

GHG Emissions' Tax in Brazil using an Input-Output Model

Topic: Carbon Emissions

Author: Luiz Carlos Santana Ribeiro

Co-Authors: Geoffrey J.D. HEWINGS, Kenia B. DE SOUZA, Lucio Flavio da Silva Freitas

The emission of greenhouse gases (GHG) generated by human activity is a major cause of global warming and climate change. There is considerable debate about the choice of the best mechanism to reduce emissions under a climate policy. In this regard, the aim of this paper is to measure the impact of a policy of taxing GHG emissions in the Brazilian economy as a whole and in the different household income levels. To do so, we derive a price system from a national input-output model that incorporates the intensity of GHG emissions, as well as a consumption vector disaggregated in ten representative households with different income levels. The main results indicate that taxation was slightly regressive, and had little impact, also negative, on output. There were, however, significant emissions reduction.