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Contact Information

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Undergraduate Studies

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|---|------|
| Master of Science, Economics (Research Track), University of Mannheim | 2021 |
| Bachelor of Science, Economics (Minor in Mathematics), University of Mannheim | 2019 |

Graduate Studies

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| University of Mannheim Ph.D. Candidate in Economics Thesis Title: Essays in Environmental Economics Expected Completion Date: July 2025 | 2019 to present |
| University of Pennsylvania, The Wharton School Visiting PhD Student, Invited by Arthur van Benthem | Fall 2023 |

References

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| Professor Ulrich J. Wagner, PhD Dept. of Economics, University of Mannheim wagner@vwl.uni-mannheim.de +49 621 181-1420 | Professor Dr. Bernhard Ganglmair Dept. of Economics, University of Mannheim ganglmair@uni-mannheim.de +49 621 1235 304 |
| Professor Arthur van Benthem, PhD Dept. of Business Economics and Public Policy The Wharton School, University of Pennsylvania arthurv@wharton.upenn.edu +1 (215) 898-3013 | Professor Laura Grigolon, PhD Dept. of Economics, University of Mannheim lgrigolo@mail.uni-mannheim.de +49 621 181-1913 |

Research and Teaching Fields

Environmental Economics, Applied Microeconomics, Innovation Economics, Transportation

Relevant Professional Experience

Teaching Experience

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| E600 Mathematics (Preparatory Course, Master), Uni Mannheim, Instructor | Fall 2024 |
| E600 Mathematics (Preparatory Course, Master), Uni Mannheim, Instructor | Fall 2023 |
| E603 Advanced Econometrics (Master), Uni Mannheim, TA for Prof. Frölich | Fall 2022 |
| Principles in Economics (Bachelor), Uni Mannheim, TA for Dr. Habermalz | Fall 2021 |
| Linear Algebra 1 (Bachelor), Uni Mannheim, TA for Prof. Boecherer | Fall 2017 |

Research Experience

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| RWI - Leibniz-Institute for Economic Research e.V., RA | 07/22 - 08/23 |
| Institute of Energy Economics gGmbH, University of Cologne, Intern | 07/20 - 08/20 |
| ZEW - Leibniz-Centre for European Economic Research GmbH, RA | Spring 2019, Spring 2020 |

Scholarships

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| Research Grant for Doctoral Students, German Academic Exchange Service (DAAD) | 09/23 - 11/23 |
| Scholarship, Graduate School of Economic and Social Sciences, Uni Mannheim | 09/20 - 08/21 |

Publications

Can Social Comparisons and Moral Appeals Encourage Low-Emission Transport Use?

(with Wolfgang Habla and Ulrich Wagner) *Transportation Research Part D: Transport and Environment*, Volume 133, 2024

Research Papers

Shifting Gears: Environmental Regulation in the Car Industry and Technological Change Among Suppliers (Job Market Paper)

Abstract: Decarbonizing industries to mitigate climate change requires technological change. Innovation by suppliers can play a crucial role for the technological transition, particularly when suppliers have expertise on zero-emission technologies. In this paper, I study the effect of environmental regulation in a downstream industry on the innovation outcomes of suppliers in the context of the European CO₂ emission standard for passenger cars. I construct a novel data set that links administrative data on car manufacturer compliance to supplier patent data using information on automotive supply chains. To identify causal effects of changes in the stringency of the emission standard, I leverage the heterogeneous exposure of automotive suppliers to changes in the composition of the European car market in the aftermath of the 2015 Volkswagen diesel scandal. I find that exposure to more stringent environmental regulation increases innovation for zero-emission vehicle technologies among existing suppliers. In addition, the likelihood that car manufacturers form new supply chain links to firms with prior knowledge on technologies to reduce vehicle emissions increases in response to more stringent environmental regulation. These results suggest that environmental regulation induces economically significant technology spillovers to the regulated industry.

No Place Like Home: Charging Infrastructure and the Environmental Advantage of Plug-in Hybrid Electric Vehicles (with Benjamin Rübenacker, Wolfgang Habla and Ulrich Wagner)

Abstract: Many European companies operating company car fleets face the challenge of lowering CO₂ emissions from their fleets. A particularly large lever in this regard exists for Plug-in Hybrid Electric Vehicles (PHEVs), as those can be run on fuel or electricity and often exhibit low electric driving shares. This paper examines the effects of a large German company installing charging stations at their employees' homes. Leveraging quasi-experimental variation in the delivery and installation of home chargers, we quantify the impact of this technology on energy use and CO₂ emissions of 856 PHEV company cars. As fuel and electricity expenditures for these cars are covered by the employer, home charging mainly changes the non-monetary costs to an employee. We find that access to home charging increases electricity consumption by 317.9 (± 23.3) kWh per quarter and decreases fuel consumption by 97.97 (± 36.5) liters, reducing CO₂ emissions by 38 %. Moreover, access to home charging increases the employee's propensity to choose a Battery Electric Vehicle (BEV) upon renewal of the lease by 30 %-points. We use these estimates to compute private levelized abatement costs of home chargers for a range of scenarios characterizing the diffusion of BEVs. With current tax-inclusive energy prices, home chargers break even for the company within eight to 16 years.

Work in Progress

The Alignment Effect of Auditing: Evidence from Energy Efficiency Retrofits

(with Andreas Gerster and Michael Kramm)

Presentations

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| 2024 | 29th EAERE Annual Conference, AERE 2024 Summer Conference, 12th Mannheim Conference on Energy and the Environment, AURÓ Young Researchers Workshop, 13th CRC TR 224 Workshop for Young Researchers, University of Mannheim |
| 2023 | University of Pennsylvania, Yale School of the Environment, University of Mannheim |
| 2022 | 27th EAERE Annual Conference, 10th Mannheim Conference on Energy and the Environment, University of Mannheim, University of Heidelberg |

Citizenship: German

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