83] As discussed above, in recent decades, the 'universal services' policy has been the most popular legal mechanism for countries in the promotion of digital inclusion.[84] However, neither 'universal' nor 'service' are self-defining terms in most jurisdictions. Generally, the universal services policy offers a fair degree of interpretive flexibility as technology evolves.[85] However, since the concept of

[76] UK Government, £1 Billion Deal Set to Solve Poor Mobile Coverage, 25 October 2015, available at www.gov.uk/government/news/1-billion-deal-set-to-solve-poor-mobile-coverage.

[77] Executive Yuan of Taiwan, E-Competitiveness Annual Report, December 2018, at 48, available at https://digi.ey.gov.tw/File/AEA766F9860CE4AF/dfb0aa40-a6c8-47db-ba95-708b365564e2?A=C\.

[78] ITU, The State of Broadband 2020: Tackling Digital Inequalities – a Decade for Action, September 2020, at 5, available at www.itu.int/dms_pub/itu-s/opb/pol/S-POL-BROADBAND.21-2020-PDF-E.pdf.

[79] Recently, the EU has also announced its connectivity objectives that 100 Mbps networks will reach 'all European households' by 2025. EU, Connectivity for a European Gigabit Society, 26 February 2021, available at https://ec.europa.eu/digital-single-market/en/news/connectivity-european-gigabit-society-brochure.

[80] *Ibid.*

[81] 'Successful Rural Digital Opportunity Fund Auction to Expand Broadband to Over 10 Million Rural Americans', *Federal Communications Commission News*, 7 December 2020, available at https://www.fcc.gov/document/fcc-auction-bring-broadband-over-10-million-rural-americans.

[82] S. Moyn, *Not Enough: Human Rights in an Unequal World* (2018), at 3.

[83] *Ibid.*, at 218.

[84] Universal service polices, which have long been accomplished through domestic subsidies, are explicitly recognized by the GATS Telecommunications Reference Paper, *infra* note 174. Paragraph 3 requires that the collection and distribution of a subsidy fund should be performed in a competitively neutral manner and that the funding levied should not be more than is necessary to meet the member's universal service policy requirements.

[85] See T. Bonnett, *Telewars in the States: Telecommunications Issues in a New Era of Competition* (1996), at 100. Section 254 of the US Telecommunications Act 1996, Pub. LA. No. 104-104, 110 Stat., stipulates that the Federal-State Joint Board should consider the extent to which such services (i) are essential to education, public health and safety; (ii) have been subscribed to by a substantial majority of residential consumers; (iii) are being deployed in public Telecommunications networks by Telecommunications carriers; and (iv) are consistent with public interest, convenience and necessity.

'telecommunications universal services' was introduced,[86] it essentially refers to the provision of 'minimum' telecommunications services to people at an affordable price. Here, 'universal' means that everyone is entitled to services that meet their needs, regardless of their ability to pay.[87] 'Minimum', therefore, is defined as 'something people actually want' – their 'basic needs'.[88] At the core of the issue lies the following question: in this digital age of today, how much broadband do we need? Based on the UN's 2025 targets, 25 Mbps seems to be the answer for developing countries and LDCs, which is a wide gap compared to the EU's 2025 gigabyte connectivity goal. This reconfirms the theory and experience that human rights are rarely an effective tool to address socio-economic inequalities.

B *Digital Inclusion: The Stretch of the General Exceptions*

1 The WTO Case of Brazil – Taxation

The 'enabling' character of broadband infrastructure raises questions regarding how best to tackle the issue of 'trade and development' in the digital economy. How can trade agreements help to narrow the 'digital divide' or even promote digital inclusion? In this context, the WTO's trade dispute known as *Brazil – Taxation* represents a remarkable case surrounding the challenges faced by international economic law in striking a balance between trade efficiency and digital inclusion.[89] The measures at issue concerned four Brazilian tax incentive programmes.[90] Among others, under the Brazilian Digital Inclusion Program, the only goods eligible for tax benefits are Brazilian domestic products – a straightforward situation of incentives that are provided in regard to a preference for domestic over imported goods.[91] The complaining parties – the EU and Japan – claimed that the Digital Inclusion Program was inconsistent with Article III:4 on national treatment of the GATT.[92]

[86] See C. Kennedy, *An Introduction to U.S. Telecommunications Law* (2001), at 185–199. The 1996 US Telecommunications Act was drafted in recognition of the fact that cross-subsidization funding mechanisms could not survive under the new competitive regime. The Act employs funding mechanisms financed through equitable contributions by all service providers. Every telecom carrier that provides interstate telecom services contributes, on an equitable basis, to the universal service support mechanisms. An eligible telecom carrier can receive support from these mechanisms for the provision of services within the scope of the universal service policy.

[87] Gough, 'Universal Basic Services: A Theoretical and Moral Framework', 90(3) *Political Quarterly* (2019) 534, at 536.

[88] *Ibid.*

[89] WTO, *Brazil – Certain Measures Concerning Taxation and Charges (Brazil – Taxation) – Report of the Panel*, 11 January 2019, WT/DS472/R.

[90] *Ibid.*, paras 8.5, 8.16. The measures at issue include the Informatics Program, the Program of Incentives for the Semiconductor Sector (PADIS), the Program of Support for the Technological Development of the Digital TV Equipment Industry (PATVD) and the Digital Inclusion Program (acronyms represent Brazilian-language versions of these programmes).

[91] *Ibid.*, paras 7.315–7.317. The retailers in turn only obtain the tax benefits to the extent that they have purchased these domestic goods (for resale) instead of like imported goods.

[92] *Ibid.*, para. 7.3.2.

One key issue of the dispute was whether the discriminatory aspects of the measures could be justified under Article XX(a) of the GATT 1994 – the public morals exception.[93] In the litigation, Brazil argued that 'there is a gap between demographics and regions that have access to modern information and telecommunications technology and those that do not have access or have restricted access'.[94] According to Brazil, the measures in dispute represented an important means to 'bridge this digital divide and promote social inclusion', which would in turn 'improve literacy, democracy, social mobility, economic quality, and growth'.[95] To support its overarching policy goals, Brazil submitted as evidence the UN Millennium Development Goals report,[96] which stressed that 'ICT [information and communication technology] access and use are unequally distributed within and between countries' and that 'it will be essential to address the widening digital divide'.[97] It stated further: 'Only then will the transformative power of ICTs and the data revolution be harnessed to deliver sustainable development for all.'[98] In this regard, the EU argued that the social and economic development objectives claimed by Brazil may 'characterize any governmental action'.[99] According to the EU, if objectives such as access to information were protected under Article XX, 'then any governmental action taken in the public interest could be justifiable under Article XX'.[100]

