How to Manage the Adoption of the Circular Economy in SMEs?

Executive Summary

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The current linear production system based on the false assumption of unlimited natural resources, that until recently brought the advantage of price convenience is being challenged by the lack of resources and large inefficiencies it generates. This is reflected in higher commodity prices and supply uncertainty, exposing businesses to severe risks (McKinsey and Company). Further pressure comes from the rapid increase in the world’s population and rate of consumption. To sustain the change in consumption and production patterns the decoupling of economic growth from the consumption of natural resources becomes inevitable (UNEP, 2011; Meadows et al. 1972).

The change required in today’s economy must go beyond the efficiency gains of the green economy, a system that starts with the assumption of a linear economy and only concentrates on reducing the damage to the environment, rather than redesigning industrial material flows (Braungart et al. 2007; Gunter, 2010). The Circular Economy (CE) has been identified as a possible solution to the current economic and environmental challenges provided by this industrial system (EMF, 2013; McKinsey & Company, 2014). The most efficient method of meeting this increasing demand is by eliminating the wastage occurring in the system, ensuring that what is currently produced can be remanufactured and reinserted in the industrial cycle.

Small and Medium Enterprises (SMEs) are the focus of this research as they are collectively responsible for the major economic and environmental impact. SMEs are usually lagging behind due to their lack of resources and expertise and the efforts to reach this group of firms have been limited due to their low visibility and size. Moreover, financial support to SMEs is limited due to the high risks of investing in such companies and their impact is often neglected when compared to that of larger firms.

**Key Principles of the Circular Economy**

*Adapted from the Ellen MacArthur Foundation*

- Eliminate waste.
- Everything within the economy has a value.
- Design with disassemble and reuse in mind with minimal changes required to reuse components of products.
- Differentiate between consumable and durable components. Biological materials go back into nature; durable and technological materials stay in use for as long as possible.
- Find ways to reuse materials across the value chain.
- Eliminate toxic chemicals, making it easier to reuse components without risk of contamination.
- Fuel the system with renewable energy.
- Build resilience through diversity.
Methods

This report set out to investigate the barriers and drivers that SMEs face in adopting the CE as well as the extent of support received from external stakeholders and the internal organisational change necessary. In-depth case studies were used as instrument for this qualitative research. Semi-structured interviews were conducted with SMEs’ owner-managers/environmental managers to understand their experience in approaching the circular economy. A questionnaire was prepared based on the significant variables emphasized in the literature review. The geographical location of the case studies was limited to the European Union as they are subject to broadly similar environmental regulations and pressure. Samples were taken from Northern Ireland and Italy as examples of economies that are lagging behind and that would largely benefit from adopting the circular economy (See Table 1).

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<thead>
<tr>
<th>Case Study</th>
<th>Size</th>
<th>Industry Sector</th>
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<td>Case 1</td>
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<td>Case 7</td>
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Table 1. Case Studies Profiles.

Results

The drivers to the CE that emerged from the case studies are the owners and managers’ personal values, economic and competitive advantage, innovation and growth, pressure from larger organisations and legislation (See figure 1).

![Drivers to the Circular Economy](image)

**Figure 1. SMEs Drivers to the Circular Economy.** The percentages indicate the frequency with which drivers were observed in the case studies (N=6). Multiple answers were allowed.
The barriers to the CE are the limited financial resources, low incentives from government, lack of information and expertise, consumer’s perspective and technological availability (See figure 2).

![Barriers to the Circular Economy](image)

**Figure 2. SMEs Barriers to the Circular Economy.** The percentages indicate the frequency with which barriers were encountered in the case studies (N=6). Multiple answers were allowed.

**The Role of External Stakeholders**

Several stakeholders have been identified in playing a part in the change, these are: suppliers, consumers, government, local authorities, relevant organisations, institutions, and other businesses.

- Organisations such as BITC and Sodalitas foundation are key in providing information, expertise and guidance, as it was found that SMEs greatly value benchmarking activities with other businesses and the possibility of receiving environmental internal audits and consultancy.
- Partnerships represent an important contact point for market and authorities an excellent networking opportunity. They are also valued as a means of attracting institutional support and attention.
- The support received from the local council and the government comes in the form of raising consumer awareness, providing effective legislation and financial assistance. Nevertheless this support is considered less reliable as it is not received in a timely manner.
- Suppliers are required to comply with the improved environmental standards and often provide new sustainable products or materials. In cases in which suppliers are not willing to adapt to the change they are either substituted or when there is the possibility the company shortens the supply chain providing their own supplies and having better control of the material and resource flow.
- Consumers can support the shift to a CE by reducing the impact of products through correct disposal and by enabling recollection and reuse.
Internal Organisational Change

- Empower and engage employees in the transition to the CE. Raise their awareness through training and education and ensure they are satisfied and committed.
- Develop a learning culture that encompasses environmental values, beliefs and norms.
- Enhance two-way communication to ensure employees can feed in the decision making process (Integrated Management System; ‘An employee suggestion’ programme).
- Cross-functional teams to fill the communication gap across different functions (Operational Efficiency Committee).
- Frequent meetings to measure progress.
- Flat structure.

