

A Generalised Propensity Score Analysis to Investigate the Influence of Agricultural Research Systems on Greenhouse Gas Emissions

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Abstract : Bioeconomy can give the chance to face new global challenges and can move ahead the transition from a waste economy to an economy based on renewable resources and sustainable consumption. Air pollution is a grave issue in green challenges, mainly caused by anthropogenic factors. The agriculture sector is a great contributor to global greenhouse gases (GHGs) emissions due to lacking efficient management of the resources involved and research policies. In particular, livestock sector contributes to emissions of GHGs, deforestation, and nutrient imbalances. More effective agricultural research systems and technologies are crucial in order to improve farm productivity but also to reduce the GHGs emissions. Using data from FAOSTAT statistics and concern the EU countries; the aim of this research is to evaluate the impact of ASTI R&D (Agricultural Science and Technology Indicators) on GHGs emissions for countries EU in 2015 by generalized propensity score procedures, estimating a dose-response function, also considering a set of covariates. Expected results show the existence of the influence of ASTI R&D on GHGs across EU countries. Implications are crucial: reducing GHGs emissions by means of R&D based policies and correlatively reaching eco-friendly management of required resources by means of green available practices could have a crucial role for fair intra-generational implications.

Keywords : agricultural research systems, dose-response function, generalized propensity score, GHG emissions

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