

Driving forces of Spain's CO₂ emissions: A LMDI decomposition approach

Cansino J.M.

Sánchez-Braza A.

Rodríguez-Arévalo M.L.

An extended version of the IPAT model and the 'Kaya identity' is used to assess the contribution of drivers of CO₂ emissions for the 1995-2009 period. The paper carries out a multisector analysis based on the Log-Mean Divisia Index Method (LMDI I). The decomposition factors used are the Carbon Intensity factor (CI), the Energy Intensity factor (EI), the structural composition of Spain's economy (Economy Structure, ES), the Economic Activity factor (EA) and Population (P), respectively. Data came from the World Input-Output Database (WIOD) and determined the period under consideration. The paper focuses on the 35 productive sectors included in the WIOD. Major findings show that RES acted in detriment to the drivers of CO₂ emissions. This may be stated for the last few years under consideration. The positive trend for the share of RES in Spain's energy matrix, together with the negative tendency in the use of fossil fuels, leads us to be optimistic. © 2015 Elsevier Ltd. All rights reserved.

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