The WTO Panel found that a concern existed in Brazilian society with respect to the need to bridge the digital divide and that such concern was within the meaning of Article XX(a) of the GATT 1994.[101] The Panel therefore proceeded to examine whether the measures at issue satisfied the 'necessity test' – the principle of proportionality in the context of international economic law. Under this 'necessity test' practice, a central question is whether the discriminatory aspects of the measure are 'necessary' to achieve the claimed objective: closing the digital divide.[102] More specifically, the central question in *Brazil – Taxation* concerned whether the alternative measures proposed by the complaining parties were WTO-consistent measures that were reasonably available to Brazil, that were less trade restrictive than the measures at issue and that could achieve an equal or higher level of contribution to the objective of bridging the digital divide.[103] The Panel found that the alternatives proposed by the complaining parties would not only be WTO consistent and less trade restrictive than the Brazilian tax incentive programmes[104] but would also make a more substantial

93 *Ibid.*, para. 7.3.6.3.
94 *Ibid.*, para. 7.544.
95 *Ibid.*, para. 7.545.
96 United Nations, The Millennium Development Goals Report (2015), available at https://www.un.org/millenniumgoals/2015_MDG_Report/pdf/MDG%202015%20rev%20(July%201).pdf.
97 *Brazil – Taxation – Report of the* Panel, *supra* note 89, para. 7.563.
98 *Ibid.*
99 *Ibid.*
100 *Ibid.*, para. 7.548.
101 *Ibid.*, para. 7.568.
102 *Ibid.*, para. 7.596.
103 *Ibid.*, para. 7.549.
104 *Ibid.*, para 7.609. Both complaining parties have proposed certain WTO-consistent, less trade-restrictive alternative measures that they claim are reasonably available to Brazil.

contribution to the claimed objective than the measures at issue.[105] The Panel therefore concluded that Brazil had not demonstrated that the measures at issue were 'necessary' to achieve digital inclusion within the meaning of Article XX(a) of the GATT 1994.[106] In other words, Brazil's developmental concerns could not justify the imposition of national-origin measures.

2 The Dilemma

It was a challenging task for the WTO Panel to address 'digital divide' within the context of Article XX of the GATT. The WTO's general exceptions provide a hierarchical framework to balance international trade commitments against 'national social preferences', ranging from the protection of public morals to the maintenance of public health.[107] WTO members, for example, can justify violations of their obligations assumed under the GATS through recourse based upon one of the grounds delineated in Article XIV of the GATS.[108] The opening sentence of Article XIV (the chapeau) leaves no doubt that the negotiators' intent was that all grounds listed in this provision 'trump' trade obligations delineated in the rest of the GATS.[109] In other words, trade liberalization is not the supreme goal that all WTO members must strive to achieve at the expense of other public objectives. Domestic measures aimed at bridging the digital divide, if successfully invoked under Article XIV, may provide WTO members with a lawful escape route from their GATS obligations.

Although the term 'public morals' is not further defined in the WTO's general exceptions, WTO jurisprudence offers examples of public policies that have been found by panels or the Appellate Body to pertain to 'public morals', which include preventing underage gambling,[110] combating money laundering,[111] protecting national culture and traditional values,[112] protecting animal welfare[113] and, as demonstrated in the *Brazil – Taxation* case, bridging the digital divide and promoting social inclusion.[114] Nevertheless, only measures that are 'necessary' to protect public morals will be deemed consistent with the GATS. In this context, the criteria for the 'necessity

[105] *Ibid.*, para. 7.618.

[106] *Ibid.*, paras 7.544–7.568. The finding of the Panel in this case raised a critical question as to what constitutes public morals and how to distinguish public policies that fall under public morals and those that do not. Unfortunately, in the appeal, while the EU and Japan each appealed certain issues of law and legal interpretations developed in the Panel reports, both parties did not appeal the issue of Article XX(a). The key questions remain unanswered. *Brazil – Taxation – Report of the Appellate Body*, 11 January 2019, WT/DS472/AB/R.

[107] See, e.g., GATS, *supra* note 33, Art. XIV.

[108] *Ibid.*

[109] Mavroidis, 'Deviating from WTO Obligations', in C. Romano, K. Alter and Y. Shany (eds), *Oxford Public International Law* (2015) 324, at 324–325.

[110] See *US – Gambling – Report of the Appellate Body*, *supra* note 67, para. 278.

[111] *Ibid.*

[112] *China – Audiovisual Services – Report of the Appellate Body*, *supra* note 61, paras 141–143.

[113] See, e.g., *European Communities – Measures Prohibiting the Importation and Marketing of Seal Products* (*EC – Seal Products*) *– Report of the Appellate Body*, 18 June 2014, WT/DS400/AB/R, paras 5.199–5.203.

[114] *Brazil – Taxation – Report of the* Panel, *supra* note 89, paras 7.552–7.568.

test' have been consistently reproduced and emphasized in WTO jurisprudence, under which WTO members 'have the right to decide which level of protection of the objectives it pursues'.[115] In this particular respect, it is up to the WTO members to determine the level of protection of digital inclusion they consider appropriate, and other WTO members cannot challenge the level of digital inclusion pursued.[116] However, the 'necessity test' requires the consideration of alternatives to the measure taken in order to determine whether existing options are 'less trade restrictive' while 'providing an equivalent contribution to the achievement of the objective pursued'.[117] As evidenced in *Brazil – Taxation*, the overall structure of the necessity test developed by the dispute settlement organs of the WTO serves as a critical tool to balance the public interests of the regulating member and the trade interests of other WTO members.

Consistent with overall Article XX jurisprudence, while the panel in *Brazil – Taxation* reaffirmed the validity of the 'digital divide' concerns for the purposes of the public morals exception, it also reinforced the necessity test as a limit to how such measures can be applied. To conclude, when trade policy collides with digital inclusion policy, it leads to a dilemma between trade and non-trade values. Faced with such a dilemma, the WTO remains the most effective forum for balancing competing interests. Normatively speaking, however, there is little room for the panels to further expand the reach of the exceptions. More fundamentally still, the mere fact that a responding party must have attempted to stretch the scope of the 'public morals' exception to justify its digital inclusion policy within the WTO indicates that the interplay between international economic law and digital inequality invites further reflection.[118]

C *Digital Trade and Development: Challenges Ahead*

1 Regional Trade Arrangements: Small But Significant Steps Forward

At the regional level, parties of the recently concluded FTAs have been inclined to design an even broader exceptions clause. The Electronic Commerce Chapter of the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP), as an example, incorporated exceptions that allow CPTPP parties to maintain national measures to achieve a 'legitimate public policy objective' as long as the measures can

[115] See, e.g., *Argentina – Measures Relating to Trade in Goods and Services – Report of the Panel*, 15 May 2016, WT/DS453/AB/R9, para. 7.684.

[116] See, e.g., *EC – Seal Products – Report of the Appellate Body*, *supra* note 113, para 5.214.

[117] *EC – Seal Products – Report of the Panel*, adopted 18 June 2014, WT/DS400/R, WT/DS401/R, paras 5.260–5.264. *Brazil – Measures Affecting Imports of Retreaded Tyres – Report of the Appellate Body*, 17 December 2007, WT/DS332/AB/R, paras 141, 143, 156, 178.

