Legal Constitution of Global Value Chains in the Digital Economy

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Digitalization of the Global Economy and International Trade

The digitalization of international trade, and the emergence of the digital economy, has entailed the integration of technological innovations, including the internet, artificial intelligence, blockchain, and the Internet of Things (IoT), into trade in three related domains of international economic law. First, technological innovations have enhanced the production of traditional and new digital goods and services. Second, they have been integrated into the trade supply chain, including e-commerce infrastructure and trade facilitation infrastructure. Third, they have introduced new digital goods and services.

The structure of the emergent digital economy has followed the fragmented structure of trade in traditional goods and services, characterized by global value chains (GVCs). The digital economy's reliance on data has led to the emergence of global data value chains (GDVCs), characterized by the collection, storage, and analysis of data, its transformation into digital

intelligence, and eventual monetization, across multiple geographical and legal jurisdictions. Debates on inequitable value capture within traditional GVCs, and the role of international law and national trade policy in redressing them, have been replicated in the GDVC context. This contribution focuses on a less-studied aspect: the role of international and national economic law in constituting and reproducing the inequitable value capture within GDVCs, and the need for new legal, economic and technological imaginaries in the digital economy.

Continuities in the Trade and Development Discourse of GDVCs

As elaborated in contributions by Alessandrini, Tan and others, the World Bank and World Trade Organization (WTO) have promoted GVCs as the 'best bet' for boosting growth, creating better jobs, and reducing poverty, provided that developing countries deepen their trade liberalization commitments. This policy prescription has extended to the digital economy, where these international economic institutions have argued that tariff reductions, trade facilitation and services liberalization are necessary for technological upgrade and the integration of developing country small and medium enterprises (SMEs) into the GDVC. This continues to be the case despite evidence of inequitable value capture and distribution as acknowledged in the WTO 2019 and World Bank 2020 reports. With specific regard to GDVCs, for example, UNCTAD's 2019 Digital Economy report noted that the trillions in value captured within GDVCs was largely accounted for by seven super-platforms (Microsoft, Apple, Amazon, Google, Facebook, Tencent and Alibaba), located in two countries (the US and China).

This structure of the GDVC has replicated the classical international division of labour. It has positioned most countries, especially developing economies, as data (raw material) suppliers, while a few of developed economies have played hosts to firms that can convert the data into monetized intelligence, thereby monopolising value capture. This has undermined the ability of developing country firms to climb up the value chain, and consequently increase their value capture, in at least three ways. First, developing economies are not equitably remunerated for the raw material (data) they generate through digitalization. Second, they are positioned at a lower end of information asymmetry, in which the digital platforms have more information about the

SMEs, and this information is sold to competitors that can afford to purchase digital intelligence. Third, digital platforms that capture the value of data generated are increasingly engaging in vertical integration of supply chains, by graduating from market intermediaries (e.g. e-commerce sites such as Amazon) to actual competitors alongside the SMEs. Consequently, GDVCs not only sustain existing hierarchies within international trade, but also reproduce new ones. For example, emerging economies like China (which rivals the US in digital monopolies) have dominated all stages of some value chains (as raw material supplies and lead firms), while other developing and least-developed economies have been stuck at the bottom of the value chains.

Constitution of GDVCs by International Economic Law

The WTO and World Bank have promoted greater trade liberalization by developing countries, despite their recognition of the inequitable nature of value capture and distribution within GDVCs. This liberalization narrative has positioned international economic law as the remedy for the under-development and inability of developing countries to technologically upgrade and integrate into GDVCs. However, international economic law plays a far greater role in the GDVCs than mere facilitation. The law has a co-constitutive relationship with GDVCs, in which it shapes, as much as it is shaped, by these chains. As articulated by Danielsen and Bair, law is constitutive of GDVCs to the extent that – by addressing or failing to address certain issues - it structures the production, exchange and distribution of value within GDVCs. First, the plurality of IEL, consisting of public and private law, State and market regulation, international and national law, and legal and technological regulation, determines the geography of GDVCs, and the distribution of responsibility, authority, and surplus within it. Second, law creates value, and enables its capture, by creating barriers to market entry, configuring the structure of value chains, creating and recognizing legal entitlements that affect bargaining power and distribution of resources, and empowers certain actors within the value chains. Third, law determines the governance of GVC, to the extent that it determines: which actors have the power to control value production, exchange and distribution; how and why this power is exercised; and the legal tools available for chain control and coordination, e.g. proprietary and contractual relationships.

The constitutive role of law within the data-driven GDVCs can be explored in the three related facets of the trade law-technology relationships mentioned earlier: technology as factors of production; technology as trade infrastructure; and technology as tradable goods and services.

