

Call for tender PhD thesis application Nantes Université

Title

Trade flow demand dynamics in gravity models.

Effects on actors' decarbonization strategies through a freight model for optimized ship dispatching

Research center: LEMNA

Field: economics

PhD Director: Rodica Loisel, <https://www.univ-nantes.fr/rodica-loisel>

Co-directors: Corinne Bagoulla, Pierre Marty,
<https://scholar.google.fr/citations?user=EZvE7MAAAA&hl=fr>

Financing: 36 months, Nantes Université

Starting date: 1st of october 2023

Candidate: graduated with a master's degree in economics (environmental, energy or maritime economics), with very good knowledge of quantitative methods.

Contact. Appliances should be sent to Corinne Bagoulla (corinne.bagoulla@univ-nantes.fr), Rodica Loisel (rodica.loisel@univ-nantes.fr) and Pierre Marty (pierre.marty@ec-nantes.fr). Email exchanges will take place occasionally, while the official selection process organised by the EDGE Doctoral School to award this doctoral contract will take place end of June.

Keywords : trade flows, maritime transport, gravity model, environmental regulation, carbon tax, emission tradable permits, abatement marginal cost of ships, partial equilibrium, freight model, ship dispatching, Europe, forecast scenarios.

Abstract. This doctoral project develops international trade models of demand (gravity model), supply (market power expressed in cost functions of logistic chain) and flow optimization (partial equilibrium model), in support to climate policies evaluation (carbon taxes, emission permit market). The prospective framework to 2050, is applied to European international trade by distinguishing the relevant markets (regular lines versus bulk flows) and the types of ship (by fuel – LNG, hydrogen, hybrid sailing, biofuel) in order to assess changes that will disrupt our economies.

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