

# Editorial: Circular Business Models and Strategies—The Key to Sustainable Business and Innovative Supply Chains

### Simone Sehnem<sup>1\*</sup>, Susana C. Farias Pereira<sup>2</sup>, Minelle E. Silva<sup>3</sup>, Valentina Gomes Haensel Schmitt<sup>4</sup>, Roberto Rivas Hermann<sup>5</sup> and Luciano Batista<sup>6</sup>

<sup>1</sup> Department of Business Administration, University of the West of Santa Catarina and Department of Business Administration, University of the South of Santa Catarina- UNISUL, Santa Catarina, Brazil, <sup>2</sup> Escola de Administração da Fundação Getulio Vargas (FGV-EAESP), São Paulo, Brazil, <sup>3</sup> Excelia Business School, La Rochelle, France, <sup>4</sup> Research Group on Business Development, Knowledge Management and Innovation, Administration School, University of Lima, Lima, Peru, <sup>5</sup> Department of Organization, Management and Leadership and Centre for High North Logistics, Nord University Business School, Nord University, Bodø, Norway, <sup>6</sup> Operations and Information Management (OIM) Department, Aston Business School, Aston University, Birmingham, United Kingdom

Keywords: circular economy, circular business models, innovation, circular supply chain, sustainable operations

Editorial on the Research Topic

# Circular Business Models and Strategies—The Key to Sustainable Business and Innovative Supply Chains

### **OPEN ACCESS**

Edited and reviewed by: Konstantinos P. Tsagarakis,

Technical University of Crete, Greece

\*Correspondence: Simone Sehnem simonesehnem\_adm@yahoo.com.br

#### Specialty section:

This article was submitted to Circular Economy, a section of the journal Frontiers in Sustainability

Received: 16 March 2022 Accepted: 05 April 2022 Published: 25 April 2022

#### Citation:

Sehnem S, Pereira SCF, Silva ME, Schmitt VGH, Hermann RR and Batista L (2022) Editorial: Circular Business Models and Strategies—The Key to Sustainable Business and Innovative Supply Chains. Front. Sustain. 3:897974. doi: 10.3389/frsus.2022.897974 The concept of circular economy has recently emerged as a political goal (Gregson et al., 2015), in a context of rising resource prices and climate change. However, the idea is more often criticized, questioned than celebrated. In a circular economic model, waste becomes a resource to be recovered and revalued through recycling and reuse. In this context, five circular economy models are emerging and spreading rapidly in organizations, namely: circular supply chains, recovery and recycling, product life cycle extension, shared platforms and product as a service (Lacy and Rutqvist, 2015). However, companies looking to adopt these circular models will have to develop new business models at the expense of linear thinking (Sehnem et al., 2022). Such models help companies to improve differentiation, in reducing costs, in generating new revenues, in reducing risks as well as in reducing the impact on the supply of virgin resources.

The adoption of these five circular business models has grown substantially in the past decade, although there are still many perspectives for change. Initially, innovation via the circular business model was driven by start-ups. Now, large multinationals are also making grandiose moves.

While advancing the narrative of circular economy, multiple supply chain members need to adapt processes, practices and behaviors to implement sustainable business models (Morali and Searcy, 2013). Circular business models are used to regenerate materials, retain the value of resources and contributes to the re-signification of natural ecosystems and the reduction of waste and pollution. Despite this comprehension, the literature lacks for information on how this affects sustainable business and innovative supply chains. The circular economy encourages the use of clean energy, the use of cascading resources and has the potential to generate sustainable solutions at micro, meso and macro levels.

The role of circular business models deserves further attention mainly due to the need for additional links to supply chain management (Su et al., 2013). Sustainability is often defined related to economic, social and environmental issues (Seiffert, 2011), which when concerns circular economy is still limited to economic and environmental consequences (Sehnem et al., 2019).

Scholars and practitioners need to increase awareness and carefully understand the contribution of circular economy to business and society. Based on these reflections, this Research Topic attempts to shed light in the connection between supply chain in different industries and the relation of these supply chains with circular business models implementation (Sehnem et al., 2021). In doing so, this issue amplifies the need to recognize the contribution of multiple players toward a new circular paradigm (Sehnem et al., 2022).

Having said it, this Research Topic seeks to contribute to the advancement of knowledge and theory in building a circular economy. As the final result, four articles were then selected to this Research Topic with contributions from different industries, regions and scopes, which provides new insights on how to design and understand circular business models for sustainable and innovative supply chains. Therefore, we invite you to read these articles and increase your comprehension of these subjects:

The article "Business Model Innovation for Circular Economy in Fashion Industry: A Startups' Perspective," written by Ostermann et al., present a Brazilian perspective for this issue. Thus, the authors aimed to identify the key elements of startups' Business Model Innovation for Circular Economy (BMI4CE), using the fashion industry as the context of the study. The researchers conducted an exploratory and descriptive multiple case study composed of 10 early-stage fashion startups from Europe, North America, and Asia. As a result, the authors identified important issues such as that: 1. Business Models Innovations based mainly on Circular Economy principles of closed-loop and reducing material use and consumption; 2. Business Models focus on Circular Economy strategies of product by lowering consumption and material use; 3. The role of emerging and digital technologies. As theoretical contribution, the article proposes five propositions linked to a triple bottom line theoretical perspective. As contributions to practitioners, the article suggests enable fashion startup managers to understand better the functioning of BMI4Ces and the critical elements needed for their effectiveness.