[118] It should also be noted that the WTO Agreements contain over 150 special and differential treatment provisions, which typically offer trade preference, flexibility, transition periods and technical assistance to developing countries. See generally Chang, 'WTO For Trade and Development Post-Doha', 10(3) *Journal of International Economic Law* (*JIEL*) (2007) 553, 553–570; see also Bartels, 'The Trade and Development Policy of the European Union', 18(4) *European Journal of International Law* (2007) 715, 715–756. It remains to be seen how special and differential provisions will be incorporated into the future WTO e-commerce deal.

satisfy the 'necessity test'.[119] Here, as Article 28.12 of the CPTPP directs adjudicatory panels under the CPTPP to consider WTO jurisprudence, the interest in promoting a 'legitimate public policy objective' must be balanced against the trade interests of other CPTPP parties through the 'necessity test'. Specifically, a comparison between the challenged 'legitimate public policy objective' and possible alternatives will be undertaken. Similar provisions can be found in the United States-Mexico-Canada Agreement (USMCA) and other recently concluded FTAs.[120] While the mandate of each clause varies, what they have in common is that they all draw upon – among other anti-protectionism proxies – the necessity test.

At the crux of the matter is the nature of 'exceptions'. Over time, even with the expansion in scope (that is, from an exhaustive list in the WTO regime to an open-ended 'legitimate objectives' approach under the FTAs)[121] and the evolution in content (for example, 'public morals' is now an all-encompassing term), the general exceptions under international trade agreements have come to play a much more important and extensive role than their drafters anticipated. Notwithstanding an increasingly broad pronouncement, these exceptions are used only as a 'shield' and not as a 'sword'. They can only be established as a defence to claims on trade obligations, but they cannot be affirmatively invoked by a member as a basis for a claim, which leads to the main proposition of this section: digital inclusion concerns should be developed for active use as a claim, representing a valid means by which to impose affirmative obligations in the treaty.

In this regard, a feasible starting point is the incorporation of a digital economy partnership agreement (DEPA)-type digital inclusion provision, requiring mandatory cooperation in bridging the digital divide.[122] To date, international trade agreements at both the multilateral and the regional level have largely failed to appropriately address the issue of the digital divide. The provisions provided under those trade agreements, if any, are generally weak and certainly do not provide sufficient mechanisms by which to enable developed country partners to provide technical assistance and capacity building to their developing country and LDC partners.[123] Recent developments in DEPAs, however, have resulted in apparently minor, but highly symbolic, progress in global digital inclusion efforts. The module on digital inclusion in the DEPA between Singapore, Chile and New Zealand – the first of its kind[124] – establishes new

[119] See, e.g., CPTPP, *supra* note 7, Art. 14.13.

[120] See, e.g., USMCA, *supra* note 7, Art. 19.11.

[121] It is worth noting that Art. DIGIT.3 'Right to regulate' of the European Union-United Kingdom Trade and Cooperation Agreement reaffirms the parties' right to regulate to achieve legitimate policy objectives. European Union-United Kingdom Trade and Cooperation Agreement, 31 December 2020, available at https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:22020A1231(01)&from=EN.

[122] Mitchell and Mishra, 'Digital Trade Integration in Preferential Trade Agreements', ARTNeT Working Paper Series no. 191 (2020).

[123] *Ibid.*

[124] The Digital Economic Partnership Agreement between Singapore, Chile and New Zealand (DEPA), signed in June 2020, available at www.mti.gov.sg/Improving-Trade/Digital-Economy-Agreements/The-Digital-Economy-Partnership-Agreement.

collaborations in digital trade issues, including reduced disparities between developed and developing countries and among haves and have-nots within a given country.[125] Article 11 stipulates that the parties acknowledge 'the importance of digital inclusion to ensure that all people and businesses have what they need to participate in, contribute to, and benefit from the digital economy'.[126] The parties also recognize 'the importance of improving access for women, rural populations and low socio-economic groups'.[127] Toward that end, the parties have agreed to cooperate on matters relating to digital inclusion, which may comprise promoting inclusive and sustainable economic growth to ensure that the benefits of the digital economy are more widely shared.[128]

Surely, the language in Article 11 is relatively 'soft' in terms of enforceability. Parties simply 'acknowledge' or 'recognize' the importance of digital inclusion, a scenario that does not provide developing countries and LDCs adequate legal tools by which to enhance their broadband infrastructure. It should be noted, however, that Article 14 renders Article 11 subject to dispute settlement.[129] A party may request the appointment of an arbitral tribunal and arbitration to settle disputes between the parties concerning their rights and obligations with regard to digital inclusion. In any event, a significant step that turns the 'exceptions' into 'rules' has been taken. If it is sufficiently sharpened in future trade negotiations, this basis for a claim may indeed play a more active role in combating the threat of digital exclusion. To conclude, the emerging incremental approaches under the module on digital inclusion in the DEPA may prove to be a more realistic direction to strengthen the link between international economic law and digital inclusion.

2 WTO E-Commerce Trade Negotiations: The Digital 'Haves' Trade Agreement?

At the multilateral level, the dynamics in the interplay between trade liberalization and digital inequality likely will continue. Recent negotiating proposals in the WTO e-commerce trade negotiations reveal how digital trade and development needs are closely intertwined. Central debates include how to promote digital capacity and take into account the special constraints that developing countries face in the digital economy.[130] Communication from Côte D'Ivoire, among other interventions, called for the WTO Secretariat to be responsible for establishing a multilateral cooperation forum to 'ensure universal benefits from the digital economy'.[131] Reiterating the fact that they 'lack the infrastructure to fully exploit the potential of e-commerce',[132] developing

[125] See *ibid.*, Module 11 Digital Inclusion.
[126] *Ibid.*, Art. 11.1.1.
[127] *Ibid.*, Art. 11.1.2.
[128] *Ibid.*, Art. 11.1.3.
[129] *Ibid.*, Art. 14.
[130] Argentina, Colombia and Costa Rica, WTO Negotiations on Trade-Related Aspects of E-Commerce, Doc. INF/ECOM/1, 25 March 2019; Brazil, Exploratory Work on Electronic Commerce, Doc. INF/ECOM/3, 25 March 2019.
[131] Côte D'Ivoire, Communication no. INF/ECOM/46, 14 November 2019; Côte D'Ivoire, Communication no. INF/ECOM/49, 16 December 2019.
[132] *Ibid.*

countries' position is that they 'have not felt the effects of trade digitalization on their economic development' and that the ongoing e-commerce trade negotiations may 'ignore the development interests of low-income countries'.[133] Similar communications from the developing members also requested that the WTO Secretariat establish a fund to support the integration of developing countries and LDCs into the digital economy. In their view, the WTO 'should be responsible' for identifying and cataloguing the various programmes, which are aimed at 'providing technical assistance and implementing pilot projects for the development of e-commerce'.[134]

