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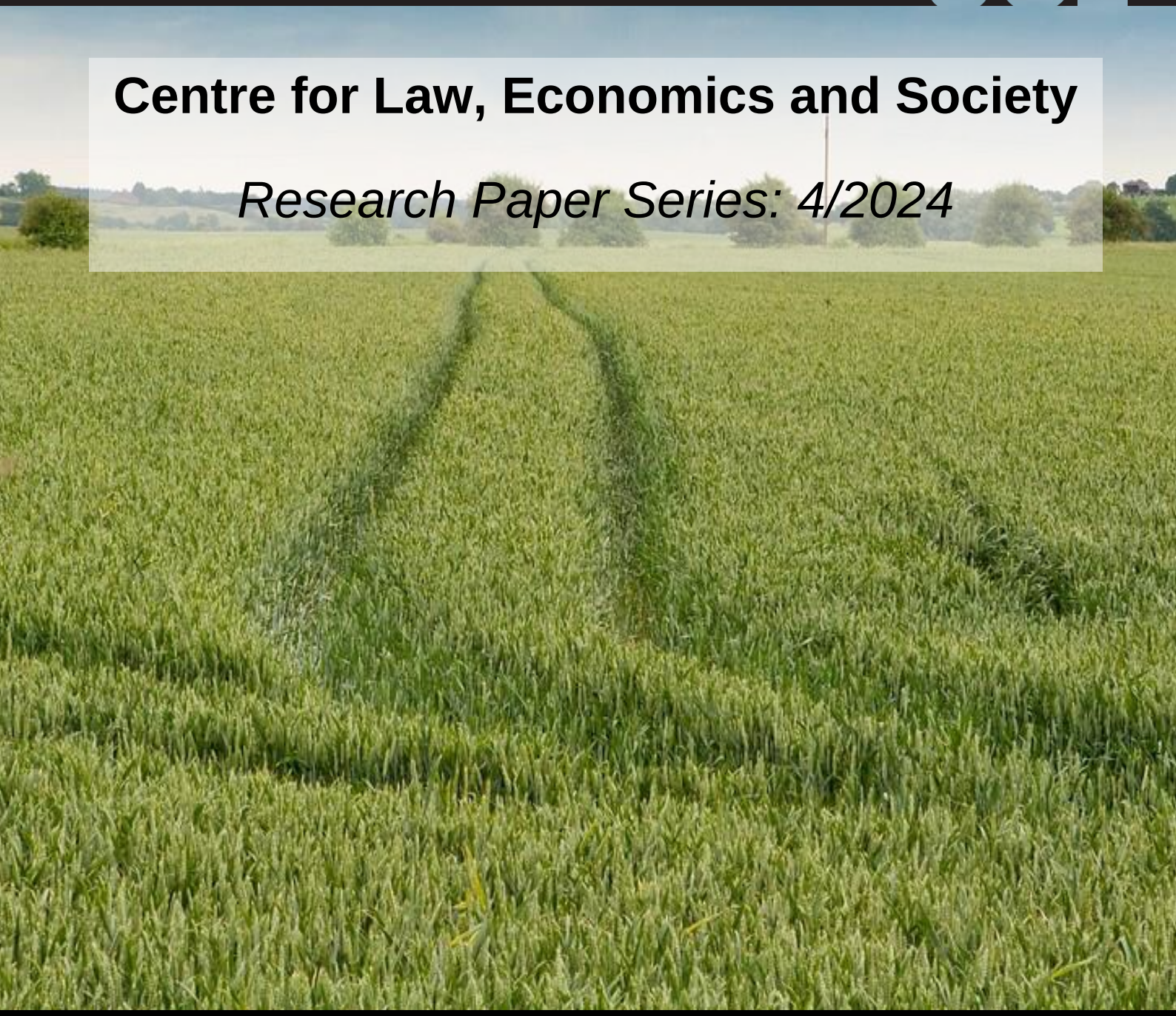

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Global Value Chains, Competition Law and Sustainability: Insights from the Cotton Global Value Chain

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Global value chains, competition law and sustainability: Insights from the cotton global value chain

Ioannis Lianos & Azza Raslan[*]

I. Introduction

We are living in an era characterized by increased connectivity of international markets and production channels. This economy is global in nature, not just international.[1] Traditionally, we used to think of multinationals that dominated markets throughout all its production cycles of research, design, manufacturing, and retailing, whether through ownership or through supplier relationships. Currently, these cycles are managed through a web of coordinated chains around the globe known as "global value chains"[2], recently supplemented by digital (and non-digital) ecosystems, orchestrated by (digital) platforms.[3] These structures establish direct interactions between the various economic operators, which largely complement the indirect interactions between them through the price vector occurring in the context of markets. Indeed, the most significant part of economic activity is organized in the context of economic organizations (such as global value chains, ecosystems and firms) rather than in markets.[4] These global value chains (GVCs) and ecosystems are characterized by their "systemic, coordination-driven nature", as they rely on various systems of transnational governance and different sorts of linkages, some traditional such as contract law, others novel and relying on corporate law, property law or some more informal or technological mechanisms.[5]

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[1] Manual Castells, 'The Information Age: Economy, Society and Culture – The Rise of the Network Society' (1996), Wiley, 92.

[2] Kevin Sobel-Read, 'Global value Chains: A Framework for Analysis' (2014) 5(3) Transnational Legal Theory 364-407, 364.

[3] Ioannis Lianos, Klaas Hendrik Eller and Tobias Kleinschmitt,'Towards a Legal Theory of Digital Ecosystems' (2024) Faculty of Laws University College London Law Research Paper No. 16/2024, Amsterdam Law School Research Paper No. 2024-22, Amsterdam Centre for Transformative private law Working Paper No. 2024-01<https://ssrn.com/abstract=4849340> accessed 25 September 2024; Jakko Salminen, and others, 'Digital platforms as second-order lead firms: Beyond the industrial/digital divide in regulating value chains'(2022) *European Review of Private Law, European Review of Private Law, 1059*; Florian Butollo and others, 'Digital transformation and value chains: Introduction'(2022) Global Networks 22, 585.

[4] As Herbert Simon reminds us, '(r)oughly eighty percent of the human economic activity in the America economy, usually regarded as almost the epitome of a "market" economy, takes place in the internal environments of business and other organizations and not in the external, between-organization environments of markets', arguing that 'it would be appropriate to call such a society and organization-&-market economy': Herbert A. Simon, *The Sciences of the Artificial* (MIT press, 2019, 3d ed. 1996), 31-32.

[5]This personal and direct dimension of the interaction is increasingly supplanted by technology, which allows for the prediction of others' behaviour to be done on the basis of data, rather than 'contract' rules, and such can be 'enforced' automatically by technological means, what Zuboff calls the "uncontract": Shoshana Zuboff, *The Age*

With the rise of global trade and GVCs[6], concerns over their impact on social and environmental outcomes increased. There was a drive to incorporate polices addressing responsible business conduct obligations into GVCs to ensure the establishment of sustainable and environmentally friendly GVCs.[7] Legal obligations arising out of environmental protection laws and sustainability norms included in international treaties and national constitutions now extend the operations of these GVCs. The private sector complies with such regulations by establishing standards and specific codes of conduct managed by industry associations or non-governmental organizations. Being at the one end of the value chain, retailers develop strategies with the aim to build store loyalty, thus enabling them to extract a more significant part of the total surplus value. Because of this direct interaction with consumers and the need to preserve store loyalty, retail networks have more incentives than suppliers to control potential risks at the various nodes of the supply chain (e.g. impact on the environment).[8] As a result of these developments, the production and distribution processes are increasingly structured around GVCs, which permit the simultaneous and coordinated production and distribution of a very large array of products that each stage of the supply chain has to manage effectively, without this involving the costs of vertical integration by ownership.[9]

The GVC concept offers an important descriptive and analytical potential. The most obvious one relates to the transnational dimension it brings forward, calling for a "transnational coordination" between "destination states" and "producer states", this coordination being pursued at global, regional or bilateral levels. Calls and initiatives for "Responsible Business Conduct" to make global markets more inclusive and sustainable have put additional emphasis on building resilient and sustainable GVCs.[10] New legal tools put forward the implementation of "responsible innovation"[11], human rights and broad sustainability concerns not only at the level of the firm but also at that of the value and supply chain.[12] At the same time, competition authorities in Europe have

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of Surveillance Capitalism: The Fight for a Human Future at the Frontier of New Power (Profile Books, 2019), 208.

[6] OECD, *Interconnected Economies: Benefiting from Global Value Chains*, (2013); OECD, WTO and World Bank Group, *Global Value Chains; Challenges, Opportunities and Implications for Policy* (2014), p. 13<https://www.oecd.org/tad/gvc_report_g20_july_2014.pdf> accessed 25 September 2024. See also UNCTAD, *World Investment* (Report 2013) <http://unctad.org/en/PublicationsLibrary/wir2013_en.pdf> accessed 25 September 2024.

[7] OECD, *Building more resilient and sustainable global value chains through responsible business conduct '* (2021) <https://mneguidelines.oecd.org/Building-more-resilient-and-sustainable-global-value-chains-through-responsible-business-conduct.pdf > accessed 25 September 2024.

[8] WTO, Greening Global Value Chains: *A Conceptual Framework for Policy Action* <https://www.wto.org/english/res_e/booksp_e/09_gvc23_ch6_dev_report_e.pdf > accessed 25September 2024.

[9] Koen De Backer and Sébastien Miroudot, 'Mapping Global Value Chains, European Central Bank' (2014) Working Paper Series No. 1677 < https://www.ecb.europa.eu/pub/pdf/scpwps/ecbwp1677.pdf> accessed 25 September 2024.

[10] OECD (2021), Building more resilient and sustainable global value chains through responsible business conduct https://mneguidelines.oecd.org/rbc-and-trade.htm> accessed 25 September 2024.

[11] See, Jack Stilgoe, Richard Owen and Phil Macnaghten, 'Developing a Framework for Responsible Innovation' (2013) 42 Research Policy 1568– 1580.

[12] See, for instance, the Act on Corporate Due Diligence Obligations in Germany regulate the responsibility of German enterprises to respect human rights in global supply chains. See also, at the EU level, the recent EU Directive on corporate sustainability due diligence for which was adopted in June 2024. EU Directive [2024/1760]

increasingly engaged with environmental and social sustainability goals[13], departing from the price and output-centric "more economic approach" followed by competition law enforcement in the last thirty years, and embracing a more "polycentric competition law" approach[14] that better integrate sustainability and resilience concerns and more generally the role of competition law in achieving the Agenda 2030 Sustainable Development Goals' (SDGs).[15] This re-adjustment of competition law and policy may require a rethinking of the way competition authorities also engage with the reality of GVCs, particularly regarding sustainability-related practices. This research completes previous work by one of the authors regarding the role of Global Value Chains in competition law and policy, putting emphasis on other parameters, such as affordable prices, more expanded output, fairness in the allocation of the surplus value brought by GVCs, and innovation.[16] We briefly explore the emergence and distinct characteristics of GVCs, and the emphasis put recently by competition law on sustainability. The following section will delve into the relationship between Global Value Chains (GVCs), sustainability, and competition law. This will be done by examining a specific case study in the cotton industry, which is significant for many developing and emerging economies. The aim is to gain insights into how competition law should be analyzed in relation to the various governance structures of GVCs that strive to promote sustainability.[17]. The last Section concludes.

