

RESEARCH

Environmental Economics

OBJECTIVES

Environmental economics is concerned with the use of economic instruments to reconcile economic activities with the need to preserve the environment and, more generally, increase the efficiency of resources allocation once we take explicitly into account that some natural resources are scarce and that some economic activities generate harmful externalities (in terms of health, destruction of scarce resources, ...).

Emissions markets are such a policy instrument. Its principles are simple. Firms covered by the scheme are given emission allowances to cover (part of) the emissions generated by their economic activities. The total number of allowances is set to match the aggregate pollution reduction target of the country and firms cannot generate more emissions than what is covered by their allowances. Allowances are tradable. Firms can sell their surplus allowances or they can buy any shortcoming.

The EU has recently introduced emissions markets following the implementation of the Kyoto Protocol. The EU market is the largest emissions market ever (the scheme involves all the countries of the EU and covers more than 10,000 firms) and its performance is likely to affect the future use and practice of environmental markets worldwide.

The objective of this research is to study the optimal organization and implementation of emissions markets, evaluate the performance of the existing market and propose possible improvements. In parallel, the team will continue to analyze alternative policy instruments for sustainable development.

RESEARCH TEAM

ECORE's team in environmental economics includes professors Claude d'Aspremont, Thierry Bréchet, Estelle Cantillon and Henry Tulkens. They supervise a group of PhD students and undergraduate students.

The team is a leading member of the research network CLIMNEG, which is funded by the Federal Government and involves the Katholieke Universiteit Leuven. Its work often involves scientists from other disciplines including climatology and energy.

RESEARCH AREAS

Climate policy and international negotiation. Carbon dioxide is a global pollutant – it affects everyone, independently of its geographical origin. Global pollutants require global coordination among countries. This can be difficult given the nature of the problem (the cost of reducing emissions is borne by the country, the benefits accrue to all) and the asymmetric positions of countries vis-à-vis the costs and benefits of lower emissions levels. At the EU level, this problem is compounded by the fact that allowances levels are decided at the country level, yet they potentially create competition distortions if an industry in one country is given relatively less allowances. Moreover, they affect how tight the supply of allowances is and thus the working of the allowances market. This research studies ways in which countries can reach optimal outcomes through the proper design of negotiation and compensation mechanisms.

Development of the EU carbon dioxide emissions market. The superiority of emissions market over alternative instruments hinges upon the feasibility of assigning control rights, the possibility of enforcement, and the proper working of the emissions market. This project focuses on the latter question, with a view to proposing changes in the way the market is organized. The analysis will be undertaken at the theoretical level (analysis of the design of the market) and at the empirical level (market performance).

Redistributional impact of climate policy. This project takes a general equilibrium view to assess how different policy instruments (or combinations thereof) affect the way consumers, firms and government share the burden of improving the environment. The analysis will be undertaken at the theoretical and empirical level.

CONTACTS

Professor Thierry Bréchet
Tel. 32 10 47 81 86 – E-mail : brechet@core.ucl.ac.be

Professor Estelle Cantillon
Tel. 32 2 650 38 40 – E-mail : estelle.cantillon@ulb.ac.be