In this context, the Digital Silk Road (DSR) under China's Belt and Road Initiative (BRI) represents an indispensable component in mapping all of the contours of such an undertaking.[135] The BRI, as China's most significant strategic agenda following its accession to the WTO, has centred its initiatives on infrastructure development. The DSR's primary undertaking is straightforward: rolling out broadband in dozens of countries in BRI regions where digital infrastructure is underdeveloped or even non-existent as well as upgrading existing Internet connections to higher broadband across BRI regions.[136] Under the DSR, various projects have been implemented with the help of Chinese government investments, which generally involve financial aid and technical support for digital infrastructure and related industries. For example, China has been deeply involved in the Infrastructure Consortium for Africa, including the establishment of national broadband networks. Several African countries have substantially benefited from the DSR, primarily in the areas of 5G networks and fibre optic cables.[137] Overall, the DSR has been concentrating on the urgent needs of broadband connectivity in the global South.[138]

The DSR has often been conceptualized by Western observers as the expansion of China's digital authoritarianism,[139] and China's digital push for development cooperation has long been framed as a part of the Chinese effort to assert itself as the dominant technological power in the world.[140] Nevertheless, the DSR can help to enhance digital connectivity in underserved regions, improve broadband access in developing

[133] *Ibid.*

[134] *Ibid.*

[135] Wang, 'The Belt and Road Initiative Agreements: Characteristics, Rationale, and Challenges', 20 *World Trade Review* (*WTR*) (2021) 282, at 287; Chaisse and Matsushita, 'China's "Belt and Road" Initiative: Mapping the World Trade Normative and Strategic Implications', 52 *Journal of World Trade* (*JWT*) (2018)163, at 167.

[136] Deloitte, BRI Update 2019, available at www2.deloitte.com/cn/en/pages/soe/articles/bri-update-2019-recalibration-and-new-opportunities.html.

[137] *Ibid.*

[138] *Ibid.* China has signed Digital Silk Road (DSR) cooperation agreements with at least 16 countries. See generally Wang, *supra* note 135, at 284–286.

[139] DSR is driven by China's private companies. Telecom service suppliers such as China Telecom Corporation, China Mobile and China Unicom, together with telecommunications equipment vendors such as Huawei and ZTE, take advantage of the 'DSR label' to expand their 5G markets overseas. Erie and Streinz, 'The Beijing Effect: China's Digital Silk Road as Transnational Data Governance', 54:1 *New York University Journal of International Law and Politics* (2021) 1, at 54–58.

[140] *Ibid.*; see also Leandro, 'The OBOR Global Geopolitical Drive: The Chinese Access Security Strategy', in J. Chaisse and J. Gorski (eds), *The Belt and Road Initiative: Law Economics and Politics* (2018) 83, at 88.

countries and, at the end of the day, narrow the infrastructure gap. Amid the WTO e-commerce trade negotiations, the lesson learned from the DSR is to save the WTO e-commerce trade deal from being a digital 'haves' trade agreement. In the digital world, developed countries might just as well be from Mars, while developing countries might just as well be from Venus. In the meantime, the latter are still at the stage where they are struggling to provide Internet access in rural areas and among disadvantaged groups, whereas the former are already focusing on barriers to digital trade – for example, data localization measures, open government data, e-invoicing facilitation and so on.[141] Such critical infrastructure gaps have posed challenges to the promotion of the more widespread adoption of e-commerce trade rules. The WTO must be very careful not to give the emerging economies a reason to think they are being excluded from the digital trade governance. Priority in the negotiating agenda should be given to addressing the issues surrounding infrastructure development, including both goods (for example, tax measures/subsidies on ICT products)[142] and services (for example, the broadband FDI).[143]

4 Inequality in Digital Platforms: Trade and Competition

A *Data as Capital: When Winners Act Globally and Take All*

Much like the persistent unequal distributions in the broadband networks, the upper layer of the Internet architecture – the platform – is now facing threats posed by data capitalism. The digital economy is gradually being shaped by increases in market concentration on a global scale, the proliferation of anti-competitive practices by digital platforms and the abuse of dominant market position by platform monopolies.[144] Taken as a whole, the 'winner takes all' is a predictable phenomenon of the digital economy, in which big tech companies do not 'compete in the market' but, rather, 'compete for the market' to displace each other.[145] In this context, competition policy must be tailor-made in order to ensure its effectiveness *vis-à-vis* dominant digital players, thereby safeguarding competition in the markets.[146]

The trend of rising inequality in the digital world challenges our existing legal approaches to the problem of anti-competition. There is an urgent need to revisit the fundamental goals of competition law in the light of digital trade.[147] At the crux of the matter are questions regarding how to 'decolonize' data, how public policy should

[141] See, e.g., New Zealand, Communication no. INF/ECOM/36, 5 July 2019.
[142] As discussed in section 3.B on the *Brazil – Taxation* case.
[143] As discussed in section 2.A on the lack of foreign capital in broadband investment.
[144] EU Competition Policy, *supra* note 47.
[145] OECD, Big Data: Bringing Competition Policy to the Digital Era, Doc. DAF/COMP (2016), at 17, available at https://one.oecd.org/document/DAF/COMP(2016)14/en/pdf.
[146] *Ibid.*
[147] Couldry and Mejias, *supra* note 56, at 191.

evolve to promote competition in the digital market and how to confront data capitalism as a whole.[148] Could 'opening up' data held by the leading digital platforms reduce barriers and thus promote competition in the digital market? If so, what roles will competition policy and international law assume?

At this moment, competition authorities all over the world are considering the benefits associated with digital platform obligations.[149] One potential mechanism, among others, is to require leading digital platforms to share data with other services operated by their potential rivals, which may 'enhance data access, resolve data bottlenecks, and contribute to a fuller realization of the innovative potential inherent in data'.[150] In any event, all of the approaches require greater cross-border collaboration. Big tech companies act globally, and dominant platforms are global in scope. The economic scale of the impact of digital platforms on economies can only be addressed through competition rules at the international level.[151] Compared with national regulations, competition disciplines at the international level would be more effective in defining the relevant (global) market, identifying the abusive market power (globally), addressing (cross-border) collusive practices and digital cartels and reviewing mergers of (global) platforms. After all, the leading platforms operate on a global scale. Efforts at the international level would be more commensurate with the scale of impact of digital platforms.[152]

In practice, the competition assessment will necessarily depend on the extent and type of data to be shared, the precise form of the data-sharing arrangement, the degree of transparency requirements and the definition of the relevant market.[153] However, the gap in competition policies and enforcement among jurisdictions will likely leave any competition authority ill-equipped to effectively address the anti-competitive practices of the big tech companies, simply because data flows do not stop at borders.[154] The dynamics of global data flows make it legally impossible to enforce data competition policies without global regulatory harmonization. The lack of consistency among national competition laws demonstrates the need for a more consistent, streamlined system between competition regimes – either through greater international collaboration or the creation of additional cross-border disciplines for competition policy.