II. GVCs and Sustainability

A. The GVC Framework

of the European Parliament and of the Council of 13 June 2024 on corporate sustainability due diligence and amending EU Directive 2019/1937 and EU Regulation 2023/2859, OJ L, 2024/1760.

[13] On environmental sustainability goals, see, for instance, the positions expressed in the OECD, 'Sustainability and Competition debate' (December 2020) <Sustainability and competition - OECD> HCC, 'Draft Staff Discussion Paper on Sustainability Issues and Competition Law' (July 2020) <Staff_Discussion_paper.pdf (epant.gr)>; ACM, 'Guidelines on Sustainability Agreements' (January 2021) <Guidelines on sustainability agreements are ready for further European coordination | ACM.nl>; HCC and ACM, 'Technical Report on Sustainability and Competition' (January 2021) <Technical Report on Sustainability and Competition (epant.gr)>; Margrethe Vestager, 'Competition Policy in Support of the Green Deal' (European Commission February 2021) <Competition policy in support of the Green Deal | European Commission (europa.eu)> accessed 25 September 2024. On social sustainability goals, see, among others, European Commission, 'Collective Bargaining for Self-Employed' (October 2020) <Competition: Collective bargaining for the self-employed (europa.eu)> accessed 25 September 2024. For a discussion, see Nicola. Countouris, Valerio De Stefano, and Ioannis Lianos, 'The EU, Competition Law and Workers' Rights' (March 25, 2021) < https://ssrn.com/abstract=3812153 or http://dx.doi.org/10.2139/ssrn.3812153>accessed 25 September 2024.

[14] Ioannis Lianos, 'Polycentric Competition Law' (2018) 71 Current Legal Probs. 161.

[15] European Commission, 'Proposal towards a sustainable Europe by 2030' (February 2019) <https://ec.europa.eu/info/publications/towards-sustainable-europe-2030_en> accessed 25 September 2024.

[16] See, regarding global food value chains, Ioannis Lianos, Alexy Ivanov & Dennis Davis (eds.), *Global Food Value Chains and Competition Law* (CUP, 2022) and regarding digital value chains, Ioannis Lianos and Alexy Ivanov, 'Digital Era Competition BRICS Report' (August 30, 2019) <https://ssrn.com/abstract=3901413> accessed 25 September 2024.

[17] See for instance, UNCTAD, 'Tapping the full potential of cotton in developing countries' (07 October 2022) <https://unctad.org/news/tapping-full-potential-cotton-developing-countries> accessed 25 September 2024.

The GVC conceptual framework was initially created to provide a theoretical framework for understanding the evolution of the global division and integration of labor in the world economy. It also aimed to explain how total surplus value is allocated among the different segments of the value chain.[18] As a tool aiming to map the inter-firm networks on a global scale, the GVC framework also enables the consideration of several factors that may influence competitive and cooperative interactions. Although the tool was initially framed to help policymakers to design industrial strategies geared towards a greater participation of firms, active in their jurisdiction, to the global economy[19], its descriptive potential is wider than that. By exploring the sequences of tangible and intangible value adding activities, "from conception and production to end use", GVC analysis offers a picture of global industries both "from the top-down", by examining for instance "how 'lead firms 'govern' their global-scale affiliate and supplier networks", but also from "the bottom-up", asking "how these business decisions affect the trajectory of economic and social 'upgrading' or 'downgrading' in specific countries"[20].

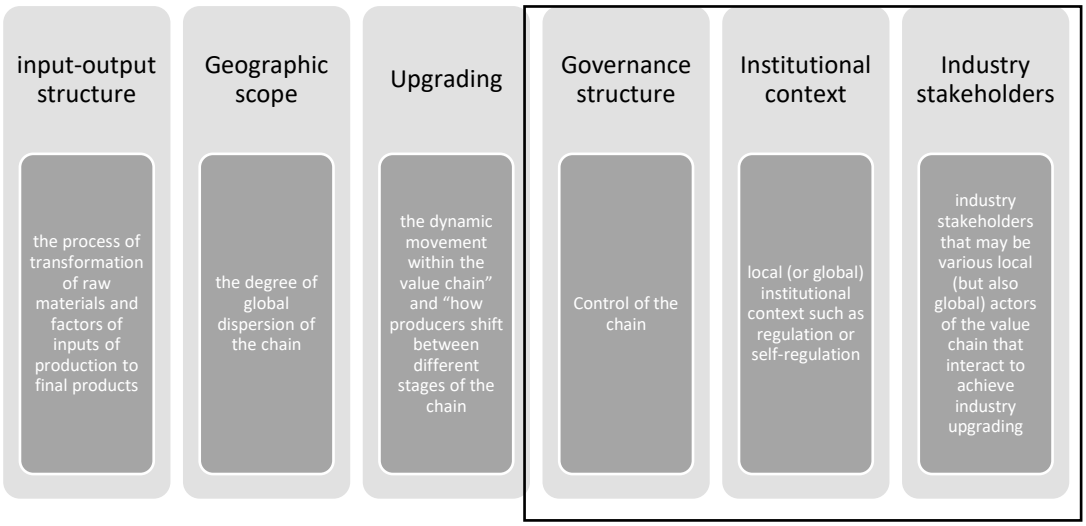
This mapping approach examines various dimensions: (i) the input-output structure of a GVC, by focusing on the process of transformation of raw materials and factors of inputs of production to final products, (ii) the geographic scope of GVCs which explains the degree of global dispersion of the chain, (iii) the governance structure of the GVC, which delves into the issue of control of the chain, (iv) the upgrading, which describes "the dynamic movement within the value chain" and "how producers shift between different stages of the chain", (v) the local (or global) institutional context in which the value chain is embedded, including regulation and self-regulation, (vi) industry stakeholders that may be various local (but also global) actors of the value chain that interact to achieve industry upgrading. These may not only be companies, but also industry associations, workers, educational or research institutions, government agencies and ministerial departments. All these actors are involved to a certain degree in the operation of the global value chains and influence their development (Figure 1).

Figure 1 GVC dimensions

[18] Gary Gereffi and Karina Fernandez-Stark, *Global value Chain Analysis: A Primer* (CGGC: 2nd ed., 2016), p. 7.

[19] See for instance, Global Value Chains Center,' GVC Intro'<https://www.globalvaluechains.org/about/gvc-intro/> accessed 25 September 2024.

[20] Gary Gereffi & Karina Fernandez-Stack, 'Global Value Chains Analysis: A Tool to Promote Economic Development' (*LSE blog*, October 30th, 2017) <https://blogs.lse.ac.uk/gild/2017/10/30/global-value-chains-analysis-a-tool-to-promote-economic-development/ > accessed 25 September 2024.



*Factors relevant to our discussion in red box
Source: G. Gereffi and K. Fernandez-Stark, Global value Chain Analysis: A Primer (CGGC: 2nd ed., 2016).

The GVC framework has been widely used to investigate the factors that affect participation, rent distribution, and development. It has also helped to identify the level of innovation related to different types of norms and private ordering, ranging from informal to more formal types. Additionally, it has helped to understand how these are used to organize coordination.[21] For example, relatively early on, the GVC framework highlighted the way in which technical and process standards are used by lead firms in order to reduce the complexity of the relevant chain.[22] Unlike market-type relations, which are essentially governed by price information, such standards can be used for the purpose of codifying non-price information in order to organise coordination. To the extent that competition is not only on the parameter of price but may also take place in various other parameters, including sustainability and resilience, it becomes important to re-integrate the field of competition law to the broader relational framework that comprises the value chain that structure the global economy.[23]

More recently, there has been a growing interest in exploring not only the descriptive but also the analytical potential of GVCs in competition law and policy.[24] Concepts of GVC have been used as an effective mapping tool of market structure. International

[21] Fredrick Mayer and Gary Gereffi, 'Regulation and Economic Globalization. Prospects and Limits of Private Governance' in Gary Gereffi (eds), *Global Value Chains and Development* (CUP 2018) .
[22] Stephano Ponte and Peter Gibbon, 'Quality Standards, Conventions and the Governance of Global Value Chains', (2005) 34 *Economy and Society*, 1-31.

[23] Peter Dicken and others, 'Chains and Networks, Territories and Scales: Towards a Relational Framework for Analysing the Global Economy' (2001) 1 Global Networks, 89-112
[24] See, Ioannis Lianos and Claudio Lombardi, 'Superior Bargaining Power and the Global Food Value Chain: The Wuthering Heights of Holistic Competition Law?' (2016) *Concurrences I-2016* 22-35; David Gerber, Competition Law and Global Supply Chains, (2016) <http://ssrn.com/abstract=2807154 >accessed 25 September 2024; Lianos, Ivanov and Davis n.16.

organizations already use the concept descriptively.[25] National competition authorities such as the Hellenic Competition Commission's (HCC) study of the basic consumer goods to assess vertical market power[26] and the South African Competition Commission study of the poultry-to-feed value chain[27] or the South Africa decision in the Bayer Monsanto merger[28] made use of the global value chain approach in understanding competitive interactions in the examined markets and sectors. However, the GVC framework may also provide a more complete picture and analytical toolkit for the competition interactions beyond the traditional price/output dimensions. For a firm, to be integrated into global GVCs may be identified as a means not only for economic, but also sustainability, upgrading.[29] This is becoming increasingly relevant for global competition in view of the extraterritorial dimension of EU law regarding the protection of human rights and environmental sustainability.[30]

B. Sustainability as a GVC goal

In parallel to the globalization of production and supply chains, the demand for sustainable and environmentally-conscious business models has increased. Sustainability is traditionally understood to mean "*meeting the needs of the present without compromising the ability of future generations to meet their own needs*."[31] There is a top-down approach to sustainability where rules requiring system-level changes are stipulated in several international instruments that are expected to be adopted on the national level. Most notably, the UN Sustainable Development Goals (SDGs) initiated a call for action and a roadmap for member countries to adopt policies towards

[25] OECD, '*Interconnected Economies: Benefiting from Global Value Chains* (2013) <https://www.oecd.org/mcm/C-MIN(2013)15-ENG.pdf > accessed 25 September 2024. See also the World Bank Markets and Competition Policy Tool (MCPAT) mapping the groundnut value chain in Senegal. World Bank, '*Better Markets for All through Competition Policy*' (2018): World Bank, *The Role of SOEs in South African Markets and their Impact on Competition*, (2017).

[26] See Contribution of Greece, Hellenic Competition Commission, '*Methodologies to Measure Market Competition – Note by Greece*' <https://one.oecd.org/document/DAF/COMP/WD(2021)2/en/pdf > accessed 25 September 2024.

[27]See, South Africa Competition Commission, 'Commission Conditionally Approves Bayer

And Monsanto Transaction' (2017) https://www.compcom.co.za/wp-content/uploads/2017/01/Commission-Conditionally-Approves-Bayer-Transaction-Final.pdf accessed 25 September 2024.

