

Summary

I am an economist, passionate about technological change, especially in the context of climate change and digitization. My research builds on quantitative empirical and theoretical methods, often leveraging large-scale data and computational tools. I also gathered experience in qualitative and conceptual research, which are powerful when exploring the unknown areas of technological change and novelty.

Employment

- Sep 2024 – **Assistant Professor of Ecological Economics**, *Kedge Business School, Paris*, Department of Accounting, Economics & Finance
- 2022–2024 **Post-doctoral Research Associate**, *The Alan Turing Institute, London*, Finance & Economics Programme, Economic Networks and Transactions
- 2020–2022 **Post-doctoral Researcher**, *University of Oxford*, Oxford Martin School, Programme on Technological and Economic Change

Professional Affiliations

Current

- Oct 2022 – **Oxford Martin Fellow**, *University of Oxford*, Programme on Technological and Economic Change

Previous

- 2021–2024 **Associate Research Fellow**, *University of Oxford*, Institute for New Economic Thinking (INET)
- 2023–2024 **Secondment**, *Office for National Statistics, UK*, Data Science Campus
- 2022–2024 **Academic Visitor**, *University of Oxford*, INET, Host: Prof. Dr. Doyne Farmer
- 2021–2023 **Associate Researcher**, *Bielefeld University*, Economic Theory and Computational Economics
- 2020 **Visiting PhD student**, *University of Oxford*, INET, Hosts: Dr. François Lafond, Dr. Anton Pichler
- 2017–2018 **Visiting PhD student**, *Paris-1 Sorbonne-Panthéon*, Host: Prof. Dr. Antoine Mandel

Education

- 2016–2020 **Ph.D. in Economics**, *Bielefeld University, Germany & Sorbonne Paris-1, France*, Supervisors: Prof. Dr. Herbert Dawid, Prof. Dr. Antoine Mandel
- 2013–2016 **M.Sc. in Agricultural and Food Economics**, *University of Bonn, Germany*
- 2013–2009 **B.Sc. in International Economics & South East Asian Studies**, *University of Tübingen, Germany*

Work experience

Academic consulting

- 2022 **Gesellschaft für International Zusammenarbeit (GIZ)/German Ministry of Development**, Study: IPR, climate technology & development, Project lead.
- 2022 **Foundation for European Progressive Studies**, Policy brief: Climate & digital policy
- 2021 **Green Legacy**, Consulting for a start-up in corporate renewable energy finance

Teaching & research assistance

- 2020–2022 **College Advisor**, *St Antony's College at the University of Oxford*
2014–2015 **Student assistant**, *University of Cologne*, Cologne Laboratory of Economic Research
2012–2013 **Teaching assistant**, *University of Tübingen*, Microeconomics & Public Finance

Internships

- 2013 **3 months internship**, *European Parliament*, Brussels, Committee on Economic and Monetary Affairs
2011 **1 month internship**, *Wuppertal Institute*, Wuppertal

Grants and Scholarships

Project

- 2022 GIZ/German Federal Ministry of Development, tendered study, project lead (€ 52,000)

Other

- 2020, 2022 Event grants by the Institute for New Economic Thinking (\$4,000-5,000)

Personal

- 2019–2020 Full PhD scholarship by the German Research Foundation through Bielefeld University (€ 19,500)
2019 Mobility grant by the Bielefeld Graduate School for Theoretical Sciences (€ 3,000)
2018–2020 Grant by the Deutsch-Französische Hochschule (German-French University) (€ 12,200)
2016–19 Full PhD scholarship by the German National Academic Foundation (€ 56,500)

Engagement

Reviewing & editorship

- Reviewing Research Policy, Nature Communications, Journal of Environmental Economics and Management, Applied Economics, Energy Economics, Economic Inquiry, Journal of Economic Interaction and Coordination, Environmental Innovations and Societal Transitions, Technological Forecasting and Social Change
Editorship Associate editor of the Journal of Mathematical Economics (2023-2024), Guest editor of a Special Issue in Review of Evolutionary Political Economy (2023-2024), Guest editor of a Special Issue in Frontiers in Environmental Economics (since 2024)