B *The EU Competition Rules for Digital Platforms: Global Norm Setting?*

A number of regulatory recommendations have been floated at both the national (primarily in developed countries) and the regional level. Among these, the Organisation

[148] EU Competition Policy, *supra* note 47.
[149] A. Ezrachi, *Virtual Competition* (2016), at 245–246.
[150] ACCC, *supra* note 54.
[151] UNCTAD, *supra* note 30, at 21.
[152] *Ibid.*, at 147–148.
[153] A. Hintz, L. Dencik and K. Wahl-Jorgensen, *Digital Citizenship in a Datafied Society* (2019), at 64–68; M. Stucke and A. Grunes, *Big Data and Competition Policy* (2016), at 168.
[154] Stucke and Grunes, *supra* note 153, at 338.

for Economic Co-operation and Development's (OECD) policy papers point to the high concentration of data-driven markets, express caution regarding the absorption of new entrants through acquisitions by dominant incumbents and call for competition rules that seek to promote the efficient use and exchange of data.[155] The European Parliament has also proposed regulations that would impose special obligations on digital platforms.[156] The Australian Competition and Consumer Commission has conducted public consultations on policies that would provide for greater regulatory oversight of digital platforms with strong market positions, such as Google and Facebook.[157]

While various regulatory proposals are still subject to policy debates, and certainly there are divergent views on how competition law should be restored to account for specific challenges brought about by datafication and data capitalism, the proposed legal approaches share common elements:

- Relevant markets and market power: all of the proposals address the need to clarify what constitutes the 'relevant market' of a digital platform. To summarize, identifying relevant markets inside the ecosystem of 'data' can prove particularly challenging because big tech companies always assume multiple roles.[158] Competition authorities must identify a multi-side market and consider relevant data flows in the market.[159]
- Dominant position and anti-competitive practices: a closely related issue is market power assessment in the context of data access and data control, which requires, among other things, specific criteria to assess the impact of a dominant market position. It is a generally shared view among competition authorities that, when data is overly concentrated in the hands of big tech companies, it may provide these firms with a substantial competitive advantage against new entrants.[160] The misuse of data to maintain market power should be considered an anti-competitive practice that requires the intervention of competition authorities.[161] Most policy papers attempt to identify the types of anti-competitive conduct that are enabled through the control of data, including collusive practices and digital cartels.[162] As emphasized in several policy papers, the incentive for digital platforms to use data to collude with each other is enormous.[163] As a result, the need for competition authorities to adapt their tools to address digital cartels is overwhelmingly strong.

[155] OECD, *supra* note 145, para. 86.

[156] European Parliament, Recommendations to the Commission on the Digital Services Act: Improving the Functioning of the Single Market, Doc. 2020/2018(INL) (2020), available at www.europarl.europa.eu/doceo/document/A-9-2020-0181_EN.html.

[157] ACCC, Digital Platforms Inquiry, 10 December 2018, available at www.accc.gov.au/focus-areas/inquiries-ongoing/digital-platforms-inquiry/preliminary-report.

[158] UNCTAD, *supra* note 30, at 138–139.

[159] OECD, *supra* note 145; see also section 4.C.2 in this article for further discussion.

[160] OECD, *supra* note 145.

[161] UNCTAD, *supra* note 30, at 139.

[162] *Ibid.*; see also EU, A European Strategy for Data, Doc. 19.2.2020 COM(2020) 66 final (2020).

[163] OECD, Algorithms and Collusion: Competition Policy in the Digital Age (2017), at 21.

- Mergers and acquisitions: another closely linked dimension is 'data-driven mergers and acquisitions'.[164] As evidenced by the Facebook/WhatsApp merger, it is not uncommon for digital platforms to acquire other digital companies and start-ups, which increases the risk of the monopolization of data.[165] Policymakers increasingly understand the need to examine the impact of mergers on data, the overall competitive implications of mergers and acquisitions involving digital platforms and the new threshold for merger control in competition law.[166]

Among all of the proposed regulatory approaches, the EU's Digital Services Act and Digital Markets Act set a high global benchmark for regulating digital platforms.[167] In particular, the Digital Markets Act addresses digital market 'imbalances' in the EU, imposes tailored asymmetric *ex-ante* rules on large digital platforms (so-called 'gatekeeper platforms'),[168] provides a legal mechanism based on market investigations and establishes harmonized rules prohibiting certain unfair practices by gatekeeper platforms.[169]

Such an ambitious agenda reveals the EU's aim to be a global norm setter in digital markets.[170] Together, the proposed new rules would assert significant regulatory control over digital platforms, both within Europe and beyond. If they become effective, the rules will bind global platforms in the years to come, rendering them de facto global standards – more commonly known as the 'Brussels Effect'. As for big tech, the stakes are particularly high because the EU is one of the world's largest consumer markets. They must accept the EU's 'terms of business' as the price of admission. To conclude, driven by economic and strategic rationales, the EU has been leveraging its economic muscle and vying for a leadership role in shaping the global rulebook governing digital platforms. The EU's intensified efforts to set international standards for the digital economy could be part of the solution toolkit to curb data capitalism.

[164] See e.g., UNCTAD, Competition Law, Policy and Regulation in the Digital Era (2021), at 10.

[165] EU Competition Policy, *supra* note 47; see also UNCTAD, *supra* note 30, at 139.

[166] EU Competition Policy, *supra* note 47.

[167] On 15 December 2020, the European Commission published its Digital Services Act package, which proposes two pieces of legislation: the Digital Services Act (DSA) and the Digital Markets Act (DMA), available at https://ec.europa.eu/digital-single-market/en/digital-services-act-package.

[168] *Ibid*. The DMA will apply only to providers of 'core platforms services'.

[169] *Ibid*. Gatekeeper platforms carry additional responsibilities, including having to comply with a defined set of obligations to avoid certain unfair practices, to ensure interoperability with its platform and to share data that is provided or generated by business users and their customers in their use of the platform.

[170] As of April 2022, the European Parliament and the EU Council have reached political agreement on the DSA and the DMA. The two instruments are now subject to formal approval and expected to enter into force in the near future.

C *WTO Competition Rules for Digital Trade: Sufficient Momentum Needed*

1 A WTO Data Reference Paper

At the multilateral level, competition was one of the so-called 'new issues' under the WTO framework two decades ago, at which time members attempted to address how domestic and international competition policies interact with international trade.[171] Much discussion has been carried out in the relevant legal literature regarding the importance of competition policy to trade liberalization, which generally describes how international cartels affect international trade, how transnational abuses of a dominant position constitute trade barriers to goods or services[172] and how anti-competitive vertical market concentrations exclude foreign suppliers from a market.[173] Nonetheless, to date, no significant consensus on the convergence of the two areas has emerged.[174] How can international economic law help to ensure that additional pro-competitive regulations are put into place? The real question is this: how can we restore the relevance of international economic law to the digital economy? Could such a restoration be launched with the modernization of the WTO's GATS Telecommunications Reference Paper for the data-driven economy?

