Examining three illusions

Reconciling Growth and Sustainability through Circular Economy?

With its promise of decoupling economic growth from resource use, the Circular Economy is gaining momentum in policy and businesses. But to live up to this promise, the gap between intention and implementation must be negotiated. By Eva Wiesemann, Sabrina Schmidt and Frieder Rubik

The transformation of the currently dominant linear economic model to a circular economy (CE) is considered a cornerstone of a future sustainable economy. Politics, civil society, businesses and academia pursue and support this approach, some consider CE as a "paradigm shift" (Prieto-Sandoval et al. 2015, 605). However, the debate provides little insight into whether and how the CE actually challenges the currently dominant economic model and its ongoing focus on economic growth. We aim to shed some light on the main shortcomings and challenges of CE.

The great expectation: Circular economy leads to green growth

CE plays a central role in policy concepts of the European Union and its member states. The European Commission's end-of-life waste policy has gradually turned towards resource-efficiency and nowadays pursues a CE approach. This shift towards CE can be traced back to the 2014 "Zero waste programme" (European Commission 2014), followed by an in the meantime updated action plan in 2020 (European Commission 2020). According to the Commission, circularity is an opportunity to reconcile resource consumption with economic growth: "Scaling up the circular economy from front-runners to the mainstream economic players will make a decisive contribution to achieving climate neutrality by 2050 and decoupling economic growth from resource use, while ensuring the long-term competitiveness of the EU and leaving no one behind." (European Commission 2020, 4). CE proponents also stress its role in climate change mitigation: 70 % of global greenhouse gas emissions are generated along global value chains, where they are converted into products and services and subsequently embedded in these. Extending the lifespan of materials and products can therefore save large amounts of "hidden" emissions that occur across the value chain (Haigh et al. 2021). Most of the EU member states follow the EU's path: In their national policy documents dealing with CE, they equally tend to highlight the potentials of CE as opportunity for growth and for promoting competitiveness. Documents of ministries of economic affairs confirm these notions. Only a minority of environmental ministries (like the Portuguese and Swedish) stress the need for more disruptive changes. We conclude that reflecting the nexus between resource consumption and growth is currently not on the political agenda. The path pursued by the EU and its member states is one of an ecological modernisation (e. g. Hajer 1995), not of transforming the economic system.

Great illusion #1: Resource efficiency equals decreasing total resource use

With CE gaining more and more advocates in both politics and businesses, the question remains whether it can actually deliver on its various promises. In this regard, it is worth reviewing the central line of conflict in the debate: the assumption that economic growth can be decoupled from resource consumption. Green growth proponents have long advanced this view. According to them, growth is a key condition for socio-ecological transformation. They propose to make growth independent from its ecological consequences, namely to achieve a high level of resource efficiency, primarily through technological innovations (Petschow et al. 2020). This is in line with the currently dominant understanding of CE as a means to foster growth. Whether this assumption is realistic remains highly contested. While some progress has been made in the last decade with regard to resource efficiency on a national level (BMU 2020), this has always only led to local and *relative* decoupling, while global resource consumption has still increased. What is needed for a deep sustainability transformation, however, is *absolute* decoupling within planetary boundaries (Bouwens 2021).

Proponents of the degrowth movement therefore argue that such an absolute decoupling is in fact not possible and that the global material footprint will only decline if the economy shrinks at the same time. Therefore, they call for a shift away from growth as a measure of progress (Petschow et al. 2020).

Even though absolute decoupling has not yet occurred, the question remains whether this may change in the future as CE principles gain momentum. Its central idea of cascade use, that is the consistent reuse of products and materials at their highest possible value, could indeed drive far-reaching changes in global production and consumption patterns. Such a clear pri-

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oritization of the "upstream" reduction and reuse stages can be interpreted as an inherent "post growth" approach to CE.

Great illusion #2: Slight modifications in business models and innovative technologies will do

Many companies consider participation in the CE to be one of the most important current trends. They expect it to offer great potential for innovations and the penetration of new markets and customer segments. Multinational profit-oriented companies proudly advertise their contributions to CE. However, their actions often fail to go beyond pseudo-innovations such as the use of recyclates or easily recyclable materials such as PET and cardboard packaging. In their CE programmes, many fashion retailers offer take-back of old textiles in exchange for consumption-stimulating shopping vouchers. The products themselves then often do not end up in any recycling facility, as reporters recently discovered (Flip 2021). At the same time there is a certain fixation on innovative technologies, such as recycling, tracking and other digital solutions. Better recycling processes, for instance for textiles, are certainly needed. However, if one takes the CE principles seriously, circular business models are more than that. They also involve extending, intensifying, and dematerializing loops (Geissdoerfer et al. 2020). Nießen and Bocken describe progressive business examples in this issue. It becomes obvious that, in addition to technical and organizational innovations, there is also a need for social innovations that target consumers.

Great illusion #3: No need to change consumption levels

In order to involve consumers in the CE, one needs to tackle the various (new) roles they play: Purchasers, users, maintainers, repairers, sellers, sharers, reusers or sorters (Maitre-Ekern/Dalhammar 2019). These roles are not very well reflected in research on CE: In a review (Kirchhoff et al. 2018), only 19 % of papers considered the consumption topic. The European Commission (2020) intends to empower consumers in the transition to CE: For example, waste treatment technologies, also digital ones, might support consumers in sorting waste or inform them on the technical conditions of durables, but such a narrow and technology-focused view neglects possible rebound effects, especially linked with the production of these new technologies.

Another rebound effect concerns the framing of consumption itself: The better products are designed for recycling and the better waste is treated in CE, the more carefree consumption patterns could become. This is illustrated by some CE narratives framing waste as a resource or "nutrient" (e. g., McDonough/Braungart 2002), thus giving it a positive connotation. In this logic, "overconsumption" no longer exists and sufficiency-based measures lose importance: Waste is converted into a fetishized commodity (Valenzuela/Böhm 2017).

In sum, current policies and practices are often characterized by cherry-picking and incremental changes rather than holistic strategies in line with the original CE concept and therefore fail to bring about the desired effect on resource reduction and climate change mitigation. From this perspective, the problem with the current state of CE is not necessarily a lack of ambition (as degrowth proponents would state), but can rather be described as an implementation gap, partly fuelled by the current narratives in politics and businesses.

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