Achim Ahrens

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Contact

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Current Positions/Affiliations

Since 9/25 Assistant Professor, *CERGE-EI*, Prague
Since 11/25 Research Associate (part-time), *University of Lausanne*, Switzerland
Since 9/25 Affiliate, *Immigration Policy Lab* (ETH Zurich/Stanford University)
Since 8/25 Co-founder *Path2Work*

Previous Positions

2019-25 Senior Researcher, *Public Policy Group*, ETH Zurich, Switzerland, and *Immigration Policy Lab* (ETH Zurich/Stanford University)
2017-19 Post-doctoral Research Fellow at the *Economic and Social Research Institute*, Ireland
2015-17 Research Associate at the *Heriot-Watt University*, UK

Education

2017 PhD in Economics, *Heriot-Watt University*, Edinburgh, UK
2012 MSc in Economics (with Distinction), *University of Edinburgh*, UK
2011 BA in Economics, Law & Social Sciences, *University of Erfurt*, Germany
Major subject: Economics; minor: Social Sciences.

Interests

Causal inference & machine learning, policy learning, fairness in AI, job search & matching, migration & refugee integration.

Working papers

Ahrens, A., Beerli, A., Hangartner, D., Kurer, S., & Siegenthaler, M. "The Labor Market Effects of Restricting Refugees' Employment Opportunities." (Revise & Resubmit, ***American Economic Review***) Latest version.

Abstract. This paper investigates whether employment restrictions contribute to refugees having poorer labor market outcomes than citizens. Utilizing linked register data from Switzerland and within-canton policy variation between 1999–2015, we find substantial negative effects on employment and earnings when refugees are barred from working upon arrival, excluded from specific sectors or regions, or face resident prioritization. Removing 10% of refugees' outside options reduces job-to-job mobility by 7.5% and wages by 3.0%, widening the wage gap to citizens in similar jobs. The restrictions depress refugees' labor market outcomes even after they apply, but do not spur emigration nor benefit other immigrants.

Ahrens, A., Chernozhukov, V., Hansen, C.B., Kozbur, D., Schaffer, M.E., Wiemann, T. "An Introduction to Double/Debiased Machine Learning." (Accepted, ***Journal of Economic Literature***) Latest version.

Abstract. This paper provides a practical introduction to Double/Debiased Machine Learning (DML). DML provides a general approach to performing inference about a target parameter in the presence of nuisance

parameters. The aim of DML is to reduce the impact of nuisance parameter estimation on estimators of the parameter of interest. We describe DML and its two essential components: Neyman orthogonality and cross-fitting. We highlight that DML reduces functional form dependence and accommodates the use of complex data types, such as text data. We illustrate its application through three empirical examples that demonstrate DML's applicability in cross-sectional and panel settings.

Auer, D., Slotwinski, M., Ahrens, A., Hangartner, D., Kurt, S., Stutzer, A. "Social Assistance and Refugee Crime." Latest version.

Abstract. Despite intense policy debates, the relationship between social welfare and refugee crime remains understudied. Taking steps to address this gap, our study focuses on Switzerland, where mobility restrictions on exogenously assigned refugees coincide with cantons' autonomy in setting social assistance rates. Linking time-varying cantonal benefit rates between 2009 and 2016 to individual-level administrative data, we find that higher social assistance reduces criminal charges, especially for petty crimes and drug offenses. In light of limited (short-run) repercussions for refugees' labor market participation, our results suggest social assistance can be a cost-effective measure to improve refugee welfare and enhance public safety.

Ongoing projects

Ahrens, A. "A policy learning approach for fair candidate recommendations."

Ahrens, A., Bächli, M., Hangartner, D., Lalive, R. "Path2Work: Targeted support of job search for refugees using an online job platform." Pilot website: path2work.ethz.ch

Peer-Reviewed Publications

Ahrens, A., Hansen, C.B., Schaffer, M.E., & Wiemann, T. (2025). Model Averaging and Double Machine Learning. *J. of Applied Econometrics*, 40, pp.249-269

Ahrens, A., Hangartner, D., Kurer, S., Stampi-Bombelli, A. (2024). Optimal treatment allocation using policy trees: An application to immigrant naturalization. *J. of Applied Econometrics*, 39(7), pp.1379–1395.

Ahrens, A., Casalis, M., Hangartner, D., Sánchez, R. (2024). Cash-Based Interventions Improve Multidimensional Integration Outcomes of Venezuelan Immigrants. *World Development*, 181, 106658.