[28] See, South Africa Competition Commission, 'Competition Commission, Impact Assessment Report on the Bayer Monsanto Merger' (March 2023) <https://www.compcom.co.za/wp-content/uploads/2023/07/ERB-Bayer-Monsanto-Impact-Study-Assessment_NonConfidential_Parliament.pdf >accessed 25 September 2024.

[29] OECD, '*Interconnected Economies: Benefiting from Global Value Chains*'(2013)< https://www.oecd.org/mcm/C-MIN(2013)15-ENG.pdf > ; Marília Bassetti Marcato and Carolina Troncoso Baltar, 'Economic upgrading in global value chains: concepts and measures,' (2020)Revista Brasileira de Inovação, vol. 19, e020002. <https://www.redalyc.org/journal/6417/641771989002/html/> accessed 25 September 2024.

[30] The so called "Brussels effect": Anu Bradford, '*The Brussels Effect: How the European Union Rules the World'* (Oxford, 2019).

[31] United Nations, *Brundtland Commission* (1987) <http://www.un-documents.net/our-common-future.pdf > accessed 25 September 2024.

sustainable development.[32] The SDGs stipulated 17 sustainable economic, social, and environmental development goals.[33] These goals are also reflected in national development plans and the activities of international organizations e.g., development loans.[34]

GVC activities impact sustainability[35] and members of these chains are thus, required to adopt appropriate measures to address these impacts.[36] The concept of ESG (Environmental, Social, Governance) encompasses three dimensions of sustainability[37]: environmental, social, and economic. The environmental dimension focuses on implementing measures to conserve and protect the environment during the production and supply processes, using suitable methods and regulations without compromising future resources. The social dimension prioritizes the long-term well-being of individuals and communities, aiming to reduce inequality and create fair labor conditions, equality, and diversity in labor markets. The economic dimension requires economic activities and growth to have a positive impact on social and environmental conditions. This is reflected in corporate social responsibility (CSR) programs and responsible resource management.

Through the influence of this overall normative framework, and more broadly CSR programs, sustainability has developed as a bottom-up goal of and a constraint on private initiatives. This has evolved from a narrow focus on social and environmental aspects of CSR[38] to the broader requirement for sustainable global value chains (SGVC). This led o the development of sustainable supply chain management (SSCM)[39], which refers to "the management of material, information and capital flows as well as cooperation among companies along the supply chain while taking goals from all three dimensions of sustainable development, i.e., economic, environmental and social, into

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[32] United Nations, 'Sustainable Development Goals (SDGs)' (2025) <https://www.globalgoals.org/goals/17-partnerships-for-the-goals/?gad_source=1&gclid=EAIaIQobChMIibiRh7j0hAMVTACtBh0DdgMcEAAYASAAEgJHQ_D_BwE> accessed 25 September 2024. Also, see the United Nations, Framework Convention on Climate Change and the Convention on Biological Diversity (entered into force on 21 March 1994) UNFCCC.

[33] United Nations General Assembly Resolution 70/1 Transforming our world (adopted on 25 September 2015) A/RES/70/1. See, encouragement of especially large and transnational companies, to adopt sustainable practices and to integrate sustainability information into their reporting cycle and (SDG 12.6) or the push for sustainability in public procurement practices (SDG 12.7).

[34] United Nations, 'Financing for Development' <https://www.un.org/sustainabledevelopment/financing-for-development/> accessed 25 September 2024.

[35] Shuhong Wang, Yuqing He and Malin Song, 'Global value chains, technological progress, and environmental pollution: Inequality towards developing countries'(2021) J. Environ. Manag. 277, 110999.

[36] Amira Khattak and Louisa Pinto, 'A Systematic Literature Review of the Environmental Upgrading in Global Value Chains and Future Research Agenda' (2018) Journal of Distribution Science 16(11):11-19.

[37] The Brundtland report n. 32. It introduced the three pillars of environmental, social and economic sustainability.

[38]OECD, Building more resilient and sustainable global value chains through responsible business conduct' (2021) <https://mneguidelines.oecd.org/Building-more-resilient-and-sustainable-global-value-chains-through-responsible-business-conduct.pdf > accessed 25 September 2024.

[39]Craig Carter and P.Liane Easton, 'Sustainable Supply Chain Management: Evolution and Future Directions '(2011) International Journal of Physical Distribution & Logistics Management Vol. 41 No. 1<https://tarjomefa.com/wp-content/uploads/2017/08/7300-English-TarjomeFa.pdf> accessed 25 September 2024.

account which are derived from customer and stakeholder requirements ".[40] The SSCM adopted a triple bottom line that requires firms to identify activities which improve economic performance and dictate the avoidance of social and environmental activities which fall outside of this intersection.[41] This includes, for instance, shifting to environmentally friendly energy sources and production processes and materials, reducing waste and increasing recycling and adopting fair labor practices that reduces turnover due to enhanced working conditions.[42]

From a development perspective, participating to GVCs has been thought of as promoting trade expansion while ensuring sustainable development.[43] It is contended by the World Bank that countries that go through GVC-driven development create wealth by shifting to higher-value jobs and integrating more technology and know-how into all aspects of their manufacturing, services, and agricultural output[44]. This may also enable them to contribute more effectively to the global SDGs[45]. GVCs may be a significant driver for sustainability practices in developing countries, taking into account the fact that an increasingly more important part of these chains, be it in extraction, production or manufacturing, are often based in developing countries. UNCTAD estimated that value-added trade in developing countries contributed nearly 30% to countries' GDP on average, as compared with 18% in developed countries.[46] Taking part in GVCs seems

[40] Stefan Seuring and Martin Mueller,' From a literature review to a conceptual framework for sustainable supply chain management.' (2008) J. Clean Prod.16, 1699–1710, e.g., triple bottom line' financial, environmental and social bottom line.

[41] Carter and Easton n. 41.

[42] Craig Carter and Dale Rogers, 'A framework of sustainable supply chain management: Moving toward new theory' (2008) International Journal of Physical Distribution and Logistics Management 38(5):360-387. Triple bottom line activities include cost savings associated with reduced packaging and more effective design for reuse and recycling; lower health and safety costs, as well as reduced turnover and recruitment costs due to safer warehousing and transport and improved working conditions; reduced labor costs in the form of higher levels of motivation and productivity and less absenteeism resulting from improved working conditions; lower costs, shorter lead-times, improved product quality, and lower disposal costs resulting from the implementation of ISO 14000 standards and the use of design for disassembly and reuse; and an enhanced organizational reputation, which can make a firm more attractive to both customers and suppliers

[43] Santiago Fernandez de Cordoba and Rubiah Lambert, 'Post-pandemic plea for sustainable value chains' (*UNCTAD* 27 May 2020) <https://unctad.org/news/post-pandemic-plea-sustainable-value-chains> accessed 25 September 2024. "how to turn global value chain (GVC) participation into sustainable development, by focusing on social and environmental sustainability". Daria Taglioni and Deborah Winkler, 'Turning GVC Participation Into Sustainable Development'(2016) 10.1596/978-1-4648-0157-0_ch10 <https://elibrary.worldbank.org/doi/full/10.1596/978-1-4648-0157-0_ch10 > accessed 25 September 2024.

[44] The World Bank, 'Global Value Chains: Participation in global value chains can lead to increased job creation and economic growth'< https://www.worldbank.org/en/topic/global-value-chains#:~:text=With%20GVC%2Ddriven%20development%2C%20countries,leap%2Dfrog%20their%20development%20process> accessed 25 September 2024. This view is not absolute Others view GVCs as recreating the core vs. periphery pattern, with the "good" jobs concentrated in the North and "bad" jobs in the South.

[45] Gary Gereffi, 'Global value chains, development and emerging economies' (2015) Inclusive and Sustainable Industrial Development Working Paper Series WP 18 <https://www.unido.org/sites/default/files/2016-01/WP_18_0.pdf > accessed 25 September 2024.

[46] UNCTAD, 'Global Value Chains: Investment and Trade for Development' (World Investment Report 2013) <https://unctad.org/system/files/official-document/wir2013_en.pdf> accessed 25 September 2024.

also to have improved industrialization and the building of domestic technological and innovation capacity in these countries, essentially by promoting learning-by-doing and the emergence of "local GVC innovators".[47]

However, there have been calls of scaling back offshoring economic activities due to increased trade protectionism and post-pandemic re-revaluation of GVCs.[48] This remains controversial as some have put forward that this may arguably hurt advanced and developing economies alike and push 52 million people into extreme poverty by 2030.[49] Not all firms in developing countries and emerging economies will benefit in the same way from involvement in global value chains (GVCs) as some may focus on less complex goods, tasks, or services within the chain. The comparative advantages of production capabilities and resources between them will determine which firms can benefit the most from their integration into GVCs. Implementing strategies that focus on increasing productivity and sustainability may thus be a key factor for upgrading within GVCs.

The concept of upgrading has so far been seen as the need to capture a growing share of domestic value added in exports, however it may be re-interpreted as a growing share of participation in sustainable production and sustainable innovation.[50] Note that the goal of achieving rapid economic development and poverty alleviation, as well as other sustainability objectives such as environmental protection, may not always be fully aligned.[51] However, sustainable GVCs may preserve an opportunity to balance economic development goals with environmental and social ones and provide a lasting competitive advantage in the emerging green economy. For example, an empirical study of a sample of firms engaged in manufacturing activities in China has shown that their integration in GVCs improves low-carbon innovation capabilities and generates a sustained competitive advantage.[52]

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[47] See the analysis in Valentina De Marchi, Elisa Giuliani, Roberta Rabellotti, 'Do Global Value Chains Offer Developing Countries Learning and Innovation Opportunities?' (2018) 30 Eur J Dev Res 389.

[48] More recently, countries have shifted their focus on national competitiveness see for example Mario Draghi's Speech at the High-level Conference on the European Pillar of Social Rights (Brussels, April 16, 2024) <https://geopolitique.eu/en/2024/04/16/radical-change-is-what-is-needed/ > accessed 25 September 2024.

[49] The World Bank, Global Value Chains in Light of COVID-19: Trade, Development & Climate Change''(March 1, 2022) <https://www.worldbank.org/en/topic/trade/publication/global-value-chains-in-light-of-covid-19-trade-development-climate-change> accessed 25 September 2024.

[50] OECD has undertaken an assessment of the determinants and economic effects of GVC participation across developing countries in five developing regions of Africa, the Middle East and Asia, to consider policy options on how to benefit from the reality of increasingly fragmented production focusing on economic and social "upgrading". Przemyslaw Kowalski and others, 'Participation of Developing Countries in Global Value Chains'(OECD, 2015) < https://www.oecd-ilibrary.org/docserver/5js33lfw0xxn-en.pdf?expires=1729656151&id=id&accname=guest&checksum=38F13A2E536AAB314D95C75F999CBC89> accessed 25 September 2024.

[51] Ben Brik and others, 'Drivers of Green Supply Chain in Emerging Economies' (2013) Thunderbird International Business Review.

[52] 31 manufacturing companies and 56 enterprise groups across 16 Chinese provinces were selected and studied. the successful embedment of global sustainable GVC with low-carbon R &D, manufacturing, and marketing led to an increase in the low-carbon innovation capabilities. Shi Deqiang and others, 'The Role of the Global Value Chain in Improving Trade and the Sustainable Competitive Advantage: Evidence From China's Manufacturing Industry'(2021) Sec. Environmental Economics and Management Volume 9. Cotton is the most common natural fiber used to make clothing, accounting for about 33% of all fibres found in textiles.

