Tracking the Sustainable Development Goals with Input-Output Analysis: A commentary and example

Topic: Sustainable Development Goals
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In September of 2015, 193 member states of the United Nations adopted the â€œ2030 Agenda for Sustainable Developmentâ€•, which introduces 17 Sustainable Development Goals (SDGs) with 169 targets as the new organizing principles to direct global action towards a universal sustainable development path. Implementing mechanisms to track progress towards these global goals is still a challenge. Furthermore, the consideration of countriesâ€™ â€œspillover effectsâ€•, namely the positive or negative effect of a countryâ€™s actions onto others is just being discussed and considered for national performance assessments in terms of the SDGs.
As a general research question, this article explores the applicability of Multi-Regional Input-Output analysis for tracking performance towards the SDGs, including the consideration of spillover effects. To do so, and more specifically, the article sets to a) address the question: What is the current global scenario regarding the assessment of performance towards the SDGs in which a tool such as MRIO analysis can fill a particular niche, considering both its strengths and limitations? b) address the question: To what extent relevant existing works in the Inputâ€”Output literature have examined issues matching any of the 232 SDG-indicators proposed by the IAEG-SDG? Here, a 3-point classification scale is introduced: Class I = same as indicator, class II = relevant to indicator (could match the indicator with some modifications), class III = proxy related to the spirit of the corresponding SDG target (but not matching any of the targetâ€™s indicators); c) How can spillovers based on MRIO analysis be factored in performance evaluations and what are the implications of such country interactions? This, also considering the observation that SDGsâ€™ targets can interact positively or negatively (Nilsson et al., 2016); d) develop an exercise to build on the previous points, using selected countries and socio-economic and environmental data from the Eora MRIO database. Based on all of this, some conclusions are drawn and aspects for further research are suggested.
This study combines a literature review and a MRIOA exercise using the Eora MRIO database, version 199.82, which includes more than 15,000 transactions between industrial sectors in 189 countries.
While there have been suggestions about the feasibility to connect MRIOA and the SDG (e.g., Xiao et al., 2017), greater deliberation is appropriate and several questions and implications need further consideration. This work sets the stage for such discussion and advances the examination of the potential that this macroeconomic analytical tool has for this new and timely application for sustainable development.

Keywords: Agenda 2030, environmental footprints, multi-regional input-output analysis, social footprints, spillover effects, sustainable development goals.