Distributional impacts of an emission tax on greenhouse gas emissions from European agriculture

Maxime Ollier*[1,2] and Stéphane De Cara[3]

[1]Economie Publique INRA/AgroParisTech (EcoPub) – Institut national de la recherche agronomique (INRA) : UMREconomiePublique – Avenue Lucien Brétignières 78850 Thiverval-Grignon, France
[2]Chaire économie du climat – Chaire économie du climat – France
[3]Economie Publique (ECO-PUB) – Institut National de la Recherche Agronomique : UMR0210, AgroParisTech – F-78850 Thiverval-Grignon, France

Résumé

We study the distributional impacts of a tax on greenhouse gas (GHG) emissions from European farms, as well as the mplications of various redistribution schemes of the collected tax. The progressivity/regressivity of an emission tax depends on the farm distribution of (i) initial (i.e. pre-tax) emissions, and (ii) abatement costs. We use a supply-side micro-economic model of the European agricultural sector to assess methane and nitrous oxide emissions and the associated marginal abatement costs for 1,802 farm types representative of about 3.7 millions real farms. The findings indicate that a standard emission tax (without redistribution) would tend to increase gross margin inequalities–as measured by the Gini index–within the sector. They also show that a flat, budget-neutral redistribution scheme could substantially reduce existing gross margin inequalities in the sector.

Mots-Clés: Climate policy, Emission tax, Income inequality, Recycling, revenue, Lump, sum transfer

*Intervenant