Workshop & seminar organization

- 2025– **Kedge Business School**, *Interdisciplinary research jamboree*, Paris Campus, quarterly
2025– **Kedge Business School**, *Payment data research seminar series*, online, bimonthly
2020–2023 **Network for Pluralist Economics**, *Scientific Workshop of the German Alumni Network for Pluralist Economics*, Bielefeld & Bamberg University, annually
2018–2019 **BiGSEM Workshop**, *BiGSEM Doctoral Workshop on Economic Theory*, Bielefeld University

Other volunteering

- 2018– **Editor for exploring-economics.org**, Online teaching and learning platform for economics
2012– **Network for Pluralist Economics**, *Young scholar initiative for pluralism in economics*
2010–2016 **Student Organization**, *oikos International*, Network for sustainability in economics and management
2008–2009 **Voluntary Year of Social Service**, France

Awards, Certifications & Miscellaneous

- 2022 William Kapp Prize for the best publication, European Association for Evolutionary Political Economy
2016–2020 European Doctorate in Economics Erasmus Mundus
2013 Certification Studium Oecologicum, Qualification in Sustainable Development
2013 Studium Professionale Group Award, University of Tübingen

Publications

Journal articles

- 2025 Hötte, K., Tarannum, T., Verendel, V., Bennett, L., "Measuring artificial intelligence: a systematic assessment and implications for governance", **Industrial and Corporate Change** [forthcoming]
- 2025 Hötte, K., "Mapping the disaggregated economy in real-time: using granular payment network data to complement national accounts", **Economic Systems Research**, Vol. 37, Issue 3, doi:10.1080/09535314.2025.2518944
- 2024 Schulz, J., Hötte, K., Mayerhoffer, D., "Pluralist economics in an era of polycrisis", **Review of Evolutionary Political Economy**, Editotial, doi:10.1007/s43253-024-00128-y
- 2024 Hötte, K., Theodorakopoulos, A., Koutroumpis, P., "Automation and Taxation.", **Oxford Economic Papers**, gpae006, doi:10.1093/oep/gpae006
- 2023 Hötte, K., Somers, M., Theodorakopoulos, A., "Technology and jobs: A systematic literature review", **Technological Forecasting and Social Change**, Vol. 194, doi:10.1016/j.techfore.2023.122750
- 2023 Hötte, K., "Demand-pull, technology-push, and the direction of technological change", **Research Policy**, Vol. 52, Issue 5, doi:10.1016/j.respol.2023.104740
- 2022 Hötte, K., Jee, S.J., "Knowledge for a warmer world: a patent analysis of climate change adaptation technologies", **Technological Forecasting and Social Change**, Vol. 138, doi:10.1016/j.techfore.2022.121879
- 2021 Hötte, K., Pichler, A., Lafond, F., "The rise of science in low-carbon energy technologies", **Renewable and Sustainable Energy Reviews**, Vol. 139, doi:10.1016/j.rser.2020.110654
- 2021 Hötte, K., "Skill transferability and the stability of transition pathways- A learning-based explanation for patterns of diffusion", **Journal of Evolutionary Economics** 31(3), doi:10.1007/s00191-020-00710-7
- 2020 Hötte, K., "The economics of transition pathways: A proposed taxonomy and a policy experiment", **Environmental Innovation and Societal Transitions**, Vol. 36, doi: 10.1016/j.eist.2020.05.001
- 2020 Hötte, K., "How to accelerate green technology diffusion? Directed technological change in the presence of coevolving absorptive capacity.", **Energy Economics**, Vol. 85, doi: 10.1016/j.eneco.2019.104565

Under review

- 2025 Barbieri, N., Hötte, K., Persoon, P., "The evolving boundary of green technologies", preprint arXiv:2503.21310.
- 2024 Jee, S.J., Hötte, K., "From catch-up to frontier: The utility model as a learning device to escape the middle-income trap", preprint arXiv:2408.14205. **[Revise & resubmit, Research Policy]**
- 2024 Hötte, K., Mantziou, A., Cucuringu, M., Reinert, G., "Economic nowcasting with large-scale inter-industry payment data using a network approach", preprint arXiv:2411.02029. **[Revise & resubmit, Journal of the Royal Statistical Society: Series A]**
- 2023 Jee, S.J., Hötte, K., Ring, C., Burrell, R., "Making intellectual property rights work for climate technology transfer and innovation in developing countries", preprint arXiv:2408.12338v1.

