

AAE 762 : Environment & Resource Economics

University of Wisconsin - Madison

Fall 2025

Location: Taylor Hall B30 Tues/Thurs 1:00-2:15pm

Professor Dr. Rhiannon Jerch

Office Taylor Hall 402

Email rhiannon.jerch@wisc.edu

Office Hours By appointment

Course Description.

This course has two broad aims: (i) to expose students to a range of topics related to foundational as well as current research in environmental economics and (ii) to prepare PhD students to conduct original research in environmental economics. We will spend the first week reviewing foundations of applied empirical research. The rest of the class will be organized around major themes in environmental economics, including public goods and property rights; pollution and health, pollution and sorting, natural disasters, transportation, and new methods. We will dissect research papers that use a wide range of research designs, identification strategies, and estimation techniques. By actively engaging in this process, each of you will hopefully start putting the pieces together as applied microeconomic researchers – by understanding (i) what makes a successful research question, and (ii) what passes muster for credible empirics at the time of this course. This course will tend to cover topics that overlap across environmental and urban economics fields, including transportation, sorting, economic history, and health.

Course Objectives.

- Understand methods, topics and contributions of major works in environmental economics
- Develop proficiency with theoretical, computational, and empirical tools that will be valuable for future self-directed research;
- Gain experience in reading, presenting, and discussing modern research in environmental economics

Prerequisites.

- ECON 709 (Economic Statistics & Econometrics I) and ECON 711(Economic Theory – Microeconomics Sequence) OR permission from the instructor.

Class Format

Most of our class time will be spent discussing papers. All students should arrive prepared to contribute to a thorough and in-depth discussion of the assigned readings. On occasion, I will lecture on big picture topics or technical material, and sometimes we will have more free flowing conversations about general research opportunities. Prior to each class (before 8am), students will post an intro outline and comments to Canvas. Details below.

Grading Criteria.

1. Referee Report: 20%. Each student is required to do an original referee report on an unpublished empirical paper in environmental economics that I will assign. The reports should *not* exceed 4 pages (1.5 spaced). Each report should briefly summarize the main contribution of the paper, strengths and weaknesses and areas for improvement. Your goal is to critically evaluate the manuscript and provide feedback the author(s) could use to improve their work. An example report and a suggested template are posted to Canvas (note, do not feel compelled to complete every piece of this template in your report. It is meant as a guide, not as necessary criteria for a useful report). **Due Oct 2nd**
2. In-Class Presentations: 15%. Each of you will conduct one in-class presentation either individually or as a group (depending on the final class size). You will be expected to present the paper as the instructor, providing the basis for a critical discussion amongst the class. The point of this exercise is to give students an opportunity to perform an in-depth study of an interesting paper, and to provide practice with presenting technical material. The papers will be chosen by you from the supplementary reading list beneath each major theme. I will assign each student to their presentation date and topic in the first week of class.
3. Replication Assignment 30%: See attached rubric.
4. Class Attendance & Participation: 10%. Please come to class each day ready to discuss the assigned reading (those marked with a * or those chosen by the presenting student), ask questions about them and answer questions about them. I realize that some weeks you will have more time and focus than others, but please do your best.
5. Paper Intro