Closing the Loop: Exploring Circular Economy, Resilience, and Supply Chain Implications from Supply Management to End Consumer

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Agenda

1. Supply chain management for circular economy: conceptual framework and research agenda (Manuscript 1)

2. Achieving supply chain resilience in an era of disruptions: a configuration approach of capacities and strategies (Manuscript 2)

3. The challenge of remanufactured products: the role of returns policy and channel structure to reduce consumers' perceived risk (Manuscript 3)
Research Group of Logistics & Supply Chain Management

- **Procurement**
  - Supply risk
  - Commodity shortages and price fluctuations
  - Resilience strategy

- **3PLs**
  - Circular practices
  - Logistics service quality

- **Transportation & Warehouse Management**
  - Decarbonization

- **Retail Supply Chain**
  - Omnichannel strategy
  - Last mile delivery
  - Reverse logistics
  - Service recovery resilience

- **Consumers**
  - Consumer role
  - Consumer impact

**CE & SCM**
- Supply chain processes, closed loop supply chain and circular economy practices
Supply chain management for circular economy: conceptual framework and research agenda

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#1 Managing Loops

Under what circumstances can companies shape the decision-making process to expand customer adoption of practices that facilitate the closing loop strategy? Which supply chain design will companies have to develop to improve the dematerializing of resources?

What is the process that companies go through to identify opportunities for narrowing through digitalization their existing supply chains? What are the critical factors influencing this process? Under what circumstances are companies most likely to cooperate to achieve greater intensification of resources? Supply chains?

Achieving supply chain resilience in an era of disruptions: a configuration approach of capacities and strategies

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#2 Our research

Key lens: 
Supply Chain Resilience (Wieland and Durach, 2021)

with 3 “lines of defense” (before, during and after a disruption): absorptive, adaptive and restorative capacities (Hosseini et al., 2019)

and their strategies (Chowdhury & Quaddus, 2017; Sturm et al., 2021)

How to combine them? 
Short term vs long term approaches?

Using a theoretical lens: Contingency Resource Based View (CRBV)

Research question
What configurations of SCR strategies and capacities to cope with the COVID-19 pandemic lead to SC resilience?
fsQCA → searching for possible configurations (Ragin, 2009, Woodside, 2014)

<table>
<thead>
<tr>
<th>SCR capacity</th>
<th>Variable (SCR strategy)</th>
<th>Group 1</th>
<th>Group 2</th>
<th>Group 3</th>
<th>Group 4</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Absence of capacities and no investments in SCR strategies</td>
<td>Sol. 1</td>
<td>Sol. 6</td>
<td>Sol. 2</td>
<td>Sol. 3</td>
</tr>
<tr>
<td>ABSORPTIVE</td>
<td>Flexibility</td>
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<td></td>
<td>Information and knowledge sharing</td>
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<td>ADAPTIVE</td>
<td>Agility</td>
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<td>Efficiency</td>
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<td>Responsiveness</td>
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<tr>
<td>RESTORATIVE</td>
<td>Technological capability</td>
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</tbody>
</table>

Passive companies: *no investments!*

Proactive, reactive and technology driven companies: *Fully equipped!*

Reactive companies driven by technology capabilities: *Coping with events!*

Proactive but partially unplugged companies: *Think in advance, but unplugged!*
Evidences and Conclusions

- **Complex picture** of how companies and their SCs have combined SCR strategies, and related capacities, to achieve SCR and to cope with disruptive events

- Several complex patterns the SC adopt to achieve SCR since heterogenous and **diverse solutions can lead to achieve SCR**

- Different capacities and strategies, and **different timelines**
The challenge of remanufactured products: the role of returns policy and channel structure to reduce consumers’ perceived risk

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Robert Frankel
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# Research question:
How can return policy and channel structure help to reduce the perceived risk of remanufactured products to entice consumers’ purchase intention from the retailer?

**Return policy**
(e.g., Petersen and Kumar 2009; Bonifield et al. 2010; Röllecke et al. 2017)

**Retail Channel Structure**
(e.g., Griffis et al., 2012; Dimoka et al., 2012; Kim and Krishnan, 2015)
Theory and Hypotheses

Theory of Perceived Risk: consumers will perceive some type of risk during a purchase situation and will try to minimize the risk through different strategies (Taylor 1974; Sweeney et al., 1999).
Contribution

- We focus our attention on the retailer-consumer interface and also highlights the potential value of investing in circular economy initiatives and the relative sustainable solutions.

- Our research suggests that providing a **lenient return policy** for remanufactured products is one option that entices consumers to purchase remanufactured products from retailers.

- Furthermore, offering a lenient return policy mitigates risk in both channels but as study 2 illustrates, **it might be more effective** (in particular for remanufactured products) **in a brick-and-mortar setting**.

- Managers must make a careful assessment between the goal of achieving a closed-loop supply chain and potentially having to process more returns of remanufactured products. One option would be to **differentiate the return policy depending on whether the product is new vs. remanufactured.**
International Journal of Physical Distribution & Logistics Management (IJPDLM)

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Max. 1st
Decision

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Major (median)

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