

Dr Moritz P. Schwarz

Curriculum Vitae

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Professional Experience

Einstein International Postdoctoral Fellow, Potsdam Institute for Climate Impact Research (PIK) & TU Berlin, Germany. 2023–

- Research: econometric policy evaluation; macroeconomic forecasting (OSEM); climate damage estimation.
- Teaching: PhD *Causal Inference*; contributions to MSc/BSc Environmental Economics.
- Part-time due to concurrent Ministry of Finance role.

Senior Climate Economist, Federal Ministry of Finance, Austria. 2021–

- Leading role in green budgeting framework and economic analysis; produced Austria's first empirical marginal abatement cost curve; macro-forecasting.
- EU Issue Lead on Long-Term Finance (UNFCCC); CBAM negotiation coordinator; negotiator on domestic climate law.

Associate, University of Victoria, Canada. 2023–2025

SSHRC grant on extreme weather impacts in developing countries

Associate, UNIVERSITY OF OXFORD, UK. 2023 –

Institute for New Economic Thinking.

External Adviser, MCKINSEY & Co., UK/USA. Summer 2021

Research Consultant, COLUMBIA UNIVERSITY, NEW YORK, USA. 2020–2021

Researcher / Associate, Climate Econometrics, Univ. of Oxford, UK. 2017–

Roles over time: Research Assistant, Doctoral Researcher, Associate Researcher (current).

Austrian EU Presidency Coordinator, 2017 – 2019

FEDERAL MINISTRY OF SUSTAINABILITY AND TOURISM, Austria.

Education

DPhil (PhD), University of Oxford, UK. 2019–2023

Dissertation: *What Actually Happened? Novel Econometric Methods to Improve Estimates of Climate Impacts and Policies*.

Supervisors: Prof Sir David Hendry, Prof Cameron Hepburn. Clarendon Scholar.

Affiliated with Climate Econometrics at Nuffield College and INET Oxford.

MSc, University of Oxford, UK. 2016–2017

Environmental Change & Management. Graduated with Distinction.

BSc, London School of Economics, UK. 2013–2016

Environmental Policy with Economics. First Class Honours.

Research Interests

Environmental economics; causal and reverse causal policy evaluation; time-series and panel econometrics; macro-forecasting; climate & biodiversity policy.

References

Prof Sir David Hendry — Nuffield College, Oxford david.hendry@nuffield.ox.ac.uk

Prof Cameron Hepburn — University of Oxford cameron.hepburn@smithschool.ox.ac.uk

Prof Felix Pretis — University of Victoria fpretis@uvic.ca

Prof Linus Mattauch — TU Berlin linus.mattauch@tu-berlin.de

Research and Publications

Job Market Paper

JMP

Pretis, F., and **Schwarz, M.** (Working Paper). Discovering what mattered: Answering reverse causal questions by detecting unknown treatment assignment and timing as breaks in panel models. In preparation for submission to *The Econometrics Journal*

Peer-review (incl. R&R)

Schwarz, M., Kurle, J., Pretis, F., Martinez, A., and Harper, G. (R&R at *International Journal of Forecasting*). An Open-Source Empirical Macro (OSEM) Model for Economic and Emission Forecasting.

2024

Mark, E., Rafaty, R., and **Schwarz, M.** (2024). Spatial-temporal dynamics of employment shocks in declining coal mining regions and potentialities of the 'just transition'. *Energy Policy* **195**: 114338.

2024

Stechemesser, A., Koch, N., Mark, E., Pretis, F., Ritter, N., **Schwarz, M.**, et al. (2024). Climate policies that achieved major emission reductions: Global evidence from two decades. *Science* **385**(6711): 884–892.

Selected media coverage: NYT, FT, CNN, WSJ, Economist, Le Monde, Spiegel, ORF.

2024

Jiao, X., Pretis, F., and **Schwarz, M.** (2024). Testing for Coefficient Distortion due to Outliers with an Application to the Economic Impacts of Climate Change. *Journal of Econometrics* **239**(1).

2023

Thalheimer, L., **Schwarz, M.**, and Pretis, F. (2023). Large weather and conflict effects on internal displacement in Somalia with little evidence of feedback onto conflict. *Global Environmental Change*.

2022

Koch, N., Naumann, L., Pretis, F., Ritter, N., and **Schwarz, M.** (2022). Attributing agnostically detected large reductions in road CO₂ emissions to policy mixes. *Nature Energy* **7**: 844–853.

Selected media coverage: FT Sustainable Views, ORF, DER STANDARD, Salzburger Nachrichten.

2022

Scheer, A., Hopkins, D., **Schwarz, M.**, and Caldecott, B. (2022). Stranded labour in Alberta, Canada: A mixed methods study on the employment impacts of oil price in a resource-rich province. *Climate Policy* **22**(8): 1016–1032.

2022

Benoit, P., Clarke, A., **Schwarz, M.**, and Dibley, A. (2022). Decarbonization in state-owned power companies: Lessons from a comparative analysis. *Journal of Cleaner Production* **355**: 131796.

2020

Cohen, F., **Schwarz, M.**, Li, S., Lu, Y., and Jani, A. (2020). The challenge of using epidemiological case count data: The example of confirmed COVID-19 cases and the weather. *Environmental and Resource Economics: Perspectives*.

