

Identification of key sectors in greenhouse gas emissions for the Salvadoran economy: an application of the input-output analysis

Topic: Classical IO applications: Multiplier and Linkage Analysis

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This article explores the key sectors of the Salvadoran economy in terms of direct and indirect emissions of greenhouse gases for the years 2005 and 2014.

The key sectors with backward linkages (driven by demand) over the multipliers will be obtained following the Rasmussen / Hirschman methodology (presented in Alcántara, 2007, Piaggio, Alcántara, & Padilla, 2014). To avoid biases towards small sectors and their contribution to total emissions, we consider the weighted multipliers and not weighted by the final demand.

The data to be used comes from the supply and use tables of El Salvador 2005 and 2014 and their corresponding transformation to input-output tables through the Eurostat methodology (model B), as well as the emission data contemplated in the Second and Third Communications National on Climate Change of El Salvador (MARN, 2013 and 2018), complemented with the Eora database (Eora: Kanemoto, Moran, & Hertwich, 2016).

This study is novel and important, because it is the first time in the country that the input-output analysis framework is used to determine the sectors that are generating the greatest amount of emissions in their production processes, either to satisfy their own demand (direct emissions) or demand from other sectors of which they are suppliers (indirect).

It also states that, although El Salvador is not a country whose emissions are significant on a global scale, the differentiation between direct and indirect emissions becomes relevant in the framework of the design of public policies, since it allows identifying which are the most appropriate policies for the direct issuers (options focused on the last link in the production chain) and what could be the most appropriate policies for those sectors that pollute indirectly (policies based on intermediate and final demand).

References

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