To illustrate, while WTO members have to date failed to agree on competition rules, most WTO members, in the context of the WTO's negotiations on basic telecommunications services following the Uruguay Round, have committed to the regulatory principles spelled out in the GATS Telecommunications Reference Paper under the GATS,[175] which sets out specific obligations for competition.[176] In the absence of general competition rules under the WTO regime, the reference paper serves as a sector-specific competition agreement, through which anti-competitive practices can be challenged using the WTO dispute settlement system.[177] The reference paper requires

[171] The issue of competition policy, however, was dropped from the Doha Round of the WTO trade negotiations. WTO, Interaction between Trade and Competition Policy, available at www.wto.org/english/tratop_e/comp_e/comp_e.htm.

[172] United Nations, *Combating Anti-Competitive Practices: A Guide for Developing Economy Exporters* (2012), at 10.

[173] *Ibid.*

[174] It should be noted, however, that competition policy has been addressed in free trade agreements (FTAs), with an evident trend towards a dedicated chapter in recent years. See, e.g., CPTPP, *supra* note 7, Chapter 16 (on competition policy); see also USMCA, *supra* note 7, Chapter 21. The interface between international trade and competition policy is now primarily manifested by the incorporation of 'basic competition principles' in the FTAs. See OECD, Regional Competition Agreements: Benefits and Challenges (2018). It has been observed that the competition policy chapters of the FTAs appear to be drafted with vagueness and ambiguity, and parties only agreed to minimum standards for the key elements.

[175] WTO, GATS Telecommunications Reference Paper, adopted 30 April 1996, available at www.wto.org/english/tratop_e/serv_e/telecom_e/telecom_e.htm (the reference paper was developed in the Negotiating Group on Basic Telecommunications).

[176] Luff, 'Telecommunications and Audiovisual Services: Considerations for a Convergence Policy at the World Trade Organization Level', 38(6) *JWT* (2004) 1059.

[177] Matsushita *et al.*, 'Competition Policy and Trade', in M. Matsushita *et al.* (eds), *The World Trade Organization: Law, Practice, and Policy* (2015) 787, at 793.

members to adopt or maintain competitive safeguarding rules to prevent abusive restrictions on bottleneck facilities, which may result in a de facto limitation on market access to basic telecommunications services.[178] The reference paper also prohibits discriminatory conditions of competition within the markets and prevents anti-competitive practices among dominant suppliers. The GATS Telecommunications Reference Paper's key provisions include the following elements:

- Relevant market and dominant supplier: the reference paper defines 'major supplier' as a supplier that has the ability to materially affect the terms of participation surrounding price and supply in the relevant market for basic telecommunications services as a result of: (i) control over essential facilities or (ii) use of its position in the market.[179]
- Anti-competitive practices: the reference paper imposes obligations on WTO members to maintain measures for the purpose of preventing suppliers, which alone or together are major suppliers, from engaging in or continuing anti-competitive practices.[180]
- Interconnection arrangement and transparency: there is a clear stipulation that interconnection with a major supplier should be provided under non-discriminatory terms, conditions and rates and should be of a quality no less favourable than that provided for its own like services or for its subsidiaries.[181]

In brief, the GATS Telecommunications Reference Paper requires WTO members to ensure that dominant companies do not abuse their market position. The case of *Mexico – Telecommunications* represents a concrete application of competition policy within the framework of the reference paper.[182] In this case, the USA claimed that the interconnection rates negotiated by Telmex, the incumbent supplier in Mexico, were not cost oriented. The Panel found that Mexico had failed to fulfil its commitments under section 2.2(b) of the reference paper, in that it failed to ensure a major local supplier provided interconnection at cost-oriented rates to other member suppliers for the cross-border supply of telecommunications services.[183] The panel also found that Mexico had not met its GATS commitments under section 1 of the reference paper to maintain 'appropriate measures' to prevent anti-competitive practices.[184]

By pointing to the model in the GATS Telecommunications Reference Paper, this article raises the following question: to what extent is a set of sector-specific competition disciplines for the data industry possible? Further, what should comprise the 'Data

[178] GATS Telecommunications Reference Paper, *supra* note 175, s. 1.

[179] *Ibid.*

[180] *Ibid.*, s. 1.

[181] *Ibid.*, s. 2. There is also a requirement that interconnection should be provided in a timely fashion, with terms, conditions and cost-oriented rates that are transparent and reasonable. A major supplier should make publicly available either its interconnection agreements or an interconnection offer.

[182] Matsushita *et al.*, *supra* note 177, at 793.

[183] WTO, *Mexico – Measures Affecting Telecommunications Services – Report of the Panel*, 2 April 2004, WT/DS204/R.

[184] *Ibid.*, paras 7.265–7.269.

Reference Paper'? Turning back to the common elements of the regulatory recommendations proposed by the OECD, the EU and the Australian competition authority, the proposed Data Reference Paper should comprise a binding set of commitments, perhaps even the lowest common denominator, which would serve to guide WTO members to better regulate data, to discipline dominant players and to thereby help non-big tech companies enter these markets. Much like the regulatory disciplines for the telecommunications market, the concept of 'essential facilities' might be applied to big tech companies to prevent the abuse of market dominance by platforms. Similarly, based on the model of the GATS Telecommunications Reference Paper, the Data Reference Paper would impose obligations on WTO members to maintain measures for the purpose of preventing dominant service suppliers from engaging in or continuing anti-competitive practices. Appropriate mechanisms to prevent collusive practices and to review mergers should also be put into place. In addition, a similar focus on pro-competitive effects could include the principles of non-discrimination and transparency, which would require that a platform provide equal treatment in data-sharing arrangements.

By imposing cross-border disciplines for competition policy and thus curbing the power of big digital platforms, the proposed WTO Data Reference Paper may well be an effective instrument to address the second dimension of 'digital inequality' defined in this article – data colonization. Moreover, if a set of international competition rules that frame competition concerns in a policy context can be established, there would be less need for *ex-post* enforcement of competition law by competition authorities in developing countries and LDCs, which have relatively limited resources to tackle digital cartel and data monopolization issues.[185]

To conclude, we are rapidly moving towards a platform-driven, data-fuelled world. Whenever we encounter a digital interface, we supply 'raw material'. Corporations, and, in particular, big tech, then 'translate' this raw data into a resource from which they can derive value.[186] Datafication today represents a paradigm shift as our society begins a new phase of the digital revolution. As discussed above, data colonization is an unforeseen phenomenon that interacts with GATS digital trade market access. The increasing inequality in digital platforms calls for a set of WTO data-specific competition rules to appropriately address market power in the data sector. There is a renewed need for a WTO Reference Paper 2.0 that migrates the competition disciplines from the context of telecommunications to that of data services.

