



Seminar zur Finanzwissenschaft (LV-Nr. 36250)

Winter-Semester 2026/27

Topic: Environmental and Health Economics

The seminar will take place as a block seminar (date: to be announced at the preliminary meeting)

Procedure: Topics will be presented in the preliminary meeting, after which preferences for topics can be submitted. Topics will be assigned by taking preferences into account (in case of doubt, by drawing lots), and topics will be assigned by email. Binding registration must be completed no later than one week after topics have been assigned via e-Learning.

Preliminary meeting:

October 14, 2026, 02:00 p.m., in room S 46; Attendance is mandatory.

Submission of topic preference:

October 14-21, 2026, online

Assignment of topics:

October 28, 2026, via email to Felix Zwies

REGISTRATION: October 28 until November 05, 2026, via CMLife (binding); 10 spots for bachelor's (Economics, IWE, P&E) and master's students (Economics, IWG, GÖ, ECCH).

Supervision period:

October 28, 2026 – January 04, 2027; contact Felix Zwies within the first three weeks of the processing and supervision period.

SUBMISSION: **January 04, 2027, by 11:59 p.m.** as a PDF via email to Felix Zwies (felix.zwies@uni-bayreuth.de)

Topics
Block A: Pollution and health outcomes
Block B: Extreme weather and natural disasters
Block C: Energy and health
Block D: Environmental shocks and long-term health effects

Topic and objectives of the seminar

The seminar focuses on the empirical intersection of environmental and health economics. The central question is how exogenous environmental shocks and externalities causally impact human health, and which econometric mechanisms are required to identify these effects.

The seminar is divided into four thematic areas: (A) Localized pollution and acute health outcomes, in particular the physiological impacts of air and water toxicity, (B) Extreme weather and natural disasters as acute exogenous shocks, (C) Energy and health, evaluating the localized externalities of energy production and large-scale infrastructure transitions (e.g., fossil fuel phase-outs, fracking, and renewable energy adoption) (D) Environmental shocks and long-term health effects. The studies discussed are mainly from empirical economic research and related disciplines.

The objective of the seminar is to develop an in-depth understanding of the empirical mechanisms underlying environmental health effects and the methodological challenges of estimating them causally. Students should comprehend and critically evaluate the assigned empirical literature, focusing rigorously on data structures, internal and external validity, and the econometric identification strategies used to isolate exogenous shocks.

Each student will be given a study as a basis for their seminar paper and presentation, which they will be required to understand and explain in detail using the guiding questions listed below.

Key questions for preparing the seminar paper and seminar presentation

1. **Research Question:** What research question(s) or problem(s) does the paper address? What assumptions or hypotheses underlie it?
2. **Relevance:** Why are these questions important?
3. **Contribution to Literature:** What specific added value does the study provide compared to existing research?
4. **Data, evidence, and context:** What empirical basis is used? How suitable is it for answering the research question?
5. **Methodology:** What methodological approaches does the study use, and to what extent are they suitable for answering the research question?
6. **Results:** What are the most important results of the study?
7. **Validity:** How robust and convincing are the results (both internally and in terms of generalizability, i.e., externally)? What are the possible weaknesses or limitations?
8. **Extensions and methodological modifications:** How could the empirical design of the study be improved or expanded? Which specific alternative identification strategies, robustness checks, or additional data sets would you propose to address the paper's limitations?
9. **Implications:** What conclusions can be drawn from the study?
10. **Open questions:** Which aspects remain unanswered or raise new questions?
11. **Outlook:** What future studies or analyses could help to clarify these open questions?

Literature:

Theme block	Paper
Block A	1) Deryugina, T., Heutel, G., Miller, N. H., Molitor, D., & Reif, J. (2019). The mortality and medical costs of air pollution: Evidence from changes in wind direction. <i>American Economic Review</i>, 109(12), 4178-4219. https://pmc.ncbi.nlm.nih.gov/articles/PMC7080189/pdf/nihms-1564022.pdf 2) Pullabhotla, H. K., & Souza, M. (2022). Air pollution from agricultural fires increases hypertension risk. <i>Journal of Environmental Economics and Management</i>, 115, 102723. https://www.sciencedirect.com/science/article/pii/S0095069622000791 3) Dave, D. M., & Yang, M. (2022). Lead in drinking water and birth outcomes: A tale of two water treatment plants. <i>Journal of Health Economics</i>, 84, 102644. https://www.sciencedirect.com/science/article/pii/S0167629622000637
Block B	1) Karlsson, M., & Ziebarth, N. R. (2018). Population health effects and health-related costs of extreme temperatures: Comprehensive evidence from Germany. <i>Journal of Environmental Economics and Management</i>, 91, 93-117. https://www.sciencedirect.com/science/article/pii/S0095069616304636 2) Nguyen, H. T., & Mitrou, F. (2025). Natural disasters and the demand for health insurance. <i>Journal of Environmental Economics and Management</i>, 130, 103108. https://www.sciencedirect.com/science/article/pii/S0095069624001827 3) Borgschulte, M., Molitor, D., & Zou, E. Y. (2024). Air pollution and the labor market: Evidence from wildfire smoke. <i>Review of Economics and Statistics</i>, 106(6), 1558-1575. https://direct.mit.edu/rest/article/106/6/1558/113174/Air-Pollution-and-the-Labor-Market-Evidence-from
Block C	1) Komisarow, S., & Pakhtigian, E. L. (2022). Are power plant closures a breath of fresh air? Local air quality and school absences. <i>Journal of Environmental Economics and Management</i>, 112, 102569. https://www.sciencedirect.com/science/article/pii/S0095069621001182 2) Neidell, M., Uchida, S., & Veronesi, M. (2021). The unintended effects from halting nuclear power production: Evidence from Fukushima Daiichi accident. <i>Journal of Health Economics</i>, 79, 102507. https://www.sciencedirect.com/science/article/pii/S0167629621000928 3) Rott, N., Almond, D., & Giuntella, O. (2026). Wind turbine proximity and health: Longitudinal evidence from US households. <i>Proceedings of the National Academy of Sciences</i>, 123(21), e2525715123. https://www.pnas.org/doi/10.1073/pnas.2525715123 4) Hill, E. L., & Ma, L. (2022). Drinking water, fracking, and infant health. <i>Journal of Health Economics</i>, 82, 102595. https://www.sciencedirect.com/science/article/pii/S0167629622000157

Block D	1) Rosales-Rueda, M. (2018). The impact of early life shocks on human capital formation: Evidence from El Niño floods in Ecuador. <i>Journal of health economics</i>, 62, 13-44. https://www.sciencedirect.com/science/article/pii/S0167629617303521 2) Lee, W. S., & Li, B. G. (2021). Extreme weather and mortality: Evidence from two millennia of Chinese elites. <i>Journal of Health Economics</i>, 76, 102401. https://www.sciencedirect.com/science/article/pii/S016762962031047X 3) Shui, A., van den Berg, G. J., Mierau, J. O., & Viluma, L. (2026). The impact of mining-induced earthquakes on mental health: Evidence from the Dutch Lifelines Cohort Study and Biobank. <i>Journal of Health Economics</i>, 103118. https://www.sciencedirect.com/science/article/pii/S0167629626000160#sec3
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