The prevalence of Sustainable Global Value chains (SGVCs) may also raise interesting questions as to the interaction between competition and sustainability values, and between regimes of public and private governance in promoting both.[53]

III. Including sustainability in the competition law analytical toolkit: a primer

As GVCs expanded and now organise economic activity for most economic sectors involving commodities[54], it is important to explore how the increasing role for sustainability in the context of GVCs may challenge the usual focus of competition law enforcement on the price dimension of competition. We note a recent change in the competition discourse, in Europe but also in some jurisdictions of the developing world, to cater for sustainability concerns. This may facilitate this interaction of the private governance regimes in SGVCs with competition law. We then explore through this interaction through a case study on the cotton value chain.

Concerning SDGs[55], the United Nations Agenda 2030 and the Paris Agreement have set targets for strengthening sustainable development and the global response to the threat of climate, which have led to the development of sustainability-enhancing policies in both developed and developing countries.[56] The essence of the concept of sustainable development entails a balance of the needs of current generations with those of future generations, considering environmental, societal and economic limitations[57]. The integration of sustainable development goals in competition law enforcement may thus generate tensions with the dominant rhetoric of "consumer welfare" or "consumer well-being" in competition law, principally for the following two reasons: it will require the consideration of sustainability benefits as efficiencies, and competition decision-makers (competition authorities and courts) would need to adequately tackle the possibility of a sustainability-based trade-off between harm to competition and benefits to sustainable development. Competition authorities around

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[53] See, OECD, 'Sustainability and Competition' (2020) OECD Competition Committee Discussion Paper< http://www.oecd.org/daf/competition/sustainability-and-competition-2020.pdf> accessed 25 September 2024.

[54] OECD, 'The Future of Global Value Chains – Business as Usual or a "New Normal"?' (July 2017, no 41).

[55] The Sustainable Development Goals (SDGs) were adopted by the General Assembly of the United Nations, in September 2015. SDG n. 33.

[56] For instance, sustainable development objectives are also firmly enshrined in the EU Treaties. Art. 3(3) and 21(2)(f) TEU. Art. 13(1) TEU and Art. 7 TFEU also set a framework for 'consistency' between EU policies and activities and all its objectives, which is closely linked to the principle of policy coherence that is essential to attaining the Sustainable Development Goals (SDGs): European Parliament, 'Report on the Annual Report on Competition Policy 2018/2102(INI)' (2018) 7. See also, the European Commission, ' The European Green Deal' (2019) 640 final, <https://eur-lex.europa.eu/legal-content/EL/TXT/HTML/?uri=CELEX:52019DC0640&from=EN> accessed 25 September 2024. Concerning developing countries, we observe the emergence of a "climate constitutionalism" with a number of developing and emergent economies incorporating in their Constitutions environmental and climate change related provisions. See, Carla Martinez Coral and others, The 11 nations heralding a new dawn of climate constitutionalism' (LSE Grant Ham Instiute 2 December, 2021) <https://www.lse.ac.uk/granthaminstitute/news/the-11-nations-heralding-a-new-dawn-of-climate-constitutionalism/> accessed 25 September 2024.

[57] The report entitled 'Our common future' and came to be known as the 'Brundtland Report' after the Commission's chairwoman, Gro Harlem Brundtland, 20 March 1987.

the world are beginning to deal with the sustainable development goals, not exclusively the environmental and climate change protection agenda[58], but also social sustainability, in particular regarding the transformation and precarity of work in the digital economy.[59]

The consideration of sustainability concerns has been more aggressive in EU competition law , particularly with the integration of a 'sustainability agreements' chapter in the most recent horizontal cooperation agreements guidelines[60]. Adopted following some extensive consultation, this integrates sustainable development considetations in the interpretation and enforcement of Article 101 TFEU, in view of the broader policy agenda in favour of the Green Deal[61]. In its 101(3) TFEU Horizontal Agreements Guidelines, the Commission seems to have accepted the consideration of collective benefits linked to sustainability that may outweigh competition related harm under specific circumstances. However, they have not moved completely away from the consumer welfare paradigm as they made the choice of requiring an *actual* and *total/full* compensation for the consumers of the relevant market affected by the restriction of competition. This can occur either because the group of consumers that is affected by the restriction and that benefits from the efficiencies is substantially the same or where consumers in the relevant market substantially overlap with, or form part of the group of beneficiaries outside the relevant market. In this context, the collective benefits occurring outside the relevant market can be taken into account if they are significant enough to compensate the consumers in the relevant market for the harm that they suffer[62]. The negative effects on consumers resulting from the restriction of competition need to be fully cancelled out by the alleged benefits. In other words, a *hypothetical* compensation would be insufficient to the extent that it compensates only *a part* of the loss to consumers resulting from the specific restriction of competition.

Putting forward collective benefits is also subject to strict evidential requirements.[63] Of interest for GVCs is that sustainability concerns are also recognized in the vertical restraints' guidelines, which refer to the principles of the horizontal guidelines to assess vertical sustainability agreements[64].

Furthermore, the area of agriculture has been singled out with a specific provision instituting a broader derogation from the application of Article 101 TFEU for sustainability agreements for agricultural producers with the introduction by the 2021 reform of the

[58] See, OECD,HCC, ACM, HCC and ACM and Vestager (n.13).

[59] See, European Commission, 'Collective Bargaining for Self-Employed' (October 2020) <Competition: Collective bargaining for the self-employed (europa.eu)> accessed 27 September 2024. For a discussion, see, Ioannis Lianos, Nicola Countouris, and Valerio De Stefano, 'The EU, Competition Law and Workers' Rights' (March 25, 2021), <https://ssrn.com/abstract=3812153> accessed 27 September 2024. This may of course affect farming and gig economy in the distribution of food (delivery).

[60] European Commission, 'Guidelines on the applicability of Article 101 of the Treaty on the Functioning of the European Union to horizontal co-operation agreements' (2023/C 259/01) (hereinafter Horizontal Agreements Guidelines).

[61] Vestager (n. 13).

[62] Ibid, paras 583-584

[63] Ibid, para. 587.

[64] European Commission, 'Guidelines on Vertical Restraints' (2002/C 248/01), paras 8 & 9.

Common Agricultural Policy (CAP) of Article 210a in the CMO Regulation[65]. . This exclusion regime enables agreements that would otherwise be caught by Article 101(1) TFEU to escape its application, provided the conditions laid down in Article 210a are met[66]. These requirements are less strict than those of Article 101(3) TFEU, hence they enable the exclusion from the prohibition principle of restrictive agreements that may not qualify for an exemption under Article 101(3) TFEU. To benefit from the exclusion of Article 101 TFEU, such sustainability agreements must aim to achieve a sustainability standard (which for being considered as indispensable needs to be supported by EU or national law).[67] The application of such standard should lead to measurable or at least observable and desirable results which are higher than the standard mandated by EU or national law.[68] The exclusion of Article 101 TFEU will however cease to apply from the moment that equivalent, or more ambitious, EU or national sustainability standards enter into force.[69]

Several National Competition Authorities (NCAs) in Europe have considered sustainability concerns in the enforcement of their national competition law, not only in the EU but also in the developing world. We do not aim to provide an exhaustive account of these initiatives but some illustrations that could be of relevance for the analysis of sustainability concerns in GVCs (particularly in the agriculture field).[70] Regarding more concrete examples, we note decisions of the German Bundeskartellamt (BkA) regarding voluntary agreements such as a common initiative to promote living wages and incomes along the supply chain in the banana sector[71], an initiative adopted by representatives of the meat industry and food retailers to promote animal welfare in livestock farming[72], or

[65] Regulation (EU) 2021/2117 of the European Parliament and of the Council of 2 December 2021 amending Regulations (EU) No 1308/2013 establishing a common organisation of the markets in agricultural products, (EU No 1151/2012) on quality schemes for agricultural products and foodstuffs, (EU) No 251/2014 on the definition, description, presentation, labelling and the protection of geographical indications of aromatised wine products and (EU No 228/2013) laying down specific measures for agriculture in the outermost regions of the Union, OJ L 435 (6.12.2021, p. 262).

[66] However, even if agreements do not benefit from Article 210a, the application of Article 101 TFEU may still be excluded in view of the possibilities offered by Articles 152, 209 and 210 of the CMO Regulation.

[67] Ibid, para. 54.

[68] Ibid, paras. 56 & 57.

[69] Ibid, para. 64.

[70] See, at a more general normative level the initiatives of the German competition authority. Maria Held, Michael Holzhäuser, 'The German Competition Authority provides guidance on the conditions under which sustainability goals in cooperation agreements between competitors may be sufficient to exempt such agreements from the prohibition against anti-competitive agreements under German provisions and the TFEU' (25 January 2022) e-Competitions Agriculture & Antitrust, Art. N° 105547*;* the ACM in the Netherlands ACM, 'Guidelines regarding collaborations between farmers' (September 2022) ACM/UIT/583192<https://www.acm.nl/system/files/documents/guidelines-regarding-collaborations-between-farmers.pdf> accessed 27 September 2024; the Hellenic Competition Commission, 'Sustainable Development Sandbox' <https://sandbox.epant.gr/en> accessed 27 September 2024; the CMA in the UK, CMA, 'Guidance on the application of the Chapter I prohibition in the Competition Act 1998 to environmental sustainability agreements' (October 12, 2023).

[71] German Retailers Working Group Sustainability initiative to promote living wages in the banana sector [2021] Case B2-90/21, (decision of 25 November 2021) <https://www.bundeskartellamt.de/SharedDocs/Entscheidung/EN/Fallberichte/Kartellverbot/2022/B2-90-21.html> accessed 27 September 2024.

[72] Compensation model of Initiative Tierwohl (ITW) to be developed and introduced for beef , Case B2-72/14, (decision of 14 December 2021)

the “industry agreement milk” (Branchenvereinbarung Milch) to improve animal welfare in milk production[73], and a voluntary commitment of the members of the German Initiative on Sustainable Cocoa (which comprised public bodies, companies active in the cocoa sector, retailers and NGOs) to adopt individualized minimum prices, quotas and premium systems with the aim to increase the income of cocoa farmers in Ghana and Côte d'Ivoire[74]. In a similar vein, the Belgian competition authority also found that the initiative by IDH Sustainable trade and large retailers to promote living wages in the banana sector which aimed to close the gap between actual wages and living wages, by developing cooperation involving the freedom of participants to the initiative to set stricter standards, without however being able to exchange commercially sensitive information, did not raise competition concerns[75]. The UK CMA also did not find any competition concerns with the Fair Trade Shared Impact initiative for the sourcing of Fairtrade banana, coffee and cocoa products by participating UK grocery retailers which aimed to use longer-term supply arrangements between the Retailers and participating Fairtrade producers to provide the producers with the security they need to invest in sustainable practices for farming in the Global South[76]. Although these initiatives seem at first sight to concern economic activities in developed countries, they impact on sustainability standards in developing and emergent economies, in view of the improvement of living standards engendered by the initiatives to increase wages.

