Energy intensities and CO2 emissions in a SAM model of the Andalusian economy

Topic: Energy input-output analysis II
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The aim of this paper is to calculate energy intensities and CO2 emissions in Andalusia, one of the most important regions of the Spanish economy, in 1995.
Energy intensities for five energy commodities are calculated using a social accounting matrix constructed for the region (SAMAND95) which is used under different endogeneity scenarios. We present also a methodology to estimate CO2 emissions, starting from the SAMAND95.
This contribution provides the first estimates of energy intensities and CO2 emissions for Andalusia using SAM models for three different levels of endogeneity. Moreover, this method provides a simulation tool of different scenarios which allows us for evaluating the impact in the regional economy of changes in some components of final demand or energy efficiency improvement in the period 1995-2005, We use the vector of final demand of the Social Accounting Matrix of Andalusia for 2005 (SAMAND05) built recently by the authors.
The results show the high interdependence between the energy branches, the importance of private consumption in the net of interrelations, and how necessary is to improve the efficiency in their usages.