"The latest IPCC report in 2022 has shown that we could still determine the future course of climate by lowering our greenhouse gas emissions, especially of CO_2. Applying Circular Economy (CE) practices to GVCs could potentially lead to a global carbon emissions cut of up to 39%."

-Magdolna MOLNÁR

Image Source: A look at the recycling chain of RecyMatelas Europe, a medium-sized mattress recycling company, in Limay, Yevlines district, Paris region. Source of the photography: RecyMatelas Europe, http://www.recyc-matelas.fr/

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The only sustainable way forward: Circular global value chains

World economies are deeply interdependent via global production and service networks, which are expected to expand further due to digitalization. At least 70% of the total international trade currently involves Global Value Chains (GVCs), with goods, services, raw materials and product parts flowing across borders.[1] But supply disruptions of essential products and components such as semiconductor chips during the COVID-19 crisis have renewed the debate on the costs and benefits of globalization as well as encouraged some countries and companies to reconsider regionalizing their value chains.[2] The recent Russian-Ukrainian military conflict is expected to push this trend further. However, substantial reshoring does not seem to be a feasible long-term solution as GVCs can help dampen economic shocks and are economically more efficient than regional markets.[3] GVCs have also created important economic opportunities for developing countries and emerging markets, which no longer need to master entire production processes to participate in the global economy. The Global South has also benefited from foreign direct investments, and knowledge and technology transfers through GVCs.

Global Value Chains need more circular practices

GVCs have a significant environmental footprint as they need more packaging and shipping, leading to more waste and CO2 emissions than trade in finished goods.[4] Linear GVCs optimize efficiency at the product level but fail to provide an overall resource efficiency due to the 'take-make and dispose' principle they operate on. Environmental costs of GVCs are often externalized to developing countries, where environmental damages often result in economic losses. However, a recent study emphasized that anti-globalization should not be a strategy for long-term global emissions mitigation, as deeper GVC participation could reduce emission intensities as well as encourage international cooperation and the proliferation of sustainable technologies.[5] For example, the production of green technologies such as solar panels could happen at lower costs through GVCs.

As a major part of global trade and services involve GVCs, making these transactions more sustainable would contribute considerably more towards national and international environmental goals. The latest IPCC report has shown that we could still determine the future course of climate by lowering our greenhouse gas emissions, especially of CO_2.[6] Applying Circular Economy (CE) practices to GVCs could lower their environmental impacts by reducing material consumption and waste production, potentially leading to a global carbon emissions cut of up to 39%.[7] But despite decades of discussions about the benefits of CE, the global economy is still only 8.6% circular, meaning that only a small part of all minerals, fossil fuels, metals and biomass is reused.[8]

Circularity in GVCs faces some challenges

One reason for the low circularity in GVCs is that it needs radical changes in the current socio-economic system. Circular GVCs would go beyond the creation, marketing and use of a product, to reintegrate the consumed end-product into a new production process – by creating upstream linkages - that would involve repairing, reusing, recycling, and remanufacturing. This needs radical rethinking of how different actors are involved in the value chain and in turn, complex shifts in 1) company culture to focus more on long-term responsibility, and not just towards shareholders; 2) product design to extend the lifespan of products; 3) direct suppliers and sub-suppliers for more transparency of production processes and the contents of products or services, and 4) customer behavior such that there is active engagement in maintaining the value of products. CE strategies could help developing countries avoid development pathways with resource-intensive economic practices, but the Global South has primarily been involved in supplying raw materials and cheap mass-produced goods. To maintain – and strengthen – their positions in emerging Circular GVCs, these countries would need to focus more on upcycling of materials, long-lasting and repairable goods, and providing services. Current GVCs have much economic activity in developing countries in sorting and recycling waste but higher-value opportunities for reuse and remanufacturing are yet to be explored.[9] Only supportive international regulatory frameworks can steer progress towards more sustainable and inclusive Circular Global Value Chains.

The current stand of international due diligence regulations

Economic efficiency often leads stakeholders in GVCs to offshore their activities to countries with laxer environmental and human rights jurisdictions. Recent developments in mandatory national due diligence legislations in the Global North, particularly in Europe, have been important steps towards ensuring corporate compliance with human rights standards as these laws oblige companies to identify, prevent, and mitigate human rights abuses in their value chains. However, the current regulations focus on environmental standards only when environmental damage leads to human rights violations. To support the development of Circular GVCs, future due diligence legislations must also include corporate responsibility for sustainability standards such as ensuring toxin-free high-quality materials of components and avoiding negative environmental externalities through waste reduction throughout the supply chain. The externalization of social and environmental costs will continue without any binding international due diligence legislation(s). Some voluntary guidelines have been proposed by international organizations, like the UN Guiding Principles on Business and Human Rights and Fashion Industry Charter for Climate Action, but a mandatory international framework has yet to be introduced. The ongoing German G7 Presidency is expected to provide new impetus to the discussion on international due diligence regulations as the agenda has prioritized the strengthening of international environmental and social standards in global supply chains.[10]

The first draft proposal of a European Due Diligence Directive, released on 23 February 2022 by the European Commission, aims to align the patchwork of voluntary and mandatory schemes within the European Union to avoid competitive disadvantages. This European legislation explicitly pushes for environmental standards in GVCs, with companies to be held liable for environmental harms committed at home or abroad by their subsidiaries, contractors, and suppliers. However, the scope of the draft has been criticized for being too narrow (i.e. applicable to less than 1% of EU companies), and companies could shift their responsibilities to suppliers by adding certain clauses to their contracts. Moreover, the proposal does not note any specific consequences for GVCs breaching the Paris Agreement and does not encourage circular practices.[11]

The draft will be subject to amendments by the European Parliament and governments in the coming months. Clearly, much work lies ahead for European and international policymakers to establish a supportive regulatory environment for Circular Global Value Chains.

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