Assessing Circularity Interventions: A Review of EEIOA-based Studies

Last Modified on 29/03/2019 11:13 am CET

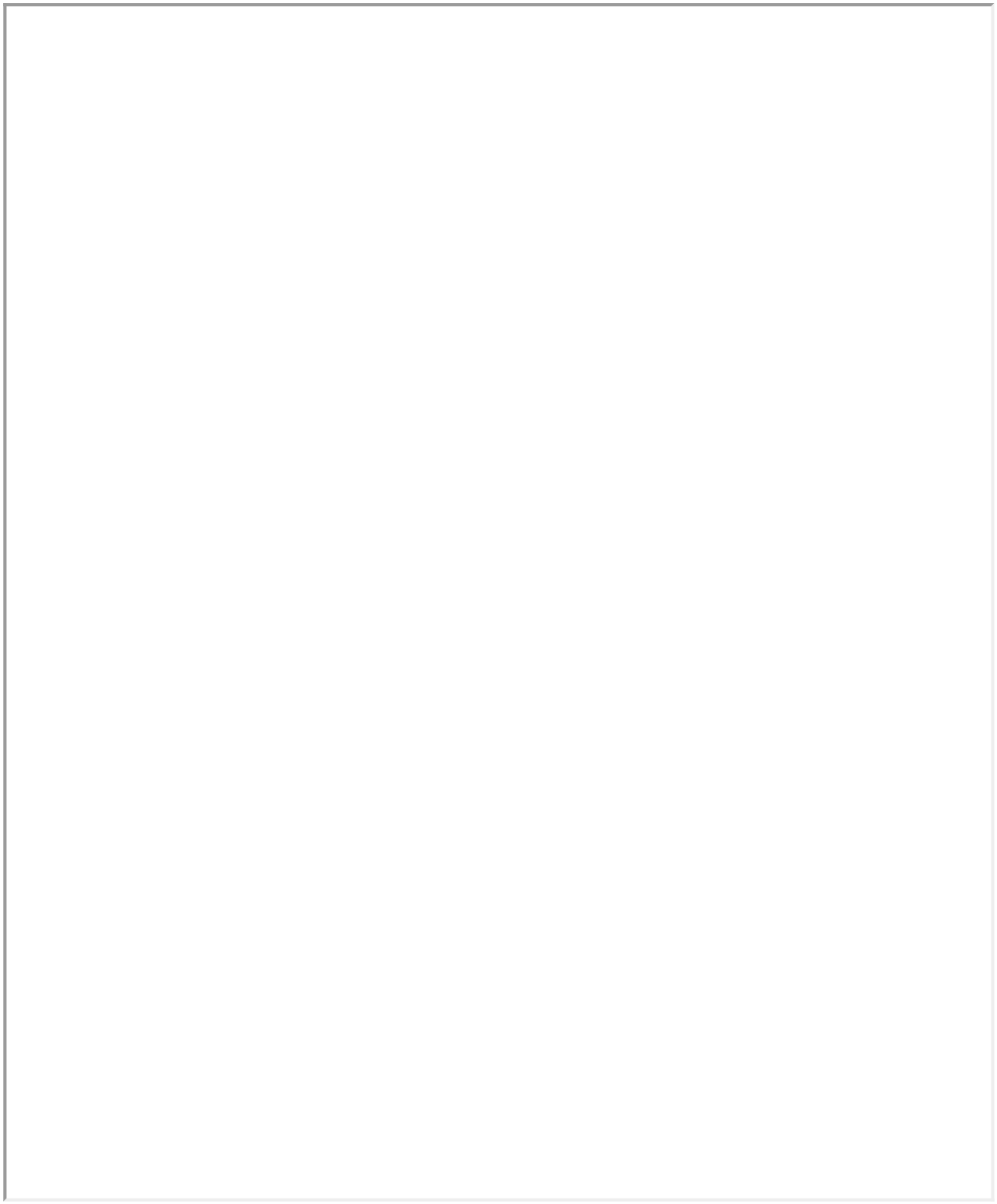
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Date of publish: December 2018

Why did we conduct this research?

This article brings the current state of EEIOA-based studies (Environmentally extended input–output analysis) for assessing circularity interventions up to date and is organized around four categories: residual waste management, closing supply chains, product lifetime extension, and resource efficiency.

Key findings:

- Causality sequence of modelling circularity interventions. For residual waste management, a waste treatment action can be modelled by augmenting the values of waste absorbed by a certain waste treatment sector, which in turn requires more inputs from the rest of the economy in order to process the new amount of waste disposal.
- Closing supply chains can be assessed by adjusting input and output coeffcients for industries that adopt closed-loop strategies, which are related to the replacements of virgin materials with secondary circular flows. In addition, these interventions require to specify new sectors in the EEIOA model if the circular activities are not explicitly expressed.
- Important to consider a potential rebound effect of prolonging product lifetime caused by the expenditures on other product or service categories from the savings on final demand.



Reference:

Aguilar-Hernandez, G. A., Sigüenza-Sanchez, C. P., Donati, F., Rodrigues, J. F., & Tukker, A. (2018). Assessing circularity interventions: a review of EEIOA-based studies. *Journal of Economic Structures*, *7*(1), 14.