Turning to developing/emergent economies, the Brazilian CADE went further in considering sustainability and cleared a joint venture between Sustainlit, Cargill, Louis Dreyfuss, and ADM to create a platform to measure sustainability in the food and agricultural supply chain. This platform aimed to standardize sustainability measurements of agricultural and food products based on information provided by suppliers and proceeding to a comparison of the products’ sustainability performance.[77] The establishment of the platform involved access to sensitive data from competitors, suppliers and customers and foreclosure of competitors because of potential

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<https://www.bundeskartellamt.de/SharedDocs/Entscheidung/EN/Fallberichte/Kartellverbot/2022/B2-72-14.html> accessed 27 September 2024.

[73] See, Bundeskartellamt, ‘Increasing animal welfare in milk production – Bundeskartellamt tolerates the introduction of the QM+ programme’ (29.03.2022) <https://www.bundeskartellamt.de/SharedDocs/Meldung/EN/Pressemitteilungen/2022/29_03_2022_Milch_Nachhaltigkeit.html;jsessionid=3C05D604BBBAB8778406FB2CB269CAA1.1_cid362?nn=3591568> accessed 27 September 2024.

[74] See, Bundeskartellamt, ‘German Initiative on Sustainable Cocoa – Bundeskartellamt sees no reason for detailed examination’ (13.06.2023) <https://www.bundeskartellamt.de/SharedDocs/Meldung/EN/Pressemitteilungen/2023/13_06_2023_Kakaoforum.html> accessed 27 September 2024.

[75] See, Belgian Competition Authority, ‘The Belgian Competition Authority assesses a sustainability initiative on 'living wages in the banana sector' (8 March 2022) <https://www.belgiancompetition.be/sites/default/files/content/download/files/20230330_Press_release_11_BCA.pdf > accessed 27 September 2024.

[76] CMA, ‘Informal Guidance: Green Agreements Guidance, Fairtrade Shared Impact Initiative’ (2023) <https://assets.publishing.service.gov.uk/media/65799999095987001295dfb1/A._Fairtrade_Foundation_informal_guidance.pdf > accessed 27 September 2024.

[77] See, Ministry of Justice, ‘CADE clears joint venture for the development of sustainability measurement software’ (Jul 04, 2023) <https://www.gov.br/cade/en/matters/news/cade-clears-joint-venture-for-the-development-of-sustainability-measurement-software> accessed 27 September 2024.

sustainability standards set by the JV, thus raising competition concerns. However, such risks were mitigated by the commitments put forward by the parties, particularly through the Antitrust Protocol submitted by the joint venture partners, ensuring, among other things, that there will be no discriminatory treatment between the platform users, no exclusivity, preference, or privilege in the use of the platform and the separation of the corporate structure of the joint venture from its shareholders.

As it appears from these initiatives, regimes of public governance such as competition law, in developed but also in developing countries, may have to grapple with sustainability and SDG-promoting business practices in the organization of GVCs. What would that mean for private governance regimes in implementing ESGs/SDGs and establishing sustainable global value chains? This is explored in the following Section, with a particular focus on the textile/cotton value chain.

IV. Sustainable global value chains (SGVCs) and competition law and policy: insights from the cotton value chain

Cotton accounts for about 33% of all fibers found in textiles.[78] Most cotton producers and consumers are situated in the developing world.[79] It is a global chain where economic activities are spread across the developing and developed world with power asymmetries between the stakeholders and potential negative environmental and social detrimental effects at every stage of the chain. The apparel supply chains are primarily buyer-driven, with a significant presence of global sourcing by multinational brands and retailers from developing nations.[80] This emphasizes the relevance of the GVC lens to understand production as a "dynamic set of processes among firms" around the world.[81] Large buyers at production and retail levels benefit from power asymmetry, potentially causing an unfair balance of risks for suppliers. From a public governance competition-promoting lens, cotton GVCs offer a fertile terrain for experimenting with sustainability policies across the value chain and insightful practical examples. For instance, the EU Horizontal Cooperation Guidelines on sustainability included an example from the textile/cotton sector in showing the limits of the traditional consumer welfare approaches to deal with collective environmental benefits that would not accrue to the

[78] World Resources Institute, 'The Apparel Industry's Environmental Impact in 6 Graphics', (July 5, 2017) <https://www.wri.org/insights/apparel-industrys-environmental-impact-6-graphics> accessed 27 September 2024.

[79] The largest producers of cotton in 2023 were China, India, USA and Brazil. The largest consumers were China, India, Pakistan, Bangladesh and Turkey. U.S. Department of Agriculture, 'Cotton Outlook' (2022)<https://www.usda.gov/sites/default/files/documents/2022AOF-cotton-outlook.pdf > accessed 27 September 2024

[80] Gary Gereffi and Richard Appelbaum, 'Power and Profits in the Apparel Commodity Chain' in E.L.C. Bonacich et al, Eds.; *Global Production: The Apparel Industry in the Pacific Rim* (Temple University Press, 1994) <https://www.researchgate.net/publication/247217768_Power_and_profits_in_the_apparel_commodity_chain> accessed 27 September 2024. The Multi-Fibre Agreement (1974-2005) imposed export quotas on developing countries, causing economic harm and job losses, and was replaced by the Agreement on Textiles and Clothing in 2005 phasing out quotas by 2005.'Textiles: back in the mainstream', (WTO) <https://www.wto.org/english/thewto_e/whatis_e/tif_e/agrm5_e.htm> accessed 27 September 2024.

[81] Ibid.

consumers of clothing in the relevant geographic market in the Global North, as they often occur only in the area where the cotton is grown, that is in most cases developing and emergent economies of the Global South. Despite however the progress made in integrating sustainability concerns, the approach followed does not depart significantly from the consumer welfare standard as such collective environmental benefits may only be considered "if and to the extent that consumers of the clothing are willing to pay more for clothing that is made of sustainably grown cotton (individual non- value benefit"[82].

We will first discuss the main features of a cotton SGVC including sustainability concerns before exploring some of the competition issues that may arise in the cotton SGVCs.

A. Sustainability objectives of cotton and apparel global supply value chains

The cotton value chain raises several environmental and social sustainability challenges.[83] Cotton as a crop requires high water consumption and significant global insecticide and pesticide usage.[84] The production of cotton also contributes to the world's total greenhouse gas emissions.[85] A concept that is relevant to cotton as an important input to fast fashion—a low-quality, short-lifetime apparel industry—and its impact on sustainability.[86] The industry faces sustainability challenges due to low quality, frequent garment replacements and textile waste.[87] In addition, human rights violation and exploitation of labor in harvesting and in production activities (e.g., sweatshops) are rampant.[88] Integrating sustainability concerns in this context in the way the GVC operates becomes an important policy concern.

Sustainability initiatives in the cotton value chain can be categorized based on whether they are implemented on the supply or the demand side.[89] On the supply side, the focus is mainly on communities (farmers) as the building blocks of the sustainable chain. On the demand side, sustainability is dependent mainly on industry self-

[82] Horizontal Agreements Guidelines, para. 585.
[83] In this chapter we focus on cotton as an input in apparel.
[84] Cotton cultivation requires 3% of all water consumed in agriculture, 24% of global insecticides and 11% of global pesticides usage. Cottonworks,'Cotton Sustainability Basics'(2024) <https://cottonworks.com/en/topics/sustainability/cotton-sustainability/> accessed 27 September 2024.
[85]FAO, *Measuring Sustainability in Cotton Farming Systems, Towards a Guidance Framework'*,(2015) p.34, <https://www.fao.org/3/i4170e/i4170e.pdf > accessed 27 September 2024. Some argue that cotton is effective plant for reducing carbon emissions. ICAC, *Review of the World Situation*, (Cotton Volume 77. Number 2, February, 2024) <https://icac.org/Content/PublicationsPdf%20Files/3a7423c8_f437_4d67_ab48_7f71ec64b188/Cotton%20Review%20Report%20-%20Cover%20website.pdf.pdf> accessed 27 September 2024.
[86] Annamma Joy et al, 'Fast Fashion, Sustainability, and the Ethical Appeal of Luxury Brands', (2023)*Fashion Theory,* Volume 16, Issue 3, pp. 273–296 <https://www.tandfonline.com/doi/abs/10.2752/175174112X13340749707123> accessed 27 September 2024.
[87] Niinimäki, Kirsi and Lotta Hassi, 'Emerging design strategies in sustainable production and consumption of textiles and clothing' (2011) *Journal of cleaner production* 19, no. 16, 1876-1883.
[88] There is a risk of $468 billion in garment imports being produced with forced labor. Walk Free, 'Global Slavery Index' <https://www.walkfree.org/global-slavery-index/findings/importing-risk/> accessed 27 September 2024
[89] A one-size-fits-all approach to sustainability is unsuitable due to the uniqueness of farming systems across regions, specific sustainability challenges, and interconnected sustainability components. FAO at n 94 p. IV.

assessment standardization, certification and ranking tools.[90] Tracing sustainability across the chain involves utilizing non-toxic colors, water recycling, eco-friendly dyes and renewable energy to minimize contamination and water loss, and use of renewable energy to reduce the carbon footprint. Some initiatives focus on shifting consumer culture to consume less fast fashion and abandon them for sustainably sourced apparel.[91] Other initiatives focus on providing consumers with more information about the products they consume using ecolabels to influence their behavior.[92]

There is no dichotomy between the demand and supply side sustainability where an initiative may aim to meet issues arising from both. For example, the Better Cotton Initiative (BCI) developed a traceability platform for retailers and aim to develop a cotton-specific carbon insetting accounting framework. Once implemented, the insetting mechanism will enable retail companies to know who grew their sustainable cotton and allow them to incentivize farmers directly with credits.[93]

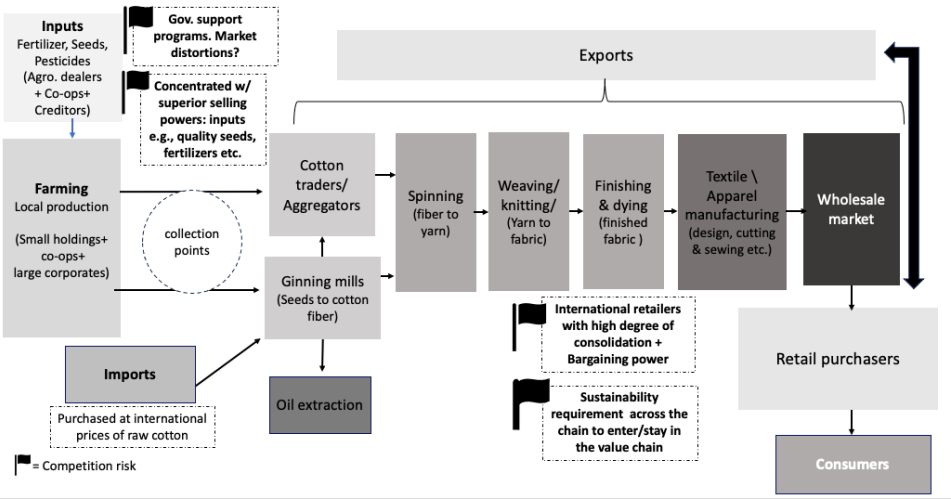
B. Competition law and policy, opportunities and challenges in the cotton SGVCs

Segmenting the value chain into its constituent functions is a critical step in understanding how sustainability affects the chain and identify potential competition concerns across it.[94]

Starting with cotton farming, it provides direct livelihoods for over 100 million households in 75 countries, of which 90% are in lower-income countries.[95] Cotton production relies on access to seeds, fertilizers, and pesticides. Harvested crops are collected and sold through traders or ginning mills, where fibers are extracted from seedpods. These fibers are exported as raw cotton or transported to spinning mills. Raw cotton is turned into yarn or thread, which undergoes several processes to be turned into fabric, treated, and used to manufacture apparel. The finished products are sold through wholesale and retail markets to end consumers.

