

innovations

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Call for papers – Special Issue

Innovation and Circular Economy

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Since the early 2000s, the circular economy has gradually established itself in environmental policies (Geissdoerfer, 2017). China, Japan, Germany, Belgium and France have adopted legislation aimed at a transition to a circular economy. In 2015, the European Union launched an action plan for the circular economy with the objective of transforming European economies and generating “new and sustainable competitive advantages for Europe” (European Commission, 2015).

In a context of climate change and increasing pressure on strategic resources, the circular economy proposes to move away from the "take, produce, consume and dispose" logic towards an economic model that limits environmental impacts and closes off energy and material flows. Emerging from this linear model leads to innovation in order to change our modes of production and consumption. Indeed, it is a question of rethinking the supply of raw materials, by favoring short supply chains and reused or recycled materials; of designing to extend the life span of our goods; of reducing and shifting our consumption to more collaborative and responsible ways; of preserving the value of goods, materials and energy by repairing and remanufacturing; and finally, of transforming our wastes into new resources that generate value (Reike et al., 2018). Defined as "an umbrella concept" (Homrich et al., 2018), the circular economy is intended to integrate a variety of scientific trends and practices aimed at sustainable resource management. Consequently, its theoretical scope, and its relationship to related paradigms such as sustainable development, are still being questioned by the research community (Murray et al., 2017; Geissdoerfer et al., 2017; Kircherr et al., 2017; Kohrhonen et al., 2018). In addition, the circular economy involves a multitude of public and private actors, working at different scales: international organizations (OECD, UN, European Commission), national governments, local authorities, companies, associations, NGOs. The scale of deployment of the circular economy is questioned, and by the same token, the forms and nature of innovative processes and innovations.

There is a close relationship between innovation and the circular economy, in the sense that innovation can boost the transformation of economies towards a circular economy, whereas the circular economy can be a lever for eco-innovation, responsible and/or sustainable innovation (Boons, McMeekinn, 2019.). Innovation is multiple and circular economy targets several

pillars: extraction/exploitation and sustainable purchases, eco-design, industrial ecology, economy of functionality, responsible consumption, extension of the useful life of goods, reusing, repairing, remanufacturing and recycling.

The study of the role of innovation in the transition to the circular economy can be approached from different perspectives, taking into account the different elements that make up the productive and consumption system:

1) In many cases, the circular economy requires product, process, organizational, commercial and institutional innovations. Eco-innovation is defined as a type of innovation aimed at improving the environmental sustainability of systems. The relationship between eco-innovation and its role in the transition to a circular economy is a promising research field (Vence, Pereira, 2019). E.g., eco-design, eco-innovative products and processes can contribute to the realisation of the principles of the circular economy, such as reduction of resource use, substitution of harmful raw materials, increasing durability and reparability of products, and so on.

2) The circular economy strongly relies on innovative sustainable business models. Business models can be designed to born circular but incumbent companies can also be expected to transform their business models to adapt and progressively align themselves with the requirements of the circular economy (Nancy M.P. Bocken, de Pauw, Bakker, van der Grinten, 2016). At the same time, civil and public associations are called upon to organize themselves differently to meet the principles of the circular economy. There is a wide range of emerging studies, including social innovation, collaborative consumption models, product-service systems (Laperche, Merlin, 2020; Pereira, Vence, 2020) and performance-based models that are linked to sustainable business models for the circular economy.....

3) The implementation of circular economy projects at the territorial level is one of the most important challenges in many regions and cities of the world. In line with sustainable business models, industrial ecology proposes a circular production scheme based on the exchange of fluxes of materials and waste between companies located in proximity. Being the basis of eco-innovative milieu, ecosystems and industrial symbioses can thus be considered as a lever of attractiveness and economic development (Gallaud, Laperche, 2016; Kasmi, 2018).

Moreover, nowadays, large companies tend to fragment their production processes, locating production phases in different countries of the world. Global value chains are a central element in the dominant linear production and consumption model. The potential transition to a circular economy requires investigating the synergies and contradictions between global value chains and the new paradigm of the circular economy (Lehmacher, 2017). The need to complete circular economy cycles leads to consider the geographical issue as strategic, as circularity is more consistent with the closed proximity flows. In this sense, on the one hand, geographical proximity between production and consumption centers minimizes the impact of transport, packaging, logistics, etc. On the other hand, the activities of reuse, reconditioning, regeneration and recovery of products in direct symbiosis require a regional/local organization. Therefore, the development of the Circular Economy can potentially promote the nexus between global value chains with a higher density of local/regional partners. The potential contradictions between circular economy and globalization are also a relevant topic.

4) The transition to the circular economy requires normative and institutional innovations that help level the playing field and favor changes in production and consumption towards the

circular economy. Existing policies sometimes act as constraints on the circular economy, since they are adapted to the linear model of production and consumption. While an increasing number of governments are adopting specific strategies and policies to promote the circular economy in their territories, it is necessary to delve deeper into this question. What is the role of concrete policy instruments in promoting forms of production and consumption consistent with the circular economy? Which are more effective? What is the role of tax instruments for Circular Economy? How different countries and regions are using their policies to promote the circular economy?

In the same token, the analysis of the circular innovation process needs suitable indicators to measure the emergence and deployment of an innovative project, as well as of the environmental, economic and social impacts of these projects; the same applies for the monitoring of public policies and country/regional strategies towards circular economy (Llorente-Gonzalez, Vence, 2019).

The objective of this special issue is therefore to understand the role of innovations in supporting the transition to a circular economy, as well as how the circular economy supports and encourages processes and the generation of innovation. The proposals for communication may be based on the following priorities:

- The definition and measurement of innovation in the field of the circular economy and its economic, social and environmental impacts;
- The implementation of the circular economy at the company level: new business models, new entrepreneurs, development of product-services systems, eco-design, management of the innovation process
- The implementation of the circular economy at the territorial level: territorial experiences, global value chain, specific governance;
- National and regional public policies to support innovation in the circular economy.

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Timetable for submission and acceptance of papers:

- Deadline for complete manuscripts through online paper submission: October 15, 2020 <http://www.editorialmanager.com/innovations/default.aspx>

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