The second article, "*Circular Business Model Innovation* and Its Relationship With Business Performance in Brazilian Industrial Chemical Companies," is presented by Motke et al. In this article, the authors analyzed the relationship between circular business model innovation and business performance in a Brazilian context. The sectoral focus was chemical companies, through a quantitative study. The results showed a reality in which industrial chemical companies have medium to high degrees of business model innovation toward the CE, despite high response variability. Also, the authors evidenced outstanding market performance related to aspects such as customer satisfaction and brand value, social performance, low forced or child labor, accidents and injuries, labor lawsuits, gender pay gaps, and improved production performance with quality, compliance, and delivery speed.

In "Paving the Way for Circular Supply Chains: Conceptualization of a Circular Supply Chain Maturity Framework," Montag et al. conceptualize a framework for analyzing the maturity level of circular economy adoption in the supply chain context. The authors carried out a systematic literature review of 1,372 articles on supply chains, circular economy and maturity. The article provides theoretical and practical contributions related to the increasing circularity in companies and supply chains. Also, the study establishes the groundwork for a subsequent causal relationship between circular economy practices and sustainable objective and, as a consequence for societal goals of sustainable development. Finally, the authors deliver a roadmap for circular supply chain transformation, supporting the gradual circular economy adoption, and allow insights to improve a structured model that considers the interdependencies at the different layers of the framework.

Last, but not least, Koop et al. present the study "Circular Business Models for Remanufacturing in the Electric Bicycle Industry," which addresses four circular business models, two sales models, and two service models. The guiding research interest of this article is the combination of remanufacturing and additive manufacturing from a business model perspective, analyzing the extent to which additive remanufacturing can be considered a solution for electric bicycles' circularity. As the result it analyzes four business models and present contributions by showing the potential of different circular business models combining remanufacturing with additive manufacturing.

At this Research Topic we, the editors, authors and reviewers made a collective effort to increase the knowledge and the discussion around this relevant topic that is the "*Circular Business Models and Strategies*—*The Key to Sustainable Business and Innovative Supply Chains*." Hopefully, it will be just one of the first steps at this long and relevant path to reach a condition in which Circular Economy and Sustainable Business may be a mainstream model.

## AUTHOR CONTRIBUTIONS

All authors listed have made a substantial, direct, and intellectual contribution to the work and approved it for publication.

## REFERENCES

Gregson, N., Crang, M., Fuller, S., and Holmes, H. (2015). Interrogating the circular economy: the moral economy of resource recovery in the EU. *Econ. Soc.* 44, 218–243. doi: 10.1080/03085147.2015.1013353 Lacy, P., and Rutqvist, J. (2015). Waste to Wealth: The Circular Economy Advantage. Basingstoke: Palgrave Macmillan. doi: 10.1057/9781137530707

Morali, O., and Searcy, C. (2013). A review of sustainable supply chain management practices in Canada. *J. Bus. Ethics* 117, 635–658. doi: 10.1007/s10551-012-1539-4

- Sehnem, S., de Queiroz, A. A. F. S. L., Pereira, S. C. F., Correira, G. S., and Kuzma, E. (2022). Circular economy and innovation: a look from the perspective of organizational capabilities. *Business Strat. Environ.* 31, 236–250. doi: 10.1002/bse.2884
- Sehnem, S., Provensi, T., Silva, T. H. H., Pereira, S. C. F. (2021). Disruptive innovation and circularity in sustainable business models: a start-ups analysis. *Business Strategy Environ.* doi: 10.1002/ bse.2955
- Sehnem, S., Vasques-Brust, D., Pereira, S. C. F., and Campos, L. M. S. (2019). Circular economy: benefits, impacts and overlapping. *Supp. Chain Manag. Int. J.* 24, 784–804. doi: 10.1108/SCM-06-2018-0213
- Seiffert, M. E. B. (2011). ISO 14.001 Sistemas de Gestão Ambiental: Implantação Objetiva e Econômica, 4th Edn. São Paulo: Atlas.
- Su, B., Heshmati, A., and Geng, Y. (2013). A review of the circular economy in China: moving from rhetoric to implementation. J. Clean. Prod. 42, 215–227. doi: 10.1016/j.jclepro.2012.11.020

**Conflict of Interest:** The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

**Publisher's Note:** All claims expressed in this article are solely those of the authors and do not necessarily represent those of their affiliated organizations, or those of the publisher, the editors and the reviewers. Any product that may be evaluated in this article, or claim that may be made by its manufacturer, is not guaranteed or endorsed by the publisher.

Copyright © 2022 Sehnem, Pereira, Silva, Schmitt, Hermann and Batista. This is an open-access article distributed under the terms of the Creative Commons Attribution License (CC BY). The use, distribution or reproduction in other forums is permitted, provided the original author(s) and the copyright owner(s) are credited and that the original publication in this journal is cited, in accordance with accepted academic practice. No use, distribution or reproduction is permitted which does not comply with these terms.