

FSR Climate Annual Conference 2022 – 8th edition

Thursday 1 December

10:00-12:15 | *Session – Environmental taxation*

Presenter: Santiago RUBIO (University of Valencia)

Title: *Climate Clubs, Border Carbon Adjustments, and Trade Wars*

Abstract:

The Nordhaus Nobel Prize proposal in 2015 of creating a climate club for overcoming free-riding in international climate policy has been extensively discussed in the literature the last years. His proposal focuses on an international target carbon price and the use of an uniform percentage tariffs on the imports of non-participating into the club (trade sanctions). In this paper, we explore this idea assuming instead of using tariffs to penalize non-participants that countries could apply border carbon adjustments (BCAs), a mechanism compatible with World Trade Organization rules. Moreover, we analyse the possibility of retaliation by non-participating that is not analysed in Nordhaus' (2015) paper. Another important feature of our approach is that we assume that international organizations/agencies (IA) can play a more active role in international negotiations presenting a proposal of cooperation based on a harmonized carbon tax and the application of BCAs. Thus, we solve an extension of the standard coalition formation game used in the literature on International Environmental Agreements (IEAs) to analyse their scope (participation) and effectiveness that incorporates a new actor/player, the IA, and a stage zero where the IA announces its proposal and invites all countries to join it, and consider two scenarios, one without retaliation by non-participants and another with retaliation. To evaluate the effects of BCAs and retaliation on trade, we use an intra-industry trade model where firms produce a horizontally differentiated good whose output releases greenhouse gases and compete in quantities in segmented markets. The main conclusions are that without retaliation, there exists a club carbon tax for which the grand coalition is stable regardless of the degree of product differentiation. However, a tax equal to social cost of carbon does not make stable the grand coalition. The stabilization of the grand coalition implies some welfare losses with respect to the efficient outcome. Finally, we find that this mechanism is very sensitive to retaliation. If non-participants react charging a tariff on the imports of club members, no carbon tax can stabilize the grand coalition regardless of the degree of product differentiation.

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