Findings

Although the term ‘SME’ is representative of a group of small firms, it must be noted that the difference in size between a micro and a medium firm is substantial, such that medium firms often possess characteristics that are more comparable to large firms. This difference is clearly perceived in the level of flexibility and the structure of the firm, which gives an important advantage when shifting to a CE model. While micro/small firms already posses the structural characteristics in favour of the change, medium sized firms require more adjustments.

Given the structural advantages possessed by small firms a question emerges to what makes SMEs so resistant to shift to the CE. While previous research highlights that this could be attributed to a low understanding of the CE, evidence from this study points to the fact that SMEs’ owners and managers have little understanding and awareness of the benefits of a CE model concepts (Fusion, 2014). Interestingly, the link between profitability and the CE is not fully acknowledged, while a shift to the CE is often associated with high investment costs. Case 4 is an exception proving the contrary, as Oxborrow and Brindley (2013, p.360) puts it ‘In the short term relatively simple interventions can make a significant contribution’.

This study provides evidence that support from the government and local authorities to SMEs is still very limited, whereas their involvement would make the transition to the CE a much more attractive option even for less environmentally conscious owner-managers. This study also demonstrates that SMEs approaching the CE have high impact awareness and developed means for measuring it (vehicle tracking system and life cycle analysis). Nevertheless given that impact awareness is directly related with managers’ personal values and interest in sustainability, this aspect may still represent an obstacle for less conscious managers.

B2B pressure from large consumers is growing and becoming an important driver in many SMEs (case 2, 5,7). It can be argued that SMEs benefit indirectly from MNE opportunities and resource abundance in engaging in the CE, as once these practices are implemented they are transmitted to their suppliers (usually SMEs) as necessary requirements.

A closer relation with consumers is a peculiarity of the CE, considering how it affects products and services provided. For this reason it is important for businesses to secure active participation from consumers. On one hand businesses must engage in ‘educating’ consumers, raising their awareness about environmental issues, helping them to understand the benefits of their products and to prefer them to other less sustainable options. On the other hand post sale consumers’ behaviour contributes to reducing the environmental impacts of products through reutilization, recollection or recycle. Considering SMEs typical local and fixed customer base it can happen that current
consumers are not receptive to sustainable products. In this case it is important that SMEs use marketing and communication strategies to attract new, interested consumers (as in cases 1, 4 and 7) even though they were not previously necessary. While losing some of the existing customers may represent concern for SMEs, the opportunity of attracting other more influential clients should become a driving force. Case 4 is a good example in demonstrating how a successful communication strategy can lead to a strong competitive advantage. This is in line with Oxborrow and Brindley (2013) who identified marketing activities as an ‘eco-advantage’ and a catalyst for sustainable change with respect to compliance.

Financial resources represent the biggest barrier to sustainability, this is mostly attributed to the high costs of environmental accreditation, suggesting that the CE transition in itself may not necessarily require high investments. Without expertise it is difficult for SMEs to recognise the opportunity of a circular model and most importantly to predict the extent of investment necessary. This could lead to overestimating the costs and not consider acquiring a deeper understanding before tracing conclusions. Case 7 demonstrate SMEs opportunity of undertaking research and exploring solutions by relying on the collaboration with Universities through Knowledge Transfer Programme as highlighted by Susman et al. (2006). In overcoming this barrier, a significant support identified by all cases studied was becoming members of organisations such as BITC NI and Sodalitas Foundation. Such external stakeholders offer a series of programmes and benefits that help SMEs fill the knowledge gap.

The change to the CE involves all organisational elements: work, people, formal structure and informal structure. The characteristics possessed by small firms are often aligned with the structural requirements facilitating the transition to the CE. In light of the findings two recommendations are made. First, SMEs should engage in activities to improve consumer relations by involving directly consumers in the business activities. Second, SMEs should seek affiliation with NGOs, such as business representative and support organisations. As well as receiving information and guidance, benefits from this collaboration will result from a higher visibility and the opportunity of sharing experiences with businesses in the network.

References


Gunter P. 2010. The Blue Economy, Paradigm Publications: New Mexico, USA.


