

Collaborative Business Models for the Circular Economy: Multi-stakeholder Alignment by a Large Plastics Incumbent

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Research Problem and Its Significance

- Plastics: important to society, but embedded in a system that produces waste by design.
- One solution: bring plastics into the Circular Economy (CE).
- A key element of CE: **circular business models**.
- Challenge: 'going circular' entails not just changing their own business model, but also those of the many firms that are part of their network.
- What's unclear in these networks:
 - how to align multiple actors' interests
 - engage in multi-stakeholder value creation & value capture
 - jointly develop a collaborative business model to exploit the opportunities triggered by the circular economy

Research Aim and Questions

Research Aim: This study aims to shed light on how large incumbents in the plastics industry transform their linear business models and create collaborative business models to capitalise on the circular economy.

Research Questions:

RQ1: How can incumbents align multiple actors' interests to exploit the opportunities triggered by the circular plastics economy?

RQ2: What business model innovations are needed by multiple actors in the circular plastics ecosystem to jointly create and capture value ?

RQ3: What barriers/drivers do these actors face in shifting to a collaborative circular business model?

Statement of the Theoretical Gap in the Literature

- Recent circular business model research has emphasised the importance of:
 - Networks
 - Stakeholder engagement
 - Ecosystem co-creation/orchestration

(Antikainen & Valkokari, 2016; Konietzko et al., 2020; Parida et al., 2019; Parida & Wincent, 2019; Mishra et al., 2019; Zucchella & Previtali, 2019 in Santa-Maria et al., 2021)

- However, as with the wider open innovation literature, it is still unclear:
 - how actors in a network within the circular economy should engage in **value co-creation and value capture with other CE actors** (Ferasso et al., 2020)
 - how to **align multiple actors' interests** to exploit the opportunities presented by the circular economy (Parida & Wincent, 2019)
- Moreover, integrating both open and closed innovation with circular business modelling requires different approaches (Bocken & Ritala, 2021), but this needs to be further developed empirically.

A Brief Account of Methodology

- Single embedded case study of the packaging plastics network of a large plastics incumbent actively pursuing CE: typical case (Yin, 2003) representative of the direction being taken by the plastics industry as a whole
- Combined approach: systematic literature review (Tranfield et al., 2003; Easterby-Smith et al., 2008) of design principles for collaborative business models + semi-structured interviews and focus group discussions with executives and managers of the focal firm and its ecosystem partners
- Data will be gathered in order to:
 - Map the collaborative business model by understanding the role, resources and capabilities, commitment to circular transformation, value contributed, and value captured by each actor
 - Identify their needs, expectations of each other, tendencies for collaboration, and possible barriers/drivers that they might face within the ecosystem now and in the future
 - Identify ways to orchestrate the ecosystem so that actors are able to innovate their individual business models while jointly collaborating, creating, and capturing value

Expected Contributions to Theory & Practice

- This study deepens our understanding of collaborative business models in the multi-stakeholder scenario of the CE, unraveling how actors in a network within the CE can optimally engage in joint value creation & value capture.
- As circular business model literature remains largely theoretical (Santa-Maria et al., 2021), this study provides important empirical insights and validation through a case study of an incumbent in the plastics sector. It also develops practitioner-oriented insights on how to shift to a collaborative business model and orchestrate it to successfully align multiple actors' interests.
- From a societal relevance perspective, this research addresses the growing need for society to look toward more sustainable patterns of production and consumption. Empowering businesses to shift to more circular business models encourages the transition to a potentially more sustainable future.