2 The Inherent Complexity

Will the need for international competition disciplines for the data sector find an outlet along the path of international economic law, as it did in the telecommunications sector 25 years ago? Serious challenges lie ahead. The idea of creating a WTO Data Reference Paper may prove difficult in gaining sufficient negotiating momentum

[185] OECD, *supra* note 145, at 22.
[186] Zuboff, *supra* note 53, at 233.

to bring it to fruition, primarily because of two structural problems. The first obstacle is the highly complex, legally technical nature of regulating the digital market. To the extent that the regulatory principles spelled out in the GATS Telecommunications Reference Paper can inform the development of the data regulatory framework, major adaptations are needed due to the specific characteristics of the online markets. As pointed out by Ofcom, the UK's communications regulator, the regulatory principles of telecommunications services cannot simply be 'read across' and 'applied as they are' to digital services.[187] There are significant similarities between the telecommunications and digital markets. Nevertheless, substantial differences remain.

More specifically, in terms of assessing the 'relevant market', far more factors must be taken into consideration when defining the relevant market for digital platforms. All of the 'big tech' firms are characterized as being multi-sided, which renders the scope of the relevant market even more difficult to define. What constitutes the relevant market of a digital platform inside the big data ecosystem when various players are involved and have assumed multiple roles? For example, Apple, as a digital platform through the Apple Store and iTunes, also plays an important role in cloud-computing services through the iCloud. At the same time, Apple closely interacts with other key social media businesses, including Facebook and LinkedIn. Should each side of the above be defined as a separate market?[188] The multi-sided platform structure poses new challenges for competition regulations.

Moreover, in terms of assessing the abuse of market power, determining the 'market power' is less straightforward in digital markets. In the case of telecommunications services, dominant market position and significant power are closely related to natural monopolies in physical infrastructure – that is, broadband networks. Digital services, however, are not necessarily natural monopolies as their market powers are primarily derived from their access to large datasets on their users.[189] In practice, market shares in telecommunications markets (that is, the 25 per cent threshold) usually provide useful indications of market importance.[190] In most jurisdictions, a broadband operator is presumed to have significant market power when it holds more than a 25 per cent share of a market in a particular geographical area.[191] On the other hand, the possession of data can be used as a barrier to entry, thus becoming the primary source of market power in digital services. The relationship between 'market share' and 'control over data', however, would prove a difficult job for competition authorities to investigate.[192] In summary, traditional measuring tools, such as market shares, must be adapted in a digital platform context. All of this highly technical complexity will lead

[187] Quoted in European Commission, Consultation on the Digital Strategy: A Framework of Analysis for an Online Regulatory Regime, 17 September 2020, at 11, available at www.ofcom.org.uk/__data/assets/pdf_file/0011/203024/european-commission-digital-strategy-170920.pdf.

[188] UNCTAD, *supra* note 30, at 25.

[189] Ducci, *supra* note 55, at 36–43.

[190] Kennedy, *supra* note 86, at 230. It should be clarified that market share is not the sole determinative factor in finding significant market power in the telecommunications market.

[191] *Ibid.*

[192] OECD, *supra* note 145, at 20.

to endless technical discussions and will become an obstacle towards the goal of creating a set of international competition principles for digital services.

Another equally or even more important consideration that may impede the creation of such international disciplines is the inherent complexity of the political economy surrounding digital capitalism. Looking back at its history, the telecommunications industry began to rapidly develop in the late 1990s. As a result, the political momentum towards telecommunications liberalization made market access and regulatory discipline under WTO negotiations possible. In other words, adoption of the GATS Telecommunications Reference Paper was seen by 'key' delegations – notably, the USA, the EU, Canada, Australia and Japan – as necessary, given the risk that competition in foreign countries' infrastructure market may be restricted by incumbent operators' abuses of market power.[193] To illustrate, the telecommunications market, especially decades ago, exhibited specific features that enabled incumbents to maintain a certain degree of market power over the competition.[194] Major incumbent suppliers have strong incentives and ample opportunities to delay the provision of interconnection to new entrants, and such delays can significantly inhibit competition.[195] The incumbents could also impose, for example, anti-competitive interconnection conditions on their competitors.[196] National measures might be needed to prevent incumbent operators from using their market power to distort competition. From the perspective of international trade, market access commitments alone cannot guarantee that a market will become truly liberalized. To be able to effectively compete, telecommunications companies in developed countries must be ensured a level playing field in foreign markets.

However, such political-economy momentum that led to the conclusion of the GATS Telecommunications Reference Paper cannot be found in the context of digital services. Unlike the negotiation background of the telecommunications services industry, the economic interests (as well as the regulatory approaches) of the data services industry are quite divergent among key players. Generally speaking, US digital platforms have been persistently dominant in the world, including the European market. At the same time, China, by establishing its own self-sufficient platform economy through the Chinese digital giants Baidu, Alibaba and Tencent,[197] has largely escaped US domination. That said, three different models for data governance are emerging: The USA generally favours an *ex-post* approach that broadly seeks punitive action for infractions of the past. Such an innovation-friendly approach is primarily driven by the concept of self-regulation.[198] The EU model, as discussed above, is holding the normative high ground. The proposed *ex-ante* regulations would result in a sweeping

[193] Geradin, 'Levelling the Playing Field: Is the WTO Adequately Equipped to Prevent Anti-Competitive Practices in Telecommunications?', in D. Geradin and D. Luff (eds), *The WTO and Global Convergence in Telecommunications and Audio-Visual Services* (2004) 130, at 135.

[194] *Ibid.*

[195] *Ibid.*

[196] Peng, 'Trade in Telecommunications Services: Doha and Beyond', 41(2) *JWT* (2007) 293, at 318.

[197] Gao, 'Digital or Trade? The Contrasting Approaches of China and US to Digital Trade', 21(2) *JIEL* (2018) 297, at 308.

[198] *Ibid.*, at 316; see generally J. Cohen, *Between Truth and Power* (2019), at 214–216.

supervisory gear to the Silicon Valley. China's main concern, however, is to ensure its political stability and security. It is conceivable that China will continue to rely on the protectionist domestic regulations to restrict cross-border data flows.[199] When these three models interface in an international organization, it is less likely to negotiate a compromise given the associated concerns.[200] The different models followed by the key players will be an impediment to an international agreement, which requires the 'right' political dynamics for reaching a consensus.

Having said that, how can international economic law contribute? Similar to the direction taken to tackle the digital divide problem at the network level, additional strategic and practical solutions to complex data inequality issues can be explored along two lines. The first is the soft law mechanism, which leaves sufficient space for national regulators. The second is a flexible modality, which helps to reach a critical mass of trade negotiations results. These two issues are discussed in turn below.