Ahrens, A., Hansen, C.B., Schaffer, M.E., Wiemann, T. (2024). ddml: Double/debiased machine learning in Stata. *Stata Journal*, 24(1), pp.3-45.

Ahrens, A., Hansen, C.B., Schaffer, M.E. (2023). pystacked: Stacking generalization and machine learning in Stata. *Stata Journal*, 23(4), pp.909-931.

Ahrens, A., & Lyons, S. (2021). Do rising rents lead to longer commutes? A gravity model of commuting flows in Ireland. *Urban Studies*, 58(2), pp.264-279.

O'Toole, C., Martinez-Cillero, M., & Ahrens, A. (2021). Price regulation, inflation, and nominal rigidity in housing rents. *Journal of Housing Economics*, 52, 101769.

Ahrens, A., FitzGerald, J., & Lyons, S. (2020). Commuting across the Irish border. *Economics Letters 190*, 109060.

Ahrens, A., Hansen, C. B., & Schaffer, M. E. (2020). lassopack: Model selection and prediction with regularized regression in Stata. *The Stata Journal, 20(1)*, 176–235.

Ahrens, A. (2015). Civil Conflicts, Economic Shocks and Night-time Lights. *Peace Economics, Peace Science and Public Policy 21(4)*, 433–444.

Ahrens, A. and Bhattacherjee, A. (2015). Two-Step Lasso Estimation of the Spatial Weights Matrix. *Econometrics 3(1)*, 128–155.

Ahrens, A., Kovandzic, T. V. & Vieraitis, L. M. (2015). Do execution moratoriums increase homicide? Re-examining evidence from Illinois. *Applied Economics 47(31)*, 3243–3257.

Ahrens, A. and Zweynert, J. (2012). Conditionality or specificity? Bulgaria and Romania's economic transition performance in comparative perspective. *Post-Communist Economies 24(1)*, 291–307.

Policy Reports

Evolution Matching. With Dominik Hangartner, Elliott Ash, Philip Grech, Michael Siegenthaler, Daniel Kopp, Uwe Schmitt, Yabra Muvdi, Gabriela Morillo Felix, 2024 (Unpublished). The report was commissioned by the State Secretariat for Economic Affairs and develops a recommender system for job matching.

Evaluating the Effects of Cash-Based Interventions on the Integration of Vulnerable Venezuelan Migrants in Peru. With Monica Aguilar Folch, Ace Dela Cruz, Jobst Koehler, Morgane Reina and Karla Sulca (International Organization of Migration) and Dominik Hangartner, Marine Casalis, Rodrigo Sánchez (ETH Zurich), 2023.

Impact evaluation of the job vacancy notice obligation I. With Rafael Lalive, Patrick Arni, Tobias Lehmann, Dominik Hangartner, Joelle Pianzola, 2021. Commissioned by the State Secretariat for Economic Affairs.

A review of the methodologies used in compiling owner-occupiers' housing indices. With Beirne, K., Economides, P., Kostarakos, I., McQuinn, K. and O'Toole, C., 2020. Commissioned by the Central Statistical Office, Ireland.

Land Use and Spatial Planning Issues. With Tom Gillespie, Ronan Lyons and Seán Lyons. In Research on the Environment, Health, Consumer Behaviour and the Economy: ESRI Environment Research Programme 2018-2020. ESRI Report November 2020. Commissioned by the Environmental Protection Agency, Ireland.

Trends in rental price inflation and the introduction of rent pressure zones in Ireland. With Martinez-Cillero, M. and O'Toole, C., 2019. Economic and Social Research Institute. Commissioned by the Residential Tenancy Board, Ireland.

Statistical Software Packages for Stata & R

Wiemann, T., Ahrens, A., Hansen, C., Schaffer, M. (2024). *ddml: Double/Debiased Machine Learning.* R package version 0.2.0.9000.

Ahrens, A., Hansen, C., Schaffer, M., Wiemann, T. (2023). *ddml: Stata module for Double/Debiased Machine Learning.* Statistical Software Components S459175, Boston College Department of Economics.

Ahrens, A., Hansen, C., Schaffer, M. (2022). *pystacked: Stata module for stacking generalization and machine learning in Stata.* Statistical Software Components S459115, Boston College Department of Economics.