Figure 2: Sample cotton apparel value chain and competition bottlenecks

[90] Import bans such as Uyghur Forced Labor Prevention are not covered in this discussion.
[91] Fashion Transparency Index (2023) < https://www.fashionrevolution.org/about/transparency/> accessed 27 September 2024.
[92] EU Ecolabel, '*Guiding your sustainable choices*' <https://environment.ec.europa.eu/topics/circular-economy/eu-ecolabel_en> accessed 27 September 2024.
[93] Fairtrade is another example that will be discussed later, Fairtrade,' *Cotton Farmers*' (2023). <https://www.fairtrade.org.uk/farmers-and-workers/cotton/> accessed 27 September 2024.
[94] The discussion of cotton SGVC is aggregated as cotton value chains vary across developing countries, making it more relevant for some countries.
[95] The number rises to 350 million people if including family labour and related activities like transportation, ginning, and storage. International Institute for Sustainable Development (IISD), *Cotton prices and Sustainability* (Jan 2023) <https://www.iisd.org/system/files/2023-01/2023-global-market-report-cotton.pdf> accessed 27 September 2024.



Source: Author's elaboration based on review of sample value chains in Egypt, India and China. See Austrian Foundation for Development Research, Value Chain Analysis for Apparel from Egypt, February 2020, WWF, Cotton Markets and Sustainability in India, (2012), and China Textile Economic Information website, BCI comes out with new Chain of Custody Guidelines.

1. Empowering policy options to support SGVCs in cotton

Competition law and policy may act as a tool to empower investment and innovation initiatives in sustainable GVCs which would benefit all GVC stakeholders, such as farmers, and not only lead firmsas well as result in keeping the costs down, thus enabling the larger diffusion of sustainability initiatives in the industry.[96]

- ***Consolidation and market power in input segment of the market***

Cotton cultivation requires a variety of inputs such as soil preparation, seed, irrigation water, fertilizers, pesticides, and labor.[97] A study in 2016 estimated that the fertilizer and harvesting or cotton picking (labor) were the two most expensive inputs for that year accounting for 24% and 13% of total expenses, respectively.[98] The higher the costs of cotton cultivation the less profits farmers can make, where they occasionally can hardly breakeven.[99] Accordingly, cartels in relevant primary markets such as fertilizers would

[96] Subsidies have a vital role in cotton value chain with direct impact on prices. However, they are outside the scope of this chapter.
[97] Hina Ali et al, 'Economic Analysis of Input Trend in Cotton Production Process in Pakistan' (2022), 2 (1) Asian Economic and Financial Review https://www.researchgate.net/publication/357900634_Asian_Economic_and_Financial_Review_24553-561 accessed 27 September 2024.
[98] Excludes land rent and seed value. ICAC, 'Cost of production of raw cotton' (2016), https://www.icac.org/Content/PublicationsPdf%20Files/9697a6b2_6d66_4111_b66d_2d2d0efea4b8/cost-of-production2016.pdf. accessed 27 September 2024
[99] Id.

have an impact on the cost to cultivate cotton. For example, the potash cartel was shown to cause a 50% increase in food prices.[100]

Access to high quality seeds also affects cotton cultivation costs of production. Farmers in countries with established programs providing support to access high quality seeds that are costly (e.g., China and the US) are at an advantage compared to farmers in countries that lack such institutional support (e.g., India).[101] Given the market power that seed companies derive from their patents, competition authorities should adopt a more active competition enforcement against abuse of dominance and control more effectively merger activity.[102] For instance, in 2016 the CCI found that Monsanto abused its dominant position as a supplier of genetically modified (GM) cotton seeds in India.[103] GM cotton seeds accounted for about 96% of the cotton area cultivated in India at the time. This was following a complaint from India's Agriculture ministry and some local seed companies against Monsanto for charging unreasonably high royalty fees for its Bt Cotton technology and entering into pricing agreements directly aimed at overcharging farmers who use Bt Cotton seeds.[104] Also, when reviewing the merger between Bayer and Monsanto the Competition Tribunal of South Africa approved the merger on the condition that the merged entity divest the Bayer South African cotton seed business.[105] The Tribunal found that the merger would result in consolidation in the GM cotton seed market from two-to-one in South Africa.

2. Private initiatives for sustainability and competition

Several private initiatives address some of the identified sustainability issues in the cotton value chain. This Section will focus on the competition concerns of two types of initiatives, those designed to address price distortion and sustainability certification. The former relate mostly to social sustainability and usually affect (disproportionately) the

[100] A study looking at whether the potash cartel caused price escalation during the 2007/2008 food crisis shows that it accounted for up to 50% of the price increases. Gnutzmann et al, 'Did the Fertilizer Cartel Cause the Food Crisis?' (2016) International Trade and Development, No. A19-V2 <https://www.econstor.eu/bitstream/10419/145777/1/VfS_2016_pid_6804.pdf> accessed 27 September 2024.

[101] International Cotton Advisory Committee, 'Production and trade subsidies affecting the cotton industry' (2020) <https://www.icac.org/Content/PublicationsPdf%20Files/d77a4022_9008_40f6_a972_c8c8e5d43d2f/Cotton_subsidies2020.pdf.pdf> accessed 27 September 2024.

[102] U.S. Department of Agriculture, *Expanded IP Protections for Crop Seeds Increase Innovation and Market Power for Companies* (2023) <https://www.ers.usda.gov/amber-waves/2023/august/> accessed 27 September 2024.

[103] Subash Surendran Padmaja, Intellectual Property, Competition, and Regulatory Policies: A Case of Bt Cotton Seed Industry in India. Competition Commission of India Journal on Competition Law and Policy, (2020) <https://doi.org/10.54425/ccijoclp.v1.11> accessed 27 September 2024.

[104] Madhvi Sally and Karunjit Singh, 'Monsanto abused dominant position in India: CCI probe' *The Economic Times* (India May 22, 2019) <https://economictimes.indiatimes.com/news/economy/agriculture/monsanto-abused-dominant-position-in-india-cci-probe/articleshow/69437310.cms?utm_source=contentofinterest&utm_medium=text&utm_campaign=cppst> accessed 27 September 2024.

[105] South Africa Competition Commission, '*Merger Impact Assessment Bayer Monsanto*'(March 2023)h<ttps://www.compcom.co.za/wp-content/uploads/2023/07/ERB-Bayer-Monsanto-Impact-Study-Assessment_NonConfidential.pdf> accessed 27 September 2024.

less concentrated segment of the cotton GVC, that is the farmers. The latter is important for both social and environmental sustainability.

Price distortions across the cotton GVC and minimum or "fair" price arrangements

Cotton prices are directly influenced by financial markets as much as by supply and demand forces in the relevant product market. Cotton supply is determined by variables such as the cotton production area, agricultural technology usage, and meteorological conditions, affecting crop yields.[106] Cotton demand is impacted by global economic growth, fashion trends, and its application in a variety of sectors, including textiles and garments. Furthermore, government subsidies can negatively impact cotton prices, particularly in developing countries.[107] External factors like global disasters, trade wars, and armed conflicts may also cause market volatility and speculation.[108] Some have called into question whether the market mechanism is truly what drives the price of primary commodities. A study on the Cotlook Index in Liverpool Cotton Exchange suggests speculative activities have distorted price determination, leading to significant price increases in primary commodities over the past two decades.[109] This raises questions as to the role of speculators, such as commodity index traders, in the process of price formation for international commodities such as cotton.[110]

The demand for trading at low prices may overshadow that for adequate farmer compensation and better agricultural practices for environmental conservation and producer well-being.[111] There are several initiatives, whether through government or institutions, promoting voluntary sustainability standards (VSS) to combat this power imbalance.

As for private initiatives, Fairtrade International established minimum prices for raw or seed cotton farmers that provides a framework for prices to be negotiated between buyers and sellers. The challenge here lies in determining a fair price for

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[106] Yvonne Jans, Werner von Bloh, Sibyll Schaphoff, and Christoph Müller, 'Global cotton production under climate change – Implications for yield and water consumption' (2021), Hydrol. Earth Syst. Sci. <https://doi.org/10.5194/hess-25-2027-2021> accessed 27 September 2024.

[107] In 2013/2014, substantial subsidies contributed to a global cotton price decline that cost African farmers USD 250 million a year. Fair Trade International, '*The Future is Fair*' (Annual Report 2020-2021) <https://files.fairtrade.net/publications/Fairtrade-International-Annual-Report-2020-2021.pdf> accessed 27 September 2024.

[108] The World Bank Group, '*The Impact of the War in Ukraine on Commodity Markets*' (2022) <https://openknowledge.worldbank.org/server/api/core/bitstreams/da0196b9-6f9c-5d28-b77c-31a936d5098f/content> accessed 27 September 2024.

[109] Ahmet İkiz and Sefa Erkus, 'Determinants of World Cotton Price Does Market Clear' (2017) Ulakbilge Dergisi <https://www.researchgate.net/publication/326279728_Determinants_of_World_Cotton_Price_Does_Market_Clear> accessed 27 September 2024.

[110] UNCTAD Trade Development Report 2023 highlights the need for group membership and evolving behavior of major international players in commodity trading, as excessive speculation can drive price fluctuations and benefit only a few global players.

[111] IISD, '*Cotton prices and sustainability*' (Jan 2023), p.22 <https://www.iisd.org/system/files/2023-01/2023-global-market-report-cotton.pdf> accessed 27 September 2024.

sustainable cotton as it is still based on conventional market prices.[112] Private companies can establish terms with farmers' associations through annual contracts, using a market-decorrelated price for organic cotton.[113] From a competition perspective, setting price floors for seed or row cotton may usually raise concerns over resale price maintenance, but with a careful design of such initiatives this may be avoided (see discussion in Section III).

Cotton price distortions persist in the value chain, especially in garments, where retailers often purchase finished products through intermediaries. Retailers enjoy significant leverage over the chain.[114] Cotton farmers receive the smallest share in the value chain with their share not exceeding 10% of the retail price of a garment. In fact, some sources suggest that they only get 2%–3%.[115] Retailers are positioned as volume sellers and are under pressure to preserve their competitive edge by decreasing their prices. The more retail concentration there is in the market, the more pressure there is on suppliers to decrease prices.[116] Cotton farmers get the lowest prices in the value chain, while retailers have pricing power and are better protected from market volatility.[117] Some variation may exist due to the size of the farmers, as larger farmers are able to negotiate better prices. Some other may depend on the existence of subsidies as those farmers receiving more government support stand to profit more from the process. As a result, retailers, especially large ones, can put pressure on other players in the value chain to minimize cost and maximize their profit.