Work in progress

- 2025 Barbieri, N. Hötte, K., "Reclassifications and the diffusion of codified knowledge".
- 2025 Hötte, K., Mundt, P., "Dissecting inflation in large-scale payment network data".
- 2025 Jee, S.J., Hötte, K., "The architecture of global value Chains and technological transition dynamics: an application to sustainable mobility".
- 2022 Hötte, K., Leusin, M., Wendler, T., "Climate risk disclosure & firm level innovation strategies".

PhD Thesis

- 2020 Hötte, K. "Facilitation of change: Macroeconomic studies of technology transitions.", Bielefeld University. doi: 10.4119/unibi/2946054

Technical reports

- 2025 Hötte, K. "Revisiting Hötte (2025): A Companion Analysis with Extended Evidence from UK Inter-Industry Payment Data, 2017-2024", arXiv preprint arXiv:2508.17695.
- 2019 Hötte, K. "Eurace@unibi-eco: A model for technology transitions. v1.1, Model documentation", *Bielefeld Working Papers in Economics and Management* No. 08-2019, doi: 10.2139/ssrn.3403510.

Policy briefs

- 2023 Hötte, K. "Climate Mainstreaming: Climate and digital policy", FEPS Policy Brief published in 'Climate mainstreaming: Breaking down the silos' series
- 2021 Hötte, K., Theodorakopoulos, A., "Technequality Policy Brief 4: Taxing robots?", EU Horizon 2020 Deliverable, www.technequality-project.eu

Other published work

- 2021 Hötte, K., Theodorakopoulos, A., "Technequality Paper 2021/15: Which governments will be most affected by automation?", EU Horizon 2020 Deliverable, www.technequality-project.eu
- 2019 Hötte, K., "Economists for future: A new agenda for Climate Economics", EAEPE - YSI Special Session Paper: Breaking walls - political economy, regional divergences, cross-disciplinary responses. Legacies and contemporary challenges, EAEPE Conference, Warsaw.
- 2016 Hötte, K., "Testing for a double dividend: Can revenue-neutral carbon taxes be used to reduce pre-existing tax distortions?", Master thesis, doi: 10.13140/RG.2.2.23260.85127
- 2012 Albrecht, A. M., Beck, A., Hager, K., Hötte, K., Henschke, J., Selinger, M., and Walch, S., "Nachhaltige Mobilität in Baden-Württemberg".

Research data & code

- 2023 Hötte, K. "Data publication: Demand-pull, technology-push, and the direction of technological change.", Bielefeld University. doi: 10.4119/unibi/2967659
- 2021 Hötte, K., Jee, S.J., Srivastav, S. "Data publication: Knowledge for a warmer world: a patent analysis of climate change adaptation technologies.", Bielefeld University. doi: 10.4119/unibi/2958327
- 2020 Hötte, K., Pichler, A., Lafond, F., "Data Publication: The scientific knowledge base of low carbon energy technologies", Bielefeld University. doi: 10.4119/unibi/2941555
- 2019 Hötte, K. "Data publication for: Skill transferability and the adoption of new technology", Bielefeld University. doi: 10.4119/unibi/2935425
- 2019 Hötte, K. "Data publication for: How to accelerate green technology diffusion? An agent-based approach to directed technological change with coevolving absorptive capacity", Bielefeld University. doi: 10.4119/unibi/2932844

