
Globalisation of the circle: pipe dream or reality?

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Scaling up the circular economy across international borders is a formidable challenge. Maxine Perella investigates how this systems-level stalemate can be unlocked to enable global resource flows to take flight

Should a global perspective be the starting point for a circular economy? Making circularity work at a local level is hard enough, never mind across different regions, but the importance of scale-up is starting to beg this very question. For resource loops to go global, they will have to interact with each other somehow seamlessly across borders. The structural and collaborative stumbling blocks are many – supply chain, regulatory, governance and cultural issues will all need ironing out.

According to Professor Carolyn Roberts, senior manager at the Knowledge Transfer Network (KTN), the circular economy poses major challenges at an international level. “Where specialist materials are being traded over long distances, the ‘dispersion and dilution’ of the resource makes retrieval in whatever form very difficult, even when the company involved is a multinational,” she says.

“The externalities from the recovery operation outweigh the benefits, both in economic terms, but also in terms of carbon emissions. Even in the case of relatively low value but widely manufactured plastics, for packaging and the like, the economic and environmental cost of just the chemical remanufacturing is high, let alone the transport implications.”

Professor Roberts argues that in the first instance, circularity is best managed locally as this approach should progressively generate the infrastructure to scale up recovery operations at a later date. Assessing exactly how much work is being done at a local level, and where, is proving tricky however. The Ellen MacArthur Foundation (EMF) is looking to build up such a database – three geographical regions (the Scottish Government, the Danish Business Authority and the Walloon region of southern Belgium) are currently members of its Circular Economy 100 platform.

Asked how many regions across the world are currently involved with circular economy work, EMF’s head of editorial & european affairs Jocelyn Blériot replies: “It’s very difficult to say, the assessment work is still ongoing.” He adds that part of the problem is defining precisely what circular economy engagement is. “Is it a declaration of intention from a region or country saying we are going to go down the circular economy route when it comes to our next wave of industrial development? Or do we consider only the ones that are doing something concrete?”

The EMF runs its own regions programme – a networking hub which enables members to share international best practice and experience. Members are asked to define specific internal projects as well as contribute to collaborative cross-regional and ‘lighthouse’ projects. Examples could involve working on regional markets for reverse logistics or outlining standards for products and materials. Blériot says the organisation is doing a lot of work to identify good case studies, but this relies on robust stakeholder engagement.

“A big part of what we do is around communicating – on the idea itself, but also what’s

happening on the ground, so trying to help people who have emerging solutions that can contribute to that transition. One area that's worth mentioning is the work we do in education ... by working with key higher education institutions around the world we are trying to seed those ideas. We've tried to start by looking at the key sectors and also the quality of the institutions we talk to and the geographical positioning as well, it's a network that is being developed as we speak."

Apart from knowledge exchange, the nature of global supply chains poses particular challenges for circular scale-up due to their complexity and fragmentation. Identifying the leakage points (where material escapes the cycle and becomes waste) is a daunting task, and there is a pressing need for better data capture on material and products flows. Tony Hartwell, who works alongside Professor Roberts at the KTN, believes this is partly a regulatory issue. "Many of the recycling businesses in the UK want effective implementation of the BASLE Convention and EU regulations on exporting waste. Effective inspection of materials that are listed as being destined for reuse, but are in reality waste shipments, would help," he says.

Blériot adds that outdated legislation relating to the definition of waste, and what can be fed back to productive loops, is a huge bottleneck. "That's really one of the main issues to address urgently. Harmonising this as well, so that cross-border exchanges of those types of materials can be facilitated. We have been speaking to a lot of companies, mostly SMEs, who say they know somebody within their region who generates a by-product which would be extremely useful, but they can't do anything with it because it's labelled as waste."

The EMF has floated the idea of a 'product passport' to aid greater openness and transparency within the supply chain – Blériot believes if such a scheme got off the ground it could help accelerate scale-up. "The idea would be to say every time you have a product or material it comes with a certain amount of data with regards to its composition, for example the way it can be repaired or upgraded if it's a product, or reprocessed if it's a material. If you attach data to a material or product then there's a better chance it can be fed back into productive loops."

There is also the question of cultural dynamics – how the circular economy might prosper in industrialised countries compared to developing nations. Can markedly different economies learn from each other? Ben Peace, a sustainability specialist at the KTN, thinks they can given the aspirations that developing nations have towards the uptake of products that industrialised nations take for granted, such as cars and smart phones.

"If the transition can be made on the basis of appropriate models of provision then recovery, repair, reprocessing and remanufacturing will be easier, and the infrastructure, business models and logistics will naturally develop in parallel. In industrialised nations, provision has traditionally been on the basis of a linear model, and we are suffering the consequences. It may be that developing nations will develop on the basis of a different product culture, one more along circular lines," he says.

If such a question were set within the context of neo-colonialism, it would be a politically charged one to answer, Professor Roberts cautions. But she points out that many developing countries are already very good at parts of the circle. "Informal or quasi-formal scavenging and collection systems for metal, paper, plastics, textiles and so on are exceptionally well developed in all areas of Africa and Asia, and parts of Latin America, because they are driven by extreme poverty. Similarly, there are thriving second-hand markets for consumer goods, and repair operations in many of these countries."

Maxine Perella is an environmental journalist specialising in circular economy issues