Here again, the FTAs provide some inspiration. Although, to date, none of the e-commerce/digital trade chapters of the FTAs have incorporated competition rules for the data market, the lesson we have learned from their general approaches pertains to the soft legal nature of the key provisions.[201] The USMCA parties, for example, merely 'recognize the importance' and 'endeavor to' comply with certain rules under the digital trade chapter.[202] It might therefore be criticized as a weak instrument. Nevertheless, it could always be argued that, without such vague provisions, the digital trade chapter would never have been finalized by the parties. In future trade negotiations on data, the 'softness' of the treaty requires that substantive rules remain somewhat general. For example, it might be necessary to leave key concepts such as 'anti-competitive practices' undefined to allow for policy alternatives. The lack of specificity in the treaty language would allow parties to cater to differences in local needs and maximize the likelihood that the rules will be effectively implemented by regulators. Given the variations that exist in the digital markets of different countries, the strategic use of hard and soft law is of practical significance in introducing a set of data rules into the WTO regime.

Another different, but closely related, issue is negotiating modality. Against this contentious political and economic backdrop, the probability of reaching a consensus under the 'single-undertaking' system seems slight.[203] Balancing the interests of 164 WTO members across diverse issues of data governance has made it difficult, if not

[199] Gao, *supra* note 197, at 319.

[200] Burri, 'Towards a New Treaty on Digital Trade', 55(1) *JWT* (2021) 77, at 99; see generally Shaffer, 'Trade Law in a Data-Driven Economy: The Need for Modesty and Resilience', 20(3) *WTR* (2021) 259, at 259–281.

[201] E.g. USMCA, *supra* note 7, Art. 19.15 (Cybersecurity); Art. 19.18 (Open Government Data).

[202] E.g. *ibid.*, Art. 19.5 (Domestic Electronic Transactions Framework); Art. 19.8 (Personal Information Protection); Art. 19.9 (Paperless Trading); Art. 19.14 (Cooperation); Art. 19.15 (Cybersecurity); Art. 19.18 (Open Government Data).

[203] Fabbricotti, 'Multilateralizing Regionalism and the Future Architecture of International Trade Law as a System of Law – The Paradox of Multilateralizing Regionalism through Flexibility', 103 *Proceedings of the American Society of International Law* (2009) 119, at 120. The 'single undertaking' concept essentially means that all of the instruments that make up the complex body of WTO law are equally binding upon all members, regardless of their stage of economic and social development.

impossible, to conclude negotiations that 'bind all WTO Members equally'. In this regard, negotiating on the basis of a critical mass approach, which involves arrangements between a number of parties that do not represent the entire membership but account for a very high proportion of international trade in data services, seems to be a more realistic direction.[204] In this context, despite strong opposition from several members,[205] the ongoing plurilateral WTO e-commerce trade negotiations are a more politically feasible means by which to agree upon a common regulatory framework. A flexible modality offers a pathway to ensure that the WTO remains responsive and relevant in the digital economy.

5 Conclusion

The following question was raised at the outset of this article: what role has international economic law played in the story of digital inequality's emergence and evolution? To answer the question, this study illustrates the uneasy interplay between digital inequality and international economic law and thus argues that the current international trade regime is a contributor to the causes of digital inequality. At the network layer, developing countries and LDCs need FDI in their digital infrastructures. The economic benefit of the GATS Mode 3 (foreign investment) market access commitments in the telecommunications sector, however, has never been realized in many developing countries and LDCs. There is a missing link between the consequences of trade liberalization and broadband investment. At the application layer, today's platformization of services was an 'unforeseen development' at the time the WTO was established. Through the pro-liberalization of WTO jurisprudence, members' decades-old Mode 1 (cross-border) market access commitments have played more than a marginal legal role in global datafication.

The next line of inquiry in this article surrounds how international economic law can confront and potentially redress this inequality. Is it legally desirable and politically possible to have a coordinated multilateral response that addresses the digital divide and data capitalism? To investigate the possible forms of interaction that would reduce digital inequality by creating new trade instruments, the main part of this article explores the issues of digital inequality from two dimensions: the development dimension and the competition dimension.

[204] This article was written in the spring of 2021. Note that on 2 December 2021, 67 (counting the European Union as 27) WTO members adopted a Declaration on the Conclusion of Negotiations on Services Domestic Regulation, also known as Reference Paper on Services Domestic Regulation. This plurilateral deal is the first set of GATS rules in 24 years. This reaffirms how plurilaterals can have the potential to restore the WTO's relevance as a forum for the negotiation of trade rules.

[205] 'India, South Africa: Plurilaterals "Legally Inconsistent" with WTO Rules', *Inside US Trade* (22 February 2021). India and South Africa have maintained that the ongoing negotiations on the plurilateral e-commerce agreements are 'legally inconsistent' with WTO rules and principles. *Cf.* 'U.S., EU, Others Defend Plurilaterals after Criticism from India', *Inside U.S. Trade* (3 March 2021).

In the context of trade and development, at the regional level, the module on digital inclusion found in the DEPA between Singapore, Chile and New Zealand may prove to be a more realistic direction for strengthening the link between international economic law and digital inclusion. The soft language in the agreement provides a useful means to gradually affect conduct while, at the same time, providing an early signal of the direction hard law may eventually take. DEPAs offer some promise for step-by-step improvements, an approach that is more politically viable in achieving results. At the multilateral level, it remains to be seen how the WTO members can find the common ground needed to balance digital trade liberalization and development needs. Unless infrastructure concerns from developing countries and the LDCs are addressed, the ongoing e-commerce trade deal may end up being labelled the Digital 'Haves' Trade Agreement.

In the context of trade and competition, the increasing inequality in digital platforms calls for a set of international competition rules to appropriately address market power in the data sector. Ideally, the proposed WTO Data Reference Paper, by imposing cross-border disciplines for competition policy, may well be an effective instrument in addressing the anti-competitive practices of digital platforms. Nevertheless, any attempt to create an international competition discipline for data services should offer parties a choice between several regulatory options and should only impose minimum specific substantive requirements,[206] given the variations that exist in the digital markets of different countries. Moreover, a sufficient degree of flexibility along the rule-making path also seems necessary.

To conclude, the interplay between international economic law and digital inequality is complex and uneasy. As previously noted, international economic law is a significant source of this unease, but it also has the potential to offer meaningful solutions to alleviate it. The COVID-19 pandemic has amplified the importance of having either a wired or mobile broadband connection and has drawn attention to the question of to what extent people in developing countries and LDCs can truly be included in the digital economy.[207] At the same time, global digital platforms are among the 'winners' of the pandemic because their dominant role has been further reinforced as a result of the boom in e-commerce attributable to the lockdown. Taken as a whole, the benefits of digitization and datafication are not evenly distributed. If left unaddressed, this digital inequality will broaden the gap between under-connected and hyper-digitized regions at the infrastructure layer and will expand the difference in digital market power at the platform layer.

[206] In this regard, Petit pointed out that, compared with other governmental intervention, a 'softer' regulatory approach, such as consumer protection, might be a better framework that does not discriminate against digital companies on the basis of market power. Consumer protection's impact on incentives to innovate is moderate. N. Petit, *Big Tech and the Digital Economy: The Moligopoly Scenario* (2020), at 252–256.

[207] WTO Secretariat, *supra* note 21, at 5.