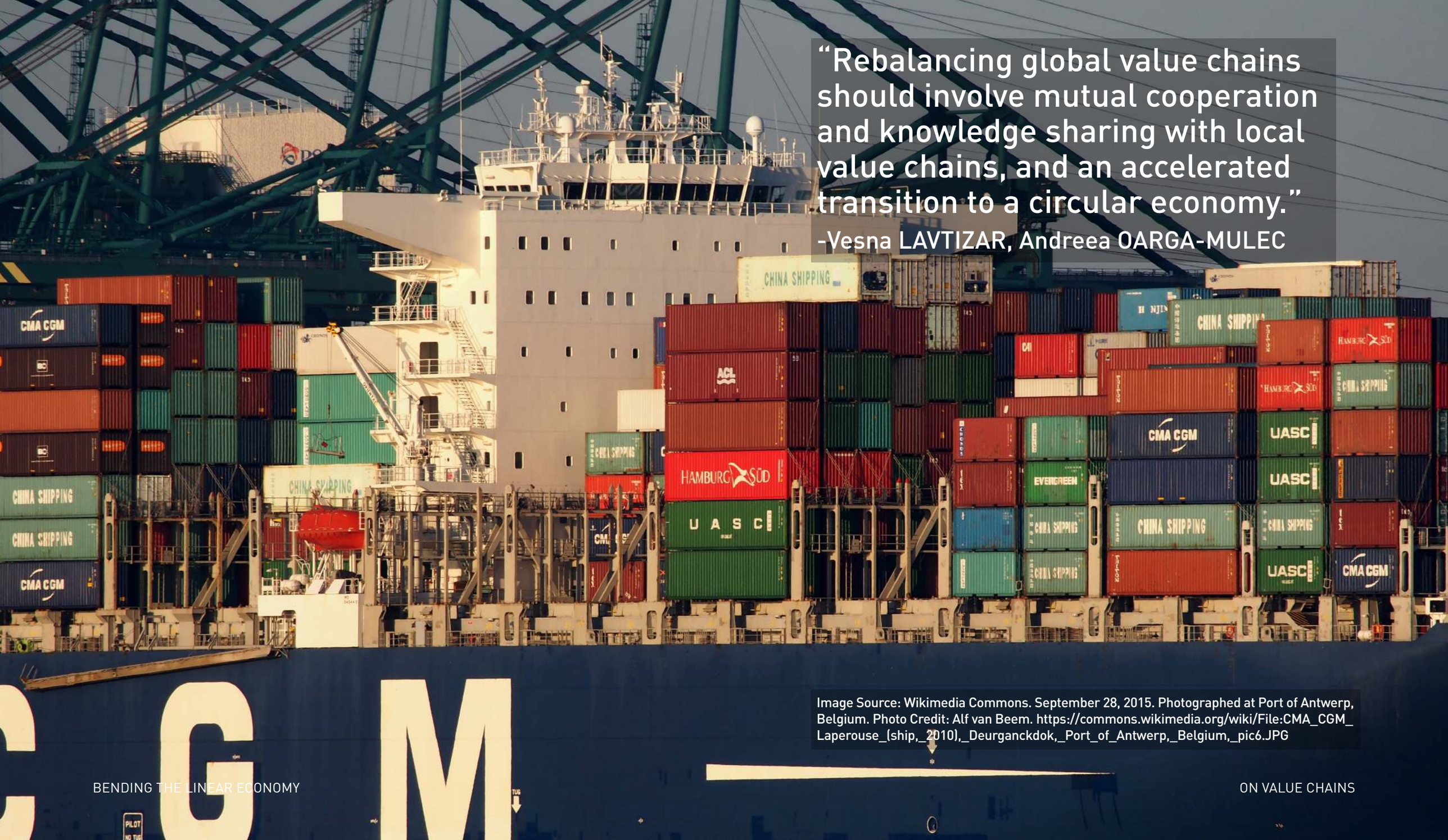

"Rebalancing global value chains should involve mutual cooperation and knowledge sharing with local value chains, and an accelerated transition to a circular economy."

-Vesna LAVTIZAR, Andreea OARGA-MULEC

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Establishing a new balance: A fair marriage between global and local value chains

The COVID-19 pandemic was the most recent global wake-up call that challenged the resilience of various systems and disruptions along supply and value chains. Car producers, for example, experienced significant profit declines when the pandemic disrupted the procurement of semiconductors and other auto parts.[1] Instances such as this exemplify the dilemma facing companies and policymakers about whether the benefits associated with maintaining globally distributed value chains outweighs the threats of force majeure that could disrupt supply, production, and marketing chains. Geopolitical instabilities as well as the increased likelihood of natural disasters in some of the partner countries are other credible concerns that are leading some players to shift from globalization to localization of their overall business activities. This paradigm shift has been greatly aided by the concept of sustainability, which rightly questions whether a product (including a Design for Environment or DfE product) produced and sold through a cascade of several distant partner countries can be considered sustainable. As a result, some also see this period as a unique opportunity to go green, with shortening supply and value chains being an important strategy under the philosophy of "building back better."

Long, linear supply chains have their own risks and can be fragile, which is why some argue that global value chains need to be rebalanced, and risk mitigation strategies be put in place. Key recognizable global supply chain vulnerabilities include insufficient manufacturing capacity, limited international coordination, inconsistencies in industrial policies among allies and partners, and geographic concentration in global sourcing. For example, certain key supply chains have become geographically concentrated due to the search for low-cost production, as in the case of China, which accounts for over 70% of global lithium-ion battery production capacity,[2] or Taiwan's 92% of state-of-the-art semiconductor production.[3]

Global value chains can improve their efficiency by linking with local and regional value chains and the circular economy. The environment, economy, society, and businesses can benefit greatly from local and circular value chains - from reduced emissions, sustainable growth and new jobs, to security of supply resilience, proper waste management, and legal compliance.

Recycling and local use of renewable energy, for example, can reduce our dependence on imports of virgin materials and fossil fuels from distant countries.[4] To shorten supply and value chains, new local connections must be created where possible. One example is industrial symbiosis, where linkages between partners are often created in smaller geographic areas where they can accelerate circular transitions.[5]

As increasing globalization may bring additional adaptation pressures on local levels, it must be recognized that the globalization process is complex in nature and should take place in connection with local or regional places, avoiding demeaning attributions such as 'weak' or 'small' for regional, and 'strong' for global.[6] Regardless of whether value chains are global or local, they must be imbibed with circular economy principles. Global value chains that exemplify the principles of circular economy can be an immense asset in promoting circularity, putting it on the global agenda, and accelerating the closure of global and local circularity gaps.

Rebalancing global value chains should therefore involve mutual cooperation and knowledge sharing with local value chains, and an accelerated transition to a circular economy. For this, vulnerabilities that could disrupt global value chains' continuity, such as business fragmentation, geographic separation, lack of technological resilience, and relationship exploitation, need to be identified and mitigated.[7] Learning from nature, where biodiversity plays an important role in the resilience of the biosphere and of ecosystem services, we should consider applying diversity conservation to the Anthropocene biosphere (the biosphere shaped by human activities). This would imply considering the fragmentation and length of value chains, whether they provide any (e-)learning and innovation opportunities, their geographical operation area, their contribution to local economic growth and respect for local culture, as well as their environmental impacts. Relationships and behaviors may ultimately be the most important factor in determining the resilience of value chains.

Past and recent (natural, economic, political) crises have taught us valuable lessons, including the importance of resilience, the need to invest in innovation, rethink our production, monitor potential supply chain disruptions and, above all, to value markets that support sustainability. All that remains is to act at all levels, in a global effort.

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