Business incubation, sustainability, and circular start-ups

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HELIX Conference, 2022
Socio Economic Trends 1750→2010

- International Tourism: 0→939.9 millions of arrivals
- Telecommunications: 0→6.48 billion landlines & subscriptions
- Transportation: 0→1281.35 mega vehicles
- Paper Production: 0→398.77 megatons
- Water Use: 0→3.87 1000km³
- Large Dams: 0.06→31.63 >15 meter height
- Fertilizer consumption: 171.46 megatons
- Primary energy use: 16→533.37 exajoule
- Urban Population: 0.05→3.5 billions
- Foreign Direct Investment: 0→1.3 trillion (2013 USD)
- Real GDP: 0.35→50.15 trillion (2005 USD)
- World Population: 0.73→6.9 billions
Landfilling of “resources”
Circular economy (CE)

• “[CE] an industrial system that is restorative or regenerative by intention and design. It replaces the ’end-of-life’ concept with restoration, shifts towards the use of renewable energy, eliminates the use of toxic chemicals, which impair reuse, and aims for the elimination of waste through the superior design of materials, products, systems, and, within this, business models.” – Ellen MacArthur Foundation (2012, p. 7)

• “[…] circular economy, where the value of products, materials and resources is maintained in the economy for long as possible, and the generation of waste minimised.” – COM (2015) 614 final
A systemic transition to CE

Materials and product design
Circular business models
Reverse supply chains
Enabling conditions

A circular business model describes the rationale of how an organization creates, delivers and captures value using circular economy principles.

Wasserbaur et al., 2022
Circular business innovation

Describe the conceptualization and implementation of circular business models

Corporate boundaries

<table>
<thead>
<tr>
<th>Internal</th>
<th>External</th>
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<tbody>
<tr>
<td>CBM transformation</td>
<td>Circular start-up</td>
</tr>
<tr>
<td>There is a current business model that is changed into another business model that qualifies as a CBM</td>
<td>There is no current business model, and a new CBM is created</td>
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</table>

An existing CBM is identified, acquired, and integrated into the organisation

The current business model stays in place, and an additional CBM is created – this also includes joint ventures

Current business model

Circular business model

(Geissdoerfer et al., 2020)
Research question

What are the challenges of start-ups developing circular business models?
Research Method

• Interviews with 60 start-ups developing circular business models in Sweden and Europe.

• Interviews with 33 entrepreneurial ecosystem actors on their circular economy competence.

• Two focus group discussion with start-ups & ecosystem actors. Total 40 participants.

• Paper development workshop at AoM conference.

• Analytical framework (Gartner, 1985)

![Diagram]

Figure 1. A framework for describing new venture creation.
Circular start-ups

i. 0 - 6 years old,

ii. profit-seeking firms,

iii. independent ventures, not a subsidiary of an incumbent,

iv. developing a CBM (Bocken et al., 2016):
   – (i) access/performance model,
   – (ii) extension of product value,
   – (iii) classic long-life model,
   – (iv) encourage sufficiency,
   – (v) extension of resource value,
   – (vi) Industrial Symbiosis (IS).
Coffee “waste” as raw material for cosmetics
Lease/Repair/Prolong

A bike that always works
Bike for a monthly fee
from 229 kr/mo
Renting of clothes

HACK YOUR CLOSET

Hack Your Closet i konkurs
Reuse

Circular Packaging as a Service

How it Works
Upcycling “waste” bread
Individual(s)-related challenges

Challenges related to the individual(s) are similar to those experienced by individual(s) developing “conventional” start-ups e.g., lack of contacts and networks, limited business development experience.
Environment-related challenges

The environment shapes the types and functioning of circular business models developed e.g., low cost labour, existing material and energy policies.
## Business model-related challenges

<table>
<thead>
<tr>
<th>Extension of resource value</th>
<th>Access models</th>
<th>Extension of product value</th>
<th>Facilitating industrial symbiosis</th>
<th>Encourage sufficiency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Uncertain quality and quantity of “waste” and their price collected as raw material.</td>
<td>• Distributed cash flow.</td>
<td>Engagement with end-users needed to return products.</td>
<td>Existing policies can limit innovative resource exchange across certain industries.</td>
<td>Costly reverse logistics.</td>
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<tr>
<td></td>
<td>• Labour intensive repair and maintenance.</td>
<td></td>
<td></td>
<td>End user engagement needed.</td>
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<td>• Costly reverse logistics.</td>
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Main insights

Circular start-ups need strategic partnerships from the start but face difficulties in entering such partnerships due to liabilities of newness and smallness.

Circular start-ups face scale-up bottle-necks due to their co-dependency with the existing linear business ecosystem within which they operate.

The dominant approach in the ecosystem is to develop general understanding on circular economy and not specialist competence.
Ways forward

🎯 Map and connect specialist competence on circular economy in regions to generalist ecosystem actors who meet start-ups regularly.

🎯 Develop and integrate questions into early-stage business coaching to trigger deeper reflections on circularity.
Thank you.

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