

Trade-offs between environmental pressures and economic benefits in primary commodity exporters: a study of Australia and Brazil from 1995 to 2015

Topic: GVC Trade

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During the past two decades, the transfer of environmental pressures embodied in traded products has increased, mainly due to the greater participation of developing economies in global exports. At the same time, value added and jobs associated to GVCs have also increased, and exports have contributed to economic development in many countries. However, few studies link the socioeconomic gains of these exporting countries with the environmental pressures embodied in supply chains. It is clear that the study of the transfer of environmental externalities cannot be dissociated from socioeconomic gains in exporting countries, and it is important to assess the trade-offs between these gains and environmental pressures if we are to promote sustainable development. Among the countries which depend on resource intensive exports (over 50% of raw- and low-processed products from agriculture, forestry and mining) and significant participation in GVCs, Australia and Brazil rank in the top.

We ask the following questions:

1) How do economic and environmental pressures compare for production- and consumption-based accounts for both of the countries, and how has this changed over time?

And 2) What are the trade-offs between economic gains and environmental pressures of the specialization in resource-intensive exports, and how has this changed over time?

We used EXIOBASE 3, an MRIO database which covers 44 countries plus 5 Rest of the World regions, 200 products, and a time series from 1995-2011 plus a nowcasted series from 2012-2015. We analyzed value added, labour, GHG emissions, land use, water use, and domestic material extraction embodied in consumption, imports and exports. We also calculated resource productivity from a production and consumption perspective throughout the period, and measured trade-offs as the economic gains (value added and labour) per use of resources (environmental pressures) in the domestic economy, exports and imports.