Conferences, workshops, summer schools

Conference talks

- 2025 DGStat Statistical Week, Deutsche Gesellschaft für Statistik & destatis
- 2025,2024,2019 Workshop on Economic Science with Heterogeneous Interacting Agents
- 2025, 2022 Munich Summer Institute, Max Planck Institute, ETH Zurich, Munich, Germany
- 2023–2025 Economic Statistics Centre of Excellence conference on economic measurement, UK
- 2019-2024 European Association for Evolutionary Political Economy Conference
- 2024 Public Data for Social, Economic, & Environmental Development, Scottish University Insight Institute
- 2023, 2018 Computing in Economics and Finance, Society of Computational Economics
- 2022 Forum Innovation 2022, Research Network Innovation, Bruges, Belgium
- 2021 Technequality Scientific Conference, EU Horizon 2020 Project Conference, Online
- 2021 Accelerating climate action: A just transition in a post-Covid era, 10th SISC Conference, Online
- 2021 18th ISS Conference: Schumpeterian Perspectives on Radical Change, Online

- 2020 ClimRisk2020: Raising the ambition of climate action, 9th SISC Conference, Online
- 2019 New Analytical Tools and Techniques for Economic Policy Making (NAEC), OECD, Paris, France
- 2019 12th RGS Doctoral Conference in Economics, Ruhr Graduate School, Bochum, Germany

Workshop presentations & invited talks (selection)

- 2025 Invited seminar talk at the Technical University of Chemnitz
- 2024 Eco-innovation Society Workshop, HEC, Paris
- 2024 4th Workshop on Time Series Analysis for Official Statistics, OECD & INSEE, Paris
- 2017-2024 German Network for New Economic Dynamics (GENED), Annual meeting
- 2020-2024 Complexity research seminar, Institute of New Economic Thinking, University of Oxford
- 2023 Invited seminar talks at Catholic University of Milan, University of Glasgow
- 2020 Invited seminar talk, Institute for Socio-Economics, University Duisburg-Essen
- 2018 Energy Innovation Academy, Florence School of Regulation & INET Young Scholar Initiative, Italy
- 2018 Doctorissimes, Doctoral School of Economics, Paris-1, Sorbonne-Pantheon, France
- 2017 Agent-based Modeling of Environmental Challenges & Climate Policy Workshop, Hamburg, Germany
- 2016 Agent-based Modelling in Ecological Economics, ESCP Europe Business School Berlin, Germany

Summer schools

- 2018 Summer school on Complexity and Emergence, Lake Como School of Advanced Studies, Como, Italy
- 2017 FFM International Keynesian summer school, Macroeconomic Policy Institute (IMK), Berlin, Germany
- 2017 EAERE Summer School, Venice International University, Italy
- 2016 Applied Stock-Flow consistent Macro-modelling, Kingston University, London, UK

References

Prof. Dr. Samuel Fankhauser; Professor of Climate Economics and Policy Smith School of the Enterprise and the Environment, *University of Oxford*; sam.fankhauser@ouce.ox.ac.uk

Prof. Dr. Antoine Mandel; Professor of Applied Mathematics, *Paris-1 Sorbonne Pantheon and Paris School of Economics*; antoine.mandel@univ-paris.fr

Dr. Francois Lafond; Deputy Director of Complexity Economics, Institute for New Economic Thinking, *University of Oxford*; francois.lafond@inet.ox.ac.uk

Prof. Dr. Herbert Dawid; Professor of Computational Economics and Economic Theory, *University of Bielefeld*; hdawid@uni-bielefeld.de

Prof. Dr. Ian Goldin; Professor of Globalisation and Development, *University of Oxford*; ian.goldin@oxfordmartin.ox.ac.uk

Ass. Prof. Dr. Angelos Theodorakopoulos; Lecturer in Economics, Economics, Finance and Entrepreneurship Group, *Aston Business School*; a.theodorakopoulos2@aston.ac.uk

Further qualifications

Computer skills

- Advanced R, Python, C, \LaTeX , Linux
- Basic Natural Language Processing in Python, GAMS

Languages

German (mother tongue), English, French, Russian, Hindi, Ancient Greek and Latin

Other Interests

Marathon running, painting