Paul Haimerl

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Research Interests

- Time series econometrics, climate econometrics, statistical learning.

Education

Ph.D. in Economics (Econometrics), *Aarhus University, Department of Economics and Business Economics* — Sept 2024 – Aug 2027

- Supervision: Eric Hillebrand and Morten Ørregaard Nielsen.
- Member of the Center for Research in Energy: Economics and Markets (CoRE).

Visiting researcher, *University of Oxford, Department of Economics* — Jan 2026 – Mar 2026

- Hosted by Sophocles Mavroeidis and James Duffy.

M.Sc. in Economic and Financial Research spec. Econometrics, *Maastricht University* — Sept 2022 – July 2024

- GPA: 8.9 (on a scale from 0 to 10, where 10 is the best grade).
- Thesis: Estimation of latent group structures in time-varying panel data models (9.5), supervised by Stephan Smeekes and Ines Wilms.

B.Sc. honors in Economics, *University of Regensburg* — Sept 2018 – July 2022

- GPA: 1.29 (on a scale from 5 to 1, where 1 is the best grade, second best of the cohort).
- Thesis: Nonlinear unobserved-components models for the COVID-19 infection rates (1.0), supervised by Rolf Tschernig and Tobias Hartl.

Semester abroad, *University of Southern Denmark* — Sept 2020 – Feb 2021

- GPA: 12 (on a scale from 1 to 12, where 12 is the best grade).

Practical Experience

Research assistant, *Maastricht University, Department of Quantitative Economics* — Sept 2023 – June 2024

- Joint work with Stephan Smeekes and Ines Wilms on simultaneous estimation of clusters as well as cluster-specific trends in environmental time series.

Research assistant, *University of Regensburg, Chair of Empirical Economic Research* — Dec 2022 – Aug 2023

- Finalization of the peer-reviewed publication Haimerl & Hartl (2023).
- Joint work with Tobias Hartl on the effect of misspecifying the order of the trend in a trend-cycle decomposition of GDP, in particular regarding the trend-cycle correlation.

Intern, *d-fine GmbH, Applied AI Cluster – Frankfurt* — April 2022 – June 2022

- Visiting member of a 3-person project team to develop a machine learning model to estimate asset correlations for the credit portfolio model of a major German financial institute.
- Analyses to evaluate the representativeness of the model training sample in R, execution of univariate analyses, automation of data processing tests in SAS, harmonization and interlinking of different industry classifications, creation of model documentation and slides.

Working student, *Deutsche Pfandbriefbank AG, Credit Risk & ICAAP Models* – Munich — Aug 2021 – Oct 2021

- Creation of the Downturn Add-on for the IRB performing Loss Given Default models in SAS.
- Implementation of EBA guidelines, identification of downturn periods, estimation of the downturn effect and its impact on risk weighted assets, documentation and presentation of results.

Intern, *Deutsche Pfandbriefbank AG, Credit Risk & ICAAP Models* – Munich — Feb 2021 – April 2021

- Creation of a statistical IRRBB model to estimate Prepayments of Real Estate Finance loans.

- Data wrangling, essential participation in creating the econometric approach, implementation of the two-step model in SAS, estimation of the resulting material benefit on operations, creation of documentation and multiple presentations in front of senior stakeholders.

Voluntary social year, *Bavarian Red Cross* – Landshut Sept 2017 – Aug 2018

- Care and transportation of immobile and vulnerable patients.

Awards and Scholarships

Marcelo Reyes Award for the best presentation by a junior researcher at WTSE XV_t Zaragoza. 2025

Master Student Prize for an excellent Master's thesis (one out of two at the School of Business and Economics) at Maastricht University. 2024

Christa-Lindner Prize for the best Bachelor's thesis of the Economics department at University of Regensburg. 2023

Scholarship of the German Ministry of Education (Deutschlandstipendium). Running for one year. 2021

Admission to the Honors Bachelor-Programme, elite program of the Economics department at University of Regensburg. 2020

Peer-Reviewed Publications

Haimerl, P., Smeekes, S., & Wilms, I. (Forthcoming). Estimation of latent group structures in time-varying panel data models. *Econometrics Journal*.
Working paper versio on arXiv at DOI: doi.org/10.48550/arXiv.2503.23165.
Replication files are available at github.com/Paul-Haimerl/replication-fuse-time.
Companion R package `PAGFL` is available at 10.32614/CRAN.package.PAGFL.

