

# Roweno J.R.K. Heijmans

This version: October 2020

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## Personal Details

Name: Roweno Johannes Ryan King Heijmans  
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## Education

2017/21 **Ph.D. Candidate, Economics**, Tilburg University, the Netherlands  
*Expected date of graduation: Summer 2021*

2017 **Research Master, Economics**, Tilburg University, the Netherlands

2015 **BSc, Economics**, Tilburg University, the Netherlands

## Research

### Job Market Papers

#### “SEQUENTIAL GLOBAL GAMES”

*Abstract:* Global games are incomplete information games where players receive private noisy signals about the true game played. In a sequential global game, the set of players is partitioned into subsets. Players within a subset (of the partition) play simultaneously but no two subsets move at the same time. The resulting sequence of stages introduces intricate dynamics not encountered in simultaneous move global games. We show that a sequential global game with strategic complementarities and binary actions has at least one equilibrium in increasing strategies. However, even with vanishing noise the general equilibrium uniqueness of one-shot global games breaks down: even a simple two-stage sequential global game does not generally have a unique equilibrium surviving iterated dominance. The reason is that the history of play may force players to believe that the true game is in fact “far away” from their signal – a possibility that does not arise in one-shot game and that is crucial in proving uniqueness. We present sufficient conditions for the sequential global game to have a unique equilibrium that survives iterated dominance.

#### “THE GLOBAL CLIMATE GAME”

*Abstract:* The present paper studies emissions abatement in a global game of technological investments. Players invest in competing technologies. One technology is cheap and dirty, the other expensive but green. Technological investments are strategic complements. While such games typically have multiple equilibria, uncertainty about the green technology’s true potential leads to selection of a unique equilibrium. Applied to international environmental agreements, the model yields sharp predictions on when a treaty targeting abatement technologies gets ratified. Under well-identified conditions, countries adopt the dirty technology even though that is inefficient. In a two-stage version of the game, I study the incentive to cooperate on green R&D prior to signing an international agreement. When used to inform domestic policy, the model suggests a novel policy of network subsidies. A network subsidy virtually guarantees efficient adoption of the green technology but is not, in equilibrium, paid out.

## Publications in peer-reviewed journals

- “CLIMATE-CONSCIOUS CONSUMERS AND THE BUY, BANK, BURN PROGRAM”, with Reyer Gerlagh. *Nature Climate Change*, 2019.  
The buy, bank, burn scheme we propose in this paper is being implemented by three NGOs: ForTomorrow, Compensators, and CAP<sub>2</sub>.
- “COVID-19 TESTS THE MARKET STABILITY RESERVE”, with Reyer Gerlagh and Knut Einar Rosendahl. *Environmental and Resource Economics*, 2020.

## Working Papers

- “AN ENDOGENOUS EMISSION CAP PRODUCES A GREEN PARADOX”, with Reyer Gerlagh and Knut Einar Rosendahl. Conditionally accepted at *Economic Policy*
- “REGULATING STOCK EXTERNALITIES”, with Reyer Gerlagh. Submitted.
- “EFFICIENT EPIDEMICS: CONTAGION, CONTROL, AND COOPERATION IN A GLOBAL GAME”, with Ana Moura. Submitted.
- “LINKING CAP-AND-TRADE SCHEMES UNDER ASYMMETRIC UNCERTAINTY”, with Reyer Gerlagh

## Work in Progress

- “ENDOGENOUS EMISSION CAPS ALWAYS PRODUCE A GREEN PARADOX”, with Reyer Gerlagh and Knut Einar Rosendahl.

## Book Chapters

Gerlagh, R., Heijmans, R.J.R.K., & Mayumi, K. T. (2019). 5 Can the social cost of carbon be calculated? Contemporary Climate Change Debates: A Student Primer, 65.

## Policy Reports (in Dutch)

Van Damme, E.E.C., Gerlagh, R., Heijmans, R.J.R.K., & Willems, B.J. (2018). Veilen of vergelijken voor het winnen van windenergie op zee?

Policy report written on request of the Dutch Ministry of Agriculture, Nature and Food Quality regarding the question how the rights to build windmill parks on the North Sea are most efficiently allocated.

## Academic talks

### Conferences

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| 2020 | SURED (Ascona, Switzerland); European Economic Association Annual Meeting (Berlin, Germany); Econometric Society World Congress (Milan, Italy); Conference of the Spanish-Portuguese Association of Resource and Environmental Economics (Lleida, Spain – moved to 2020); European Association of Environmental and Resource Economists Annual Meeting (Berlin, Germany); Koninklijke Vereniging voor Staatshuishoudkunde New Paper Session (Leiden, the Netherlands); Autumn panel meeting on the economics of climate change (Berlin, Germany – organized by Economic Policy and CEPR) |
| 2019 | European Economic Association Annual Meeting (Manchester, United Kingdom); European Association of Environmental and Resource Economists Annual Meeting (Manchester, UK); CREE Workshop (Statistics Norway, Oslo, Norway); UECE Lisbon Meetings in Game Theory and Applications (Lisbon, Portugal); International Energy Workshop (IEA, Paris, France); Energy & Climate Conference (Toulouse, France)   |

- 2018 SURED (Ascona, Switzerland); World Meeting of Environmental and Resource Economists (Gothenburg, Sweden); European Economic Association Annual Meeting (Cologne, Germany); CREE Workshop (Statistics Norway, Oslo, Norway); UECE Lisbon Meetings in Game Theory and Applications (Lisbon, Portugal); Nederlandse Economendag/Dutch Economists Day (Amsterdam, the Netherlands)

## Seminars

- 2020 Tilburg University; Nova SBE Health Economics & Management Knowledge Center, Lisbon, Portugal; Universidad del Rosario, Bogota, Colombia
- 2019 Nederlandse Emissieautoriteit (Dutch emissions authority)
- 2017 Tilburg University; CPB Netherlands Bureau for Economic Policy Analysis

## Awards & Honors

- 2015 Tilburg University Excellence Scholarship
- 2019 Scholarship from the Spanish-Portuguese Association of Resource and Environmental Economics to present my job market paper at their conference.
- 2016 CentER Honors Program, CentER, Tilburg University
- 2015 Honors Program “Discourses on Europe”, Tilburg University

## Teaching Experience

- Teaching Assistant**, Tilburg University, the Netherlands
- 2019/20 BSc thesis supervision, Grondslagen macro-economie (undergraduate macro, in Dutch), Micro-economics 2: Game Theory (research master).
- Teaching Assistant**, Tilburg University, the Netherlands
- 2018/19 BSc thesis supervision, Grondslagen macro-economie (BSc macro, in Dutch), Economics for Social Sciences (BSc).
- Teaching Assistant**, Tilburg University, the Netherlands
- 2017/18 MSc thesis supervision, Grondslagen macro-economie (BSc macro, in Dutch), Macroeconomics for EOR (BSc).

## Employment

- 2014 **Intern, De Nederlandsche Bank**, Amsterdam

## Professional Activities

**Refereeing:** Resource and Energy Economics, Annals of Economics and Statistics

**Conferences:** Reviewer for the Spring Meeting of Young Economists (24th and 25th edition)

**Organizational:** Member of the Education Committee, Tilburg University, 2015-2017

## Skills

**Computer:** L<sup>A</sup>T<sub>E</sub>X, Matlab, Python (beginner)

**Languages:** Dutch (native), English (fluent), German (intermediate), Portuguese (beginner).

## References

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