This is another area in which an active competition enforcement against exploitative practices in cotton as an input market may provide an adequate tool to also enhance the adoption of sustainability practices by farmers. Competition law enforcement may address issues arising from the high concentration at the retail level under the "expansive consumer welfare standard"[118], which focuses on conduct that

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[112] Textile Exchange, 'Preferred Fiber & Materials' (2021), <https://textileexchange.org/app/uploads/2021/08/Textile-Exchange_Preferred-Fiber-and-Materials-Market-Report_2021.pdf>accessed 27 September 2024.

[113] Such as Veja. Restoring balance in global trade, https://project.veja-store.com/en/single/fairtrade. accessed 27 September 2024

[114] IISD *supra n.*123 p.18.

[115] Ibid at p. 148.

[116] Diana Moss & Robert Taylor, 'Short Ends of the Stick: The Plight of Growers and Consumers in Concentrated Agricultural Supply Chains' (2014) Wisconsin Law Review <https://wlr.law.wisc.edu/wp-content/uploads/sites/1263/2014/07/5-Moss-Taylor.pdf> accessed 27 September 2024. See also USDA, 'USDA Is Fighting for Fair, Competitive, and Transparent Markets'(May 4, 2023) <https://www.usda.gov/media/press-releases/2023/05/04/fact-sheet-usda-fighting-fair-competitive-and-transparent-markets> accessed 27 September 2024 and, Oliver Cattaneo, Gary Gereffi and Cornelia Staritz, 'Global value chains in a postcrisis world : a development perspective' (World Bank Group 2010)

<http://documents.worldbank.org/curated/en/432691468332065846/Global-value-chains-in-a-postcrisis-world-a-development-perspective > accessed 27 September 2024

[117] IISD supra n. 123 at 148.

[118] See analysis in Ioannis Lianos and Chrysovalantou Milliou, 'Advantages and Disadvantages of Competition Policy Standards' (1/2024) CLES Policy Paper series <https://www.ucl.ac.uk/cles/sites/cles/files/cles_policy_paper_1_2024.pdf> accessed 27 September 2024.

harms the welfare of the trading partners of dominant firms[119]. The trading partners can include, depending on the conduct under analysis, (upstream) input suppliers, (upstream) farmers, workers, and (downstream) business customers. This concretely means that if there is harm from competitive restraints directed at farmers, workers and other upstream trading partners, this will be a sufficient trigger for action by competition authorities.[120]

- ***Certification and green entry barriers in the value chain***

There are several standards and certification programs for cotton. Cotton certification programs differentiate between fully organic products, the entire production chain being organic, and organic cotton, which is farmed without synthetic chemicals.[121] To this end, the use of standards and certification are meant to reduce the negative externalities of transnational production, while promoting sustainable development through fostering green growth and trade.[122] Adopting voluntary standards and certification are also increasingly popular as tools for sustainable supply chain management, and in order to mitigate reputational risk . More and more lead firms in global value chains adopt Voluntary Sustainability Standards (VSSs) making their buying decisions dependent on suppliers' (across borders) compliance with voluntary standards.[123] These include programs such as Global Organic Textile Standard (GOTS)[124] and Better Cotton[125], that require proof of a chain of custody, but their requirements vary, making it unclear how feasible it is to meet these standards. This are examples of what we refer to as green entry barriers.[126]

Competition between certifiers motivates firms to disclose all information and adopt the VSS that are easiest for them to comply with. Competition among VSS regimes may increase the cost for firms if they perceive a need to obtain certification from multiple

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[119] Carl Shapiro, 'Breathing New Life into Consumer Welfare Standard' (2018) FTC Hearings on Competition and Consumer Protection in the 21st Century <https://faculty.haas.berkeley.edu/shapiro/protectingcompetitionstandard.pdf> accessed 27 September 2024.

[120] This standard is "broad enough to encompass harms to workers (and other input suppliers) as cognizable competition harms, even if downstream purchasers are not harmed". See Laura Alexander and Steven Salop, 'Antitrust Worker Protections' (2023)The University of Chicago Law Review (2022) <https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4094046> accessed 27 September 2024.

[121] John Naviaux and others, 'Calcite dissolution rates in seawater: Lab vs. in-situ measurements and inhibition by organic matter'(2019) Marine Chemistry, Vol 215 <https://www.sciencedirect.com/science/article/abs/pii/S0921800910002661> accessed 27 September 2024.

[122] Santiago Fernandez de Cordoba and Rubiah Lambert, *Post-pandemic plea for sustainable value chains*, (UNCTAD 2020) <https://unctad.org/news/post-pandemic-plea-sustainable-value-chains>

[123] The UN, *3rd Flagship Report on Sustainability Standards* (UNFSS 2018) <https://unfss.org/wp-content/uploads/2018/09/UNFSS-3rd-Flagship-Report-FINAL-for-upload-1.pdf> accessed 27 September 2024

[124] GOTS, 'Standard' <https://global-standard.org/> accessed 27 September 2024.

[125] BCI, 'Defining Better Standards' <https://bettercotton.org/who-we-are/> accessed 27 September 2024.

[126] IDRN, 'The Green Economy: Barriers to Entry,'(2022) <https://idrn.eu/the-green-economy-barriers-to-entry/> accessed 27 September 2024.

VSS regimes, even though they only need to comply with one.[127] Increased compliance costs may affect smaller farmers and entities' ability to join or continue to be part of the SGVC. Mutual recognition agreements as a possible solution could reduce harmonization costs.[128] Another approach to the crowding of VSS is meta-recognition involving a private meta regulator administering credible international standard-setting organizations focusing on social and environmental issues, e.g., International Social & Environmental Accreditation & Labelling (ISEAL).[129] This diversity of standards presents possible conflicts among members in addition to the market rivalry between member standards, hence posing internal challenges to the integrity of ISEAL. When ISEAL's membership increases, these risks intensify. To this end, ISEAL aims to improve internal cohesiveness by adopting code of ethics to manage and eventually reduce competitive rivalry among its members.[130] Such meta-recognition bodies may help level the playing field but they may also lead to discouraging intra-member competition on the relevant market.

3. Competition enforcement and cotton SGVCs: a sword and a shield

Workable solutions to sustainability issues require the collaboration of all stakeholders across the value chain in innovative ways. The parameters of such collaboration should not result in constraining price or sustainability competition. Competition law enforcement can play a positive role in combating forms of collaboration that lead to horizontal collusion under the guise of achieving sustainability objectives or that enable dominant players to deceive consumers and trading partners over their sustainability policies (the so-called practices of green washing). It is of equal importance to differentiate and provide some flexibility for the different forms of collaboration needed to achieve such sustainability goals. Competition enforcers would thus need to explore new modalities of cooperation on their action regarding SGVCs, which also calls for more international cooperation between competition authorities in developed economies and in developing and emergent economies.

- ***Clear cases***

A recent investigation in fashion retail highlights potential tension between competition law enforcement and sustainability goals. Post Covid-19, fashion

[127] Santiago Fernandez de Cordoba and others , 'Voluntary Sustainability Standards, Trade and Sustainable Development' (UNFSS 2018) <https://unfss.org/wp-content/uploads/2018/09/UNFSS-3rd-Flagship-Report-FINAL-for-upload-1.pdf> accessed 27 September 2024.
[128] Axel Marx and Jan Wouters, 'Competition and cooperation in the market of voluntary sustainability standards' (2014) <https://ssrn.com/abstract=2431191> accessed 27 September 2024.

[129] Phillip Paiement, 'Forestry Standards Thematic Analysis Codebook' in *Transnational Sustainability Laws Global Law Series* (Cambridge University Press 2017).
[130] Allison Loconto and Eve Fouilleux, 'Politics of private regulation: ISEAL and the shaping of transnational sustainability governance' (2014) Regulation & Governance <https://doi.org/10.1111/rego.12028> accessed 27 September 2024.

executives and designers launched the "Rewiring Fashion" initiative to address issues like unsold inventory and waste, leading to restrictions on quantities and prices, e.g., delaying the traditional discounting periods and cutting down on mid-season sales that eroded profits, among other things.[131] It should be noted that collaboration between competitors on environmental protection is not prohibited as long as it does not significantly reduce market competition and may be allowed, subject to authorization.[132]

In addition to these horizontal competition concerns, of interest is also the approach followed by some producer country governments to preserve "fair" prices which would adequately compensate the effort by cotton producers to invest in sustainability-enhancing practices. As part of a holistic policy the Egyptian government adopted auction-based marketing system for short-staple cotton aligned with international prices to restore cotton farming.[133] This approach compensates cotton producers for sustainability-enhancing practices, addressing horizontal competition concerns and promoting fair prices. Under this scheme, the government announces indicative purchase prices to guarantee Egyptian farmers a "fair" price.[134] In addition, aware of the rising demand for sustainable cotton the government launched the "Better Cotton BCI" initiative in 2020 to increase sustainability and improve the conditions of cotton farmers.[135] It was reported that after the reduction of the bid opening prices at the request of private companies, these companies continue to refrain from bidding.[136] This shows that the mere use of competitive tendering does not ensure a successful outcome. Such initiative requires constant monitoring and engagement including from competition watchdogs. Such efforts to guarantee an adequate or "fair" compensation for farmers is also a characteristic of some of the industry-wide and/or inter-industry collaborations for "fair" wages examined in Section III.

Another area of enforcement that has seen some development recently is the prohibition of greenwashing.[137] Greenwashing, a strategy used to deceive the public into

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[131] EU DG Comp, 'Commission confirms unannounced inspections in the fashion sector' (2023) <https://ec.europa.eu/commission/presscorner/detail/en/ip_23_2352> accessed 27 September 2024.

[132] Competition Bureau, 'Amendments of the deceptive marketing practices provisions of the Competition Act' <https://competition-bureau.canada.ca/how-we-foster-competition/education-and-outreach/guide-june-2024-amendments-competition-act> accessed 27 September 2024.

[133] Egypt's government also took control of cottonseed production and distribution to improve seed purity and environmental impact. EU, 'Food and Agricultural Import Regulations and Standards' (2020) <https://shorturl.at/TUgKA> accessed 27 September 2024.

[134]Sarah Elhosary,'A cloud with a silver lining' *Ahram Online* (Cairo 1 Nov 2022). Initiatives like Better Cotton and Cotton Made in Africa use commodity prices as reference points. National Cotton Council, '*Cotton Policy Performance in Egypt*'

<https://www.cotton.org/beltwide/proceedings/getPDF.cfm?year=2002&paper=D039.pdf> accessed 27 September 2024.

[135] Law No. 210 of 1994. See also Textiles Bar, '*History of Egyptian Cotton'*< https://textilesbar.com/history-of-egyptian-cotton/ > and Yasmine Alsayyad, 'The End of Egyptian Cotton' *The New Yorker* (New York February 27, 2020) <https://www.newyorker.com/news/news-desk/the-end-of-egyptian-cotton> accessed 27 September 2024.

[136], Mohamed Gharib and others, 'Parliament discusses reluctance of cotton traders to enter auctions' *Al Masry Al Youm* (Cairo March 11, 2023) <https://www.almasryalyoum.com/news/details/2839010> accessed 27 September 2024.