Haimerl, P., & Hartl, T. (2023). Modeling COVID-19 infection rates by regime-switching unobserved components models. *Econometrics*, 11(2), 10. DOI: doi.org/10.3390/econometrics11020010.
Replication files are available at github.com/Paul-Haimerl/Regime-SW-UC-COVID-19.

Work in Progress

Bennedsen, M., Duffy, J., **Haimerl, P.**, Hillebrand, E., Mavroeidis, S., Nielsen, M.Ø., & Wirth, M. (202x). Identifying the carbon sink saturation threshold.

Haimerl, P. (202x). Evidence of sink rate decline despite a near-constant airborne fraction.

Haimerl, P., Lembrechts, J., Schiffelers, L., Smeekes, S., & Wilms, I. (202x). Trends in the In-Situ and Free-Air Temperature Offset Across 20 Years and a Large Number of Locations.

Software

`PAGFL`: R package to simultaneously identify latent group structures and estimate group-specific (time-varying) coefficients in panel data models. DOI: 10.32614/CRAN.package.PAGFL.

`BTtest`: R package to estimate the number of factors in large nonstationary datasets. DOI: 10.32614/CRAN.package.BTtest.

Talks and Presentations

Econometric Models for Climate Change (EMCC) conference X, talk. Aalborg, 2026

ACE James G. MacKinnon 75th Birthday Conference, poster presentation. Aarhus, 2026

Internal seminar, Copenhagen Business School. Copenhagen, 2026

Internal flash presentation seminar, University of Oxford. Oxford, 2026

19th CFE-CMStatistics, invited talk. London, 2025

Danish Graduate Programme in Economics (DGPE) network, flash talk. Køge, 2025

CoRE members' retreat, flash talk and poster presentation. Sandbjerg, 2025

Internal seminar, Aarhus University. Aarhus, 2025

Econometric Models for Climate Change (EMCC) conference IX, talk. Victoria (BC), 2025

Internal seminar, Center for Statistics Bielefeld University. Bielefeld, 2025

Workshop in Time Series Econometrics (WTSE) $\mathrm{XV_t}$, talk. Zaragoza, 2025

Danish Graduate Programme in Economics (DGPE) network, talk. Middelfart, 2024

Aarhus Workshop in Econometrics (AWE) V, poster presentation. Aarhus, 2024

Econometric Models for Climate Change (EMCC) conference VIII, talk. Cambridge, 2024

Netherlands Econometric Study Group (NESG) 2024, poster presentation. Maastricht, 2024

Teaching Experience

Applied Machine Learning (Tutorial), *Aarhus University* Winter 2026

- 10 ECTS Master course
- Comprehensive introduction to machine learning methods using Python.

3630: Econometrics 1 (Tutorial), *Aarhus University* Winter 2026

- 10 ECTS undergraduate course
- The course covers a suite of econometric approaches to analyse cross-sectional data, time series data, and panel data. It also introduces various modern experimental-style designs aimed at conducting causal inference.

2648: Econometrics (Tutorial), *Aarhus University* Summer 2025

- 10 ECTS undergraduate introductory econometrics course

Multiple Bachelor's and Master's theses supervision, *Aarhus University*

Languages and Technologies

Languages: German (native), English (C1), Spanish (B1), Danish (A2), Dutch (A2)

Technologies: R (advanced), C++/ Rcpp (intermediate), Julia (basic), Python (basic), Matlab (basic), SAS (intermediate)