2018

Pretis, F., **Schwarz, M.**, Tang, K., Haustein, K., and Allen, M. R. (2018). Uncertain impacts on economic growth when stabilizing global temperatures at 1.5°C or 2°C warming. *Philosophical Transactions of the Royal Society A* **376**(2119): 20160460.

Selected media coverage: Carbon Brief, The Independent, Daily Mail, El Pais

Working Papers & Ongoing Research

Schöngart, S., **Schwarz, M.**, Schwaab, J., Pretis, F., Pfeleiderer, P., and Schleußner, C.-F. (Working Paper). Temporary warming, lasting losses: Economic damages from climate overshoot may be irreversible within this century.

Schwarz, M., and Pretis, F. (Working Paper). An empirical climate damage function accounting for climate extremes and adaptation. SSRN 4022690.

Schwarz, M. statIAM: Building a statistical emulator for Integrated Assessment Models.

Policy Papers and Reports

2025

Delgado, J., and **Schwarz, M.** (2025). Rückblick auf die 29. Weltklimakonferenz (COP29). *RWK – Reporting und Wirtschaft kompakt* 1/2025. Linde Verlag.

2025

Castle, J., Mark, E., Hendry, D. F., **Schwarz, M.**, and Pretis, F. (2025). Net zero: Strategy and tactics. *Newsletter of the Royal Economic Society*, Issue 208.

2024

Delgado, J., Haider, K., Lamprecht-Pühra, I., and **Schwarz, M.** (2024). Tracking von Klima- und Umweltschutzauszahlungen – der Bundesansatz. *SWK – Steuer und Wirtschaftskartei* 99(6). Linde Verlag.

2022

Schwarz, M., Benoit, P., and Clark, A. (2022). Decarbonising state-owned power companies: A framework for applying policy actions. Smith School Working Paper No. 23-01.

2020

Cohen, F., Ives, M., Srivastav, S., **Schwarz, M.**, Lu, Y., Mealy, P., Bento Maffei De Souza, P., Jackson, P., and Hepburn, C. (2020). Emerging markets and self-interested climate action. A report prepared for Pictet AM by the Oxford Smith School of Enterprise and the Environment.

2020

Hepburn, C., and **Schwarz, M.** (2020). Climate change: Answers to common questions. Oxford Smith School of Enterprise and the Environment. A report prepared for Pictet AM.

2019

Mattauch, L., Creutzig, F., Franks, M., Funke, F., Jakob, M., Sager, L., **Schwarz, M.**, et al. (2019). Antworten auf zentrale Fragen zur Einführung von CO₂-Preisen. *Diskussionsbeiträge der Scientists for Future* 2: 10.5281/zenodo.3371150.

2017

Mattauch, L., Roesti, M., **Schwarz, M.**, and Siegmeier, J. (2017). Wirtschaftswachstum und Klimawandel: Chancen und Herausforderungen auf dem Weg zur klimafreundlichen Gesellschaft. *Wirtschaftspolitische Blätter* 3/2017.

Awards & Grants

2024: Best Paper Award for Junior Scholars, TU Berlin (Faculty VII).

2023: Einstein International Postdoctoral Fellowship, TU Berlin (~EUR 339k).

2023: British Academy Postdoctoral Fellowship offer (GBP 342k) – declined in favor of Einstein Fellowship.

2021: Insight Development Grant (Canada), co-recipient (CAD 60k).

2019–2023: Clarendon Scholarship, University of Oxford (~GBP 100k).

2017: ECI MSc Prize for Top Overall Performance & Best Dissertation, University of Oxford.

2016: George & Hilda Ormsby Prize (Best Undergraduate Dissertation), LSE.

Teaching

TU Berlin: Lecturer: Causal Inference (PhD level; design & instruction). Contributed to Environmental Economics teaching (MSc/BSc level).

Co-supervision of two BSc theses and one MSc thesis.

University of Oxford: Lecturer: "New Environmental Economic Thinking" (MSc);

TA: Environmental Economics (MSc), Quantitative Methods (MPhil).

Co-supervision of two MSc thesis (both were subsequently published).

University of Nottingham: Designed & delivered R/tidyverse econometrics training (multi-day).

Policy & Outreach (selected)

Domestic Policy: Green budgeting, empirical MAC curve development, macro-forecasting. Research results featured in Austrian National Energy and Climate Plan. Policy exchanges with institutions like incl. German Chancellery, MoF and Economics Ministry; Austrian Environment Agency; Climate Neutrality Forum (Brussels).

EU/UNFCCC: Issue Lead for Long-Term Finance; CBAM technical coordinator for negotiations.

Coalition of Finance Ministers for Climate Action: Report on effectiveness of climate policies using results from the Science paper. Participation in the Green Macro Modelling Initiative with OSEM to improve policy modelling for policy-makers.

IPCC citations: Research prominently featured in SR1.5 and AR6.

Media: Coverage in major international outlets for multiple papers.

Presentations (selected)

Conferences: EAERE (various years); Dynamic Econometrics; VfS; IIPF; Int. Symposium on Forecasting; EGU (various years); Econometric Models of Climate Change (various years); NOeG (various years).

Invited Economics Seminars: CEU Vienna; IIEEE Lund; University of Turin.

Languages

German (native); English (C2); French (conversational).