Ahrens, A., Hansen, C., Schaffer, M. (2018). *lassopack: Stata module for lasso, square-root lasso, elastic net, ridge, adaptive lasso estimation and cross-validation.* Statistical Software Components S458458, Boston College Department of Economics.

Ahrens, A., Hansen, C., Schaffer, M. (2018). *pdslasso: Stata module for post-selection and post-regularization OLS or IV estimation and inference.* Statistical Software Components S458459, Boston College Department of Economics.

Presentations

12/25 Charles University Department of Economics and Legal Studies, 11/25 University of Lausanne, 9/25 Exeter Tools, Methods and Data Workshop, 6/25 Spanish labour economics conference (Oviedo), 6/25 Rockwool Fonden Migration Workshop (Kopenhagen, Denmark), 6/25 LISER seminar (Luxembourg), 5/25 Bozen University seminar (Bolzano, Italy), 9/24 MZES Social Science Data Lab (Mannheim, Germany), 7/24 Leibniz IOS Summer Academy (München, Germany), 8/23 Econometric Society European Meetings (Barcelona, Spain), 6/23 International Association for Applied Econometrics (Oslo, Norway), 5/23 Machine Learning in Program Evaluation, High-dimensionality and Visualization Techniques (LISER, Luxembourg), 5/23 Society of Labor Economists (Philadelphia, PA), 03/23 University of Bern, Sociology seminar (CH), 11/22 Stata Conference (Bern, CH), 10/22 AI+Economics Workshop (Zurich, CH), 9/22 European Association of Labour Economists (Padova, Italy), 8/22 European Economic Association (Milan, Italy), 6/22 Barcelona School of Economics (Spain), 5/22 University of Bath seminar (UK), 3/22 Applied ML Days (Lausanne, CH), 7/19 Joint Statistical Meeting (Denver, US), 10/18 Stata Conference (Zurich, CH).

Workshops "Machine Learning for Economists"

5/23 Inter-American Development Bank (Washington, DC), 8/22 Scottish Graduate Program in Economics (St Andrews, UK), 2/22 Chiang Mai University (Thailand), 10/20 Universidad Internacional de Andalucía (Seville, Spain), 9/19 Italian Stata Users Group meeting (Florence, Italy), 6/19 Irish Postgraduate and Early Career Economics Workshop (NUI Galway, Ireland).

Selected Teaching Experiences

2026	Lecturer "AEP Applied Machine Learning and AI for Economists", *CERGE-EI*
2026	Lecturer "MSc/PhD Labor Economics II", *CERGE-EI*
2024	Lecturer "Methods III: Causal Inference", *ETH Zurich*
2021–2023, 2025	Tutorial Instructor "Methods IV: Statistical learning", *ETH Zurich*
2019	Tutorial Instructor "Methods II: Quantitative Methods", *ETH Zurich*
2016	Instructor "Energy Markets and Policy", *University of Stirling*, UK
9/2015	Lecturer Summer School "Basic Statistics", *University of Edinburgh (UoE)*
1/2015	Guest Lecturer "Applications for Econometrics", *University of Edinburgh (UoE)*
2012-15	Teaching Assistant "Econometrics 1" & "Econometrics 2" (MSc), *UoE*
2013/14	Teaching Assistant "Economics 2", *UoE*

Grants and Awards

2023	J-PAL Displaced Livelihoods Initiative (Co-Principal Investigator; $75'000)
2024	J-PAL Displaced Livelihoods Initiative (Co-Principal Investigator; $120'000)
2015	European Peace Scientists, *Stuart A Bremer Travel Award*
2012	Economic and Social Research Council PhD Scholarship (ESRC)

Media Coverage

Switzerland (in German): SRF, NZZ, SRF, Federal press release.
Ireland: Irish Times, Independent.

Skills & Other

Refereeing: Review of Economic Studies (3×), Journal of Econometrics, Journal of Business & Economic Statistics (2×), Econometric Theory, Journal of Applied Econometrics, Economics Letters (2×), Labour Economics, Journal of Political Economy Microeconomics, Review of Development Economics, Economica, Journal of Forecasting, Journal of Financial Econometrics, Urban Studies, Scientific Reports, Oxford Economic Papers, Stata Journal, World Bank Economic Review, Italian Economic Journal, Industrial and Corporate Change, International Journal of Housing Markets and Analysis.

Software: R, Stata, Python, Julia, SQL, QGIS, Matlab, Git, LaTeX