Technology as Factors of Production

Various overlapping IEL regimes have structured the availability of technology in various stages and geographies of value chains, and consequently the ability of various value chain actors to upgrade and capture value. For example, the WTO Agreement on Trade Related Aspects of Intellectual Property Rights (TRIPS) has globalised stringent intellectual property protections. It has created legal entitlements such as patents and copyright over 'proprietary' digital technological innovations, which have enabled technology giants predominantly in the US to maintain high prices on technological innovations, and consequently capture more value from the GDVC. Macmillan has argued, for example, that the transfer of technologies down global value chains from firms in the global North to those in the global South, through a series of strictly controlled private licensing transactions "creates hierarchical relations that mirror the hierarchical relations between the global North and South that have been created everywhere in the legal, political and economic landscape of the post-colonial world".

Technology as Trade Infrastructure

Technological innovations have enabled digital trade (that is, the sale of physical and digital goods and services) through the internet and related technologies, e.g. cloud computing, etc. IEL has also played a role in the exchange and distribution of value generated from digital trade, within GDVCs. For example, the emergence of a data-driven platform-based economy has exposed the inadequacy of both international and national law on tax and competition in ensuring equitable value capture and distribution within the digital market-places. First, the intangibility and opacity in production and extraction of value in cross-border data flows has posed a challenge for the global taxation of digital platforms, which capture a large percentage of the value created in GDVCs. Coupled with aggressive tax avoidance schemes, the taxation of digital platforms has posed a challenge, especially for developing

economies. The lack of a legal conceptualization and definition of ‘data’ in international trade regimes has further compounded the legal lacunae. Second, the absence of a transnational competition law, and inadequacy of national competition laws, has resulted in the dominance of the global digital economy by few digital platforms located predominantly in the US and China. National competition legal regimes, which measure consumer welfare on the basis of price, have not accounted for the platform business model involving the exchange of personal data (rather than money) for online services. Consequently, developing country firms have been unable to break into the platform economy, as the network effects, anti-competitive policies, and inadequate technological capacity of competitors, has reproduced the dominance of digital platforms.

Technology as Tradable Goods and Services

TRIPS and other national legal regimes have played an important role in not only constituting tradable technological innovations, but also enabling particular exchange and distribution of the value created. For example, TRIPS and national intellectual property regimes have constituted tradable digital goods by commodifying private information into tradable data. The General Agreement on Trade in Services (GATS) does not explicitly address cross-border data flows. However, considering that more than 50% of the world’s traded services are in digital form, GATS market access and most-favoured nation (MFN) disciplines apply to cross-border data flows. The implication is that barriers to cross-border data flows can be considered as breaches to market access obligations (removing limitations to access by importers to a national market) and MFN obligations (treating all WTO members no less favourably than a favoured Member). The WTO Understanding on Commitments to Financial Services also contains a specific and narrow commitment to not “prevent the transfers of information or the processing of financial information, including the transfers of data by electronic means”. Intellectual property regimes have also structured inequitable value extraction and distribution by vesting proprietary rights over the data only on the value chain actors with the ability to convert data into digital intelligence, to the exclusion of data subjects. This means that individual/private data (raw materials) collected by digital intermediaries are not ascribed economic value at the point of collection.

In addition, international trade regimes such as the 1996 Information Technology Agreement (ITA) and the 1998 Declaration on Global Electronic Commerce (e-commerce moratorium) have also structured the distribution of the value extracted from GDVCs. Under the ITA, 82 WTO members have eliminated tariffs on up to 97% of world trade in IT products. Some developing countries, for example, India, have declined to opt-in to the recent expansion of the product coverage of the ITA, on the basis that the agreement undermines domestic technological innovation. The e-commerce moratorium, on the other hand, bans countries from imposing customs duties on electronic transmissions. Developing countries, as net importers of electronic transmissions, have argued that the moratorium undermines value capture through revenue losses of up to $11 billion, curtails the use of tariffs as trade policy tools for promoting domestic digital economies, and results in loss of other duties and charges.

Conclusion

IEL regimes, including WTO law and national property, privacy, competition and tax laws, play a central role in the constitution of inequitable GDVCs. This means that the adoption of further liberalization commitments especially by developing countries will only exacerbate the inequitable value capture and distribution between developed and developing economies. WTO members should revisit the liberalization commitments with a view to engaging in further impact assessments of present and proposed liberalization commitments. More importantly, international and national trade policy makers should welcome new imaginaries of a global digital economy, including the use of trade policy tools to make domestic digital economies competitive at the global stage. This requires a re-conceptualization of the foundations of international trade law, and national tax, competition, property, privacy and data protection laws.

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