[137] For example, Under the Australian Competition and Consumer Act 2010, firms are required to avoid false or misleading representations, including environmental claims, to protect consumers and exclude rivals. ACCC

believing a company or institution is more environmentally friendly than actually is, constitutes a deceptive trade practice that may under certain circumstances also qualify as an abuse of a dominant position.[138] In some instances, such actions may trick consumers into paying a premium for misleading/false environment-friendly products, which may also be considered as a form of excessive pricing.

In conclusion, there has been some effort to ensure that competition policy may promote sustainability goals rather than seen as an impediment.[139] Though this is a welcome step, it adds another layer of complexity to the competition assessment of GVCs, whether from a normative standpoint (e.g., objectives and public interest considerations) or from a more practical one, that of developing tools for analyzing such trade-offs.

- ***Co-ops and competition policy***

Cooperation, not competition, is a core principle for farmers co-ops, enabling them to balance through collective bargaining the buying power of traders, processors and other intermediaries.[140] In addition, co-ops enjoy government support e.g., access to finance, favorable treatment e.g., tax exemptions and competition exemptions or a more flexible regime in some countries.[141] Economic research available on competition and cooperatives is relatively limited. Studies suggest that cooperatives can increase competition among processors for farmers' produce, benefiting all farmers, including those not members of the co-op. However, if a cooperative alters industry structure, its impact is more ambiguous, with some farmers benefiting and others losing.[142] Some co-ops such as marketing cooperatives that help farmers receive better prices may also result in limiting output. and under certain circumstances they may be found in conflict

Greenwashing Guidelines. Similarly, under the Canadian Competition Act greenwashing is considered a deceptive market practice. Competition Bureau, Amendments of the Deceptive Marketing Practices Provisions of The Competition Act.

[138] UN Climate Action, *Greenwashing*.

[139] The Columbia Center on Sustainable Investment, *Antitrust and Sustainability: A Landscape Analysis* (July 2023) <https://ccsi.columbia.edu/sites/default/files/content/docs/Antitrust-Sustainability-Landscape-Analysis.pdf > accessed 30 September 2024.

[140] Co-operative principle emphasises collaboration among co-operatives through local, national, regional, and worldwide frameworks. International Co-operative Alliance, 'Cooperative identity, values & principles' <https://ica.coop/en/cooperatives/cooperative-identity> accessed 30 September 2024.

[141] In 2012, the Hungarian Parliament granted an exemption of an alleged collusion between melon producers and trade associations over fair minimum prices and restricted import distribution. K.J. Cseres, 'Acceptable Cartels at the Crossroads of EU Competition Law and Common Agricultural Policy' (2020) Antitrust Bulletin, 65(3) https://doi.org/10.1177/0003603X20929122> accessed 30 September 2024. Section 6 of the Clayton Act 1914 excluded some agricultural cooperatives from the Sherman Act and provided an exemption for labour unions to enhance their collective bargaining power against big business and trusts. Agricultural cooperatives, while subject to competition law, enjoy immunity regime for certain types of cooperation. *Coöperatieve Stremsel- en Kleurselfabriek v Commission* [1980] Case 61/ 80 [1981] ECR 851.

[142] Brent Carney and others, ' Farmer Cooperatives and Competition: Who Wins, Who Loses and Why?' (2015) <https://ssrn.com/abstract=2673396> accessed 30 September 2024.

with competition law.[143] These studies focus on price effects, hence further analysis of the sustainability effects is also necessary.

Taking a permissive approach, some countries may offer a broader policy space regarding the implementation of competition law in the agriculture sector. [144] This is important given the difficulty to determine sustainable practices in cotton GVCs [145] and the crucial role of cooperatives in this context.[146] .

- ***Co-operation enforcement frameworks to address SGVCs: a new template***

The cotton value chain provides an example of how relatively simple production functions have developed into a complex web joining various nods scattered around the world.The effective application of competition laws across several jurisdictions with actors holding asymmetrical positions in the chain will require a new proactive cooperation between competition authorities to an unprecedented level. Co-operation between competition authorities may result from different sources: national laws, regional economic integration and trade agreements and bilateral (Mutual Legal Assistance Treaties) or multilateral co-operation agreements which often do not involve developed countries-developing countries cooperation.[147] The OECD and ICN audit revealed that formal cooperation between competition authorities can be categorized into first-generation cooperation, which allows authorities to engage in cooperative activities without an agreement, and second-generation cooperation, which allows authorities to participate in more extensive activities under specific conditions, such as exchanging private information.[148] The audit also showed a prevalence of bilateral inter-authority agreements (such as MOUs) compared to more formal co-operation agreements at a inter-governmental level.

Taking a GVC perspective, NCAs may want to develop more dynamic modalities of co-operation. For example, following the pandemic-related disruptions to global markets, five competition agencies agreed to form a task force to examine competition

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[143] Rebecca Harvey, 'Co-ops vs Competition law'(Co-op News 2021) <https://www.thenews.coop/155478/sector/retail/co-ops-vs-competition-law/> accessed 30 September 2024 and Anca Voinea, 'Dangerous territory: when collusion takes over from co-operation' (Co-op News 2021) <https://www.thenews.coop/155485/sector/retail/dangerous-territory-when-collusion-takes-over-from-co-operation/> accessed 30 September 2024.

[144] For example, in the EU, despite having competition law applicable to the agricultural sector (subject to some exemptions) the Court of Justice did recognize the precedence of the objectives of the agricultural policy over the aims of the Treaty in relation to competition to tackle unfair trading practices in the supply chain. See Cseres (n 153).

[145] "There is no question that cotton suffers from a lack of clarity on what sustainability means". Jim Robinson, ', Consensus on Sustainability' (ICAC 2012) < https://www.cottongrower.com/cotton-news/icac-to-look-for-consensus-on-sustainability/ > accessed 30 September 2024.

[146] Percy Barrientos, 'Cotton Cooperatives in Peru' (2015) International Journal of Research in Agricultural Sciences' Volume 2, Issue 4 <https://ijras.org/administrator/components/com_jresearch/files/publications/IJRAS_269_Final.pdf> accessed 30 September 2024.

[147] Article 30 (15) of the Croatian Competition law. OECD/ICN, *Report on International Co-operation in Competition Enforcement* (2021) <http://www.oecd.org/competition/oecd-icn-report-on-international-cooperation-in-competitionenforcement-2021.htm> accessed 30 September 2024.

[148] Ibid p. 103.

issues in global supply chains.[149] However, these authorities have been working under an existing co-operation instrument in place[150]including a Multilateral Mutual Assistance and Cooperation Framework for Competition Authorities (MMAC). This enabled them to exchange information on potential anticompetitive behavior affecting domestic shipping and logistics. This reflects the need for trust-based relationships and for adequate resources to engage in such high-level collaborations. These are conditions that may be challenging to meet in the context of a Global North and Global South cooperation .[151]

We should also mention the possibility of an ad hoc cooperation between authorities in countries that are affected the most by the GVC subject to the competition law analysis. The assessment should consider both positive sustainability effects and potential harms to sustainability on a broader scale than the national level, which may arise from the cooperation of competition authorities from both developed and developing countries. Although this more expanded network of competition authorities involved in an investigation may not change the fact that welfare/well being standards are narrowly perceived at the relevant market level or in the best case scenario at the national level, the sharing of information and the development of a more holistic understanding of the various effects of a specific business conduct on sustainability (along with other more traditional parameters such as price levels) may improve the accuracy of decision-making regarding SGVC.

V. Conclusion

The rise of SGVCs necessitates competition authorities in both the Global North and South to address the sustainability practices of GVCs , for instance by establishing new supply-chain liability regimes. Sustainability requirements may often lead GVCs to define specific inputs, production processes and consumption patterns that are environmentally friendly and which reduce the impact on climate change while preserving the livelihood of small farmers and the protection of human rights. This arguably expands the type of market imperfections and the scope of private (and public) governance intervention to regulate more directly (rather than indirectly through price signals) the activity of the members of the GVC. It is unclear how such conduct may be dealt with under the narrow scope of the price and output-oriented consumer welfare standard. This development calls for a more explicit integration of environmental and social sustainability concerns in competition law.

Competition law and policy has an important role in the development of SGVCs. Its' intervention may also strengthen policy alternatives that promote SGVC investment

[149] Competition Bureau, '*International Working Group Targets Potential Collusion by Competitors in Supply and Distribution-of Goods*' (2002) <https://www.canada.ca/en/competition-bureau/news/2022/02/ > accessed 30 September 2024.

[150] Competition Bureau, *'Cooperation instruments with international partners'*< https://ised-isde.canada.ca/site/competition-bureau-canada/en/how-we-foster-competition/collaboration-and-partnerships/cooperation-instruments-international-partners#wb-auto-4> accessed 30 September 2024.

[151] OECD/ ICN n. 147.

and innovation, while benefiting farmers and lowering prices for consumers. The government's role in furthering sustainability may also take the form of more targeted interventions (eventually enabling experimentation through sandboxes and other active stewardship public governance practices) and pro-competitive industrial policies involving horizontal tools, such as the development and financing of sustainability enhancing business ecosystems and industry-state cooperation. Furthermore, small and fragmented farmers, often situated in developing and emergent economies. face challenges in combating exploitation from large, consolidated firms in upstream (seeds, fertilizers) and downstream (retailers) markets, usually based on the Global North. This may also have some impact on the resources that these farmers decide to invest for sustainability purposes. Competition authorities both in the developed and developing world will need to create tools to scrutinize consolidation, superior bargaining power, and value chain bottlenecks through systematic mapping and sector inquiries. They may also advocate for price discovery through a "fair" bidding process in which the government aims to overcome a collective action problem (from the inability of farmers and their cooperatives to collectively bargain in the presence of a significant power asymmetry as is often observed in developing and emergent economies) and combat exploitation by economic actors benefiting from such power asymmetry. It may be important in this context to re-think the role of value capture and allocation in these value chains and ecosystems and whether competition policy should allow in some specific circumstances collective bargaining and/or "fair" price initiatives, for instance through public authorities managed auction mechanisms.

Private initiatives promoting voluntary industry standards are crucial for sustainability in the cotton GVC, but they may increase compliance costs for smaller farmers, create green entry barriers, or lead to greenwashing. There are also concerns about the parameters of partnerships between market players to promote sustainability, which should not restrict the competitive process in the medium and long-term, as competition is key for the development of effective and "fair" sustainability. Competition enforcement can also play a constructive role in fighting types of collaboration that lead to collusion on crucial parameters of competition in the name of attaining sustainability goals. It is equally important that it recognizes and allows for types of collaboration required to attain these objectives at the lowest possible cost for the competitive process. Competition regulators with a consumer mandate, or with the possibility to focus on exploitative conduct, may also investigate deceptive practices, such as market operators' misleading claims of sustainability.

Stakeholders across the value chain must collaborate in new and innovative ways to find solutions for sustainability-related challenges. By investing in sustainable business conduct the development of GVCs mat assist developing countries in achieving SDGs. Such efforts need to be attentive of the competition risks and require in order to be successful a close cooperation between competition authorities of the Global North and the Global South, for instance through the development of joint competition investigations pooling resources to deal with a variety of competition and sustainability harms resulting from GVCs.