

## The Circular Economy and the puzzle of formalisation: reflections on circular practices in the biodiverse Amazon

Tags: circular economy, informal economy, biodiversity, amazon rainforest

Among its many goals, the Circular Economy (CE) promotes greater efficiency in the consumption and production of goods and recycling resources within and beyond systems of production. However, it also involves regenerative practices such as soil restoration, crop rotation and organic farming. These practices are important, though the application of the CE concept requires more fundamental systemic change: new business models based on value created by following circular principles; the emergence of new value chains that support collaboration around circular practices; the creation of new markets that connect circular production with ethical consumers, who understand their role in the consumption-production chain; and, the creation of new systems of regulation which may enhance circular innovation.

As part of a Professional Development Workshop at the Academy of Management in August 2022 on the theme of the [Puzzle of the Informal Economy and the Circular Economy](#), we considered the opportunities and challenges associated with the adoption of circular practices in the Amazon rainforest. In many ways this was a rather extreme (i.e. outside of the norm) context, even within the Global South. The Amazon region has high poverty rates; lacks telecommunication and basic infrastructure (energy, water, sanitation, communication); adequate land property rights are largely absent, and; most of its (largely indigenous) population work in the informal economy. It is also among one of the most biodiverse regions in the world. The PDW allowed a diverse group of academics from different disciplinary perspectives (albeit within the realm of management studies), to identify and discuss what issues stand out if we are to scale up CE practices in the region.

The following bullet points list some of the most salient aspects that emerged in the discussion:

- **The geography is vast and pervasive.** Arguably the most outstanding characteristic of the region is the harshness of its geography and vast natural ecosystem. All economic and social life is deeply interlaced with it. It pervades cultural aspects, such as how the beliefs of indigenous, local communities are closely associated with the immediate environment. Economic life not only depends on the extraction of natural resources but also on the river systems as the main source of life and the main form of transportation. While there are international ports, these are few and poorly equipped; local actors have limited access to connect with global sustainable value chains. Even when there might be technical solutions to these problems of interconnectivity (airports, road systems, river canals, etc), there is much uncertainty about how these solutions may affect local biodiverse environments.

- **Biodiversity connects with economic life.** Global markets typically require scale and intensive forms of production (high quantities of standardized products). In biodiverse ecosystems, intensive forms of agriculture negatively impact biodiversity because it concentrates resources in a few products with specific characteristics. In the past, Amazon rainforest inhabitants have developed economic strategies that connect and promote local biodiversity. But intensive forms of production, even when undertaken 'sustainably', can disrupt local biodiverse ecosystems. Extensive knowledge about the local land and fauna is needed to limit these disruptions.
- **The informal economy is the norm and formalisation is a market based process.** If CE practices are going to diffuse across the Amazon rainforest region, then it is important to underline the 'economy' side of the concept. Supply chains that promote circular practices, end consumers that value the application of circular principles in the way their goods are made, funders that support circular businesses, and so on, are embedded within formal markets. But the process of formalisation is not just about informal actors registering and complying with formal regulations, they need to build new capabilities to compete for formal consumers within formal market environments. This involves profound changes in the way informal actors operate. The challenge this presents is: how to convince local actors to leave behind what has been the norm for their entire lives? When socioeconomic systems - like the informal economy - are established for long periods of time, they develop lock-in mechanisms and path dependencies that are hard to break away from. Change does not come overnight; some argue that processes of formalisation can take decades (La Porta and Schleifer, 2014). If the CE in developing countries can align with local economic and social problems within the region, it may become a bridge that helps local actors to connect with international sustainable markets, while moving closer to the formal economy.
- **The role of circular indigenous knowledge.** The Amazon rainforest has a large indigenous population. Their lives are interlaced with biodiversity and they mainly apply agroforestry techniques inherited from previous generations that are part of their culture and the way they live and interact with nature. For example, in some regions they promote biodiversity as their fields grow older by increasing the variety of products and leaving fields fallow; in other regions they use charcoal to improve the soil or plant specific fauna around the lakes to attract fish. Much of this indigenous knowledge is applied in lieu of new technologies and modern infrastructure. It is tried and tested, and in many ways, aligned to circular principles of regeneration.

### Next steps

These are just a few of the headline insights from the AOM PDW. There is clearly a need for further investigation on multiple fronts. We highlight two avenues here. First, our understanding remains sparse on the process of transition from an informal to formal economy, and the role played by circular economy principles and practices. Without more evidence, it is impossible to develop practical interventions that aim to formalise the economy while promoting circular practices. It is necessary to build more case studies and local data that will better inform policy

makers. Further analyses are needed that explore informal circular economy practices in the Global South: the role of indigenous knowledge, who are the key actors, how do they work, what are their relationships. Also necessary are better assessment methods by which circular practices can, how their impacts can be determined, how cost and benefits can be gauged. Finally, consideration of how to overcome barriers associated with scaling up informal circular practices, guiding informal actors toward formality and linking them to global value chains and formal economic agents.

Second, the biodiversity consequences of CE are particularly poorly understood. The Amazon case demonstrates that context matters. The types of circular interventions in the Amazon rainforest are potentially very different to those in other contexts. We need to understand better the biodiversity impacts – both locally and globally – of circular practices. At the *(Bio-) Diversifying Circular Economy Research and Innovation* session at the Future Earth Systems of Sustainable Consumption and Production conference on 8th November 2022 (1300-1620 CET), we invite interdisciplinary academics and non-academic stakeholders to share their experiences and reflect on the challenges of fostering CE projects while contributing to enhanced biodiversity. The conference is virtual and free to attend. More details can be found [here](#).

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Other relevant links:

<https://sscp.futureearth.org/2022/08/24/insights-into-circular-economy-and-the-puzzle-of-formalization-in-the-global-south/>

<https://sscp.futureearth.org/2022/09/06/circular-economy-and-the-puzzle-of-formalization-insights-from-circular-waste-picking-in-south-africa/>