

Marten Christian Riterrath

PHD CANDIDATE

University of Cologne -- Cluster of Excellence: ECONtribute Markets & Public Policy
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Research Fields

Environmental Economics · Innovation · Public Economics · Behavioral Economics

Current Position

VATT Institute For Economic Research

POSTDOCTORAL RESEARCHER

Helsinki, Finland

2026 –

Affiliations

2024 – **DIW**, Guest Researcher

2022 – **Center for Social and Economic Behavior (C-SEB)**, Junior Researcher

2021 – **Cluster of Excellence ECONtribute: Markets & Public Policy**, Associated Member

Education

University of Cologne

PHD ECONOMICS

Cologne, Germany

2022 –

Central European University

VISITING RESEARCHER

• Host: Marc Kaufmann

Vienna, Austria

03.2026

University of California Los Angeles (UCLA)

VISITING RESEARCHER

• Host: Nico Voigtländer

Los Angeles, USA

01.2025 - 04.2025

CREST/École Polytechnique

VISITING RESEARCHER

• Host: Pierre Boyer

Paris, France

10.2024 - 12.2024

University of Cologne

MASTER OF ECONOMIC RESEARCH (RANKED 1/12)

• Master Thesis

– *Title: "Electricity Market Responses to Carbon Pricing in Europe: Emission Avoidance and the Relocation of Emissions"*

Cologne, Germany

2019 - 2022

University of Cologne

BSc ECONOMICS

• Minor in Politics

• Dean's Award – *Awarded to the top 10% of students*

Cologne, Germany

2014 - 2018

Hitotsubashi University

STUDY ABROAD

Toyko, Japan

2017

References

Prof. Anna Bindler PhD

Crime Labor and Inequality Department
DIW Berlin and University of Potsdam
abindler@diw.de

Prof. Christopher Roth PhD

Department of Economics
University of Cologne
roth@wiso.uni-koeln.de

Prof. Dr. Felix Bierbrauer

Department of Economics
University of Cologne
bierbrauer@wiso.uni-koeln.de

Prof. Nico Voigtländer PhD

UCLA Anderson School of Management
University of California, Los Angeles
nico.v@anderson.ucla.edu

Working Papers

Inventors' Personal Experience of Natural Disasters and Green Innovation (with Lisa Keding)

We show that personal experiences affect high-stakes economic decisions among inventors. Using patent and survey data from French and German inventors linked to natural disaster records, we exploit exogenous variation in disaster exposure. Inventors who experience natural disasters produce 8.1% more green patents, mainly emission-reducing mitigation technologies, while non-green innovation remains unaffected. The absence of sizable spatial spillovers highlights the importance of personal experience. Disasters shape innovation by altering profitability expectations through shifting higher-order beliefs about consumer demand and anticipated regulation. Our model predicts, and the data confirm, that effects are strongest in competitive markets, where profit incentives matter most.

2024 Best Paper Award - Ivey-ARCS PhD Sustainability Academy

2025 YEP Doctoral Paper Award - ECONtribute (Universities Bonn & Cologne)

Work in Progress

Morals and the Political Economy of Carbon Taxes (with Felix Bierbrauer, Mattias Polborn and Georg Weizsäcker)

We study the political economy of carbon taxes in a model with neoclassical consumers who take prices and country-wide emissions as given and socially responsible consumers who internalize the effects of their actions on others. In equilibrium, the interaction of the two types can create a political tragedy of the commons: a larger share of socially responsible consumers implies a decrease in taxes and an increase of overall emissions. We also analyze how equilibria change if moral arguments take a more central role in societal discourse. Finally, we report on a survey that investigates how preferences over carbon taxes vary with consumption behavior and attitudes towards social responsibility.

Risk Denial & Meritocracy (with Melisa Kurtis)

This paper investigates whether individuals with strong meritocratic beliefs rationally downplay existential threats such as climate change, war, or civil unrest in order to sustain their motivation to exert effort. We develop a theoretical model linking meritocratic beliefs to risk denial and empirically test its implications using survey data. We find that individuals who more strongly endorse meritocracy are significantly more likely to discount future existential risks, particularly those related to climate change and geopolitical conflict. To identify causality, we propose a controlled laboratory experiment designed to explicitly test whether stronger beliefs in the returns to effort induce individuals to deny existential threats as a strategy to maintain motivation.

On the Equity-Efficiency-Tradeoff and the Social Cost of Carbon (with Felix Bierbrauer and Niklas Taft)

The key insight of this paper is that optimal carbon prices depend on society's welfare preferences. We characterize the Pareto frontier of optimal corrective taxation under the Atkinson-Stiglitz separability conditions in a model with green and brown goods. The carbon price takes the Pigouvian form at every point along the frontier and is uniform across types, but its level varies with welfare weights. Heterogeneous environmental preferences give the corrective tax a distributive role even in the separable case, contrary to the standard result that commodity taxes follow first-best principles independent of redistributive concerns. Extending the framework to a dynamic setting, we show that the same logic governs the timing of the green transition: the optimal switching time from brown to green production varies along the Pareto frontier, with planners who favor the environmentally less-concerned type delaying the transition. Existing social cost of carbon estimates are therefore implicitly conditioned on a distributional choice that is

never made explicit.

Conferences & Seminars (* scheduled, + invited)

2026 – **Central European University** (Vienna)

2025 – **UCLA Anderson** Internal Seminar (Los Angeles),

UC Berkeley Internal Seminar⁺ (Berkeley),

DIW Cluster Seminar (Berlin),

Maastricht University Interdisciplinary Brownbag Seminar of Behavioural Sciences⁺ (Maastricht),

AERE Summer Conference (New Mexico),

EAERE Conference (Bergen),

Collège de France, PSE, INSEAD Innovation Seminar⁺ (Paris),

EEA Conference (Bordeaux),

ESA European Meeting (Brno),

2024 – **Royal Economic Society Conference** (Belfast),

RGS Doctoral Conference (Essen),

EAERE Conference (Leuven),

EAERE Summer School on Data science in environmental economics research (Graz),

ZEW/MaCCI Conference on the Economics of Innovation and Patenting (Mannheim),

CREST/ENSAE Internal Applied Seminar (Paris)

Refereeing

Journal of the European Economic Association

Grants

2025 **C-SEB**, 3000€ - Funding for a research visit at UCLA

2024 **Joachim Herz Stiftung**, 12500€ - Add-on Fellowships for Interdisciplinary Economics and Interdisciplinary Business Administration

2022-2025 **ECONtribute**, 8600€ - Funding for various projects

Teaching

Spring 2022 - 2025 **Core Module Macroeconomics**, for the BSc Management, Economics and Social Sciences

Fall 2023 – **Thesis Supervision**, Master 2x

Fall 2022 – **Thesis Supervision**, Bachelor 16x

Fall 2016 **Statistics**, Teaching Assistant

2014 **English Teacher**, Suzhou Lanying (Blue Tassel) School - Suzhou China

Professional Service & Activities

2024 – 2026 **Internal Applied Lunch Seminar**, Co-Organizer

2022 – 2024 **ECONtribute Seminar**, Co-Organizer

Languages

German (native), English (fluent), French (advanced)

Programming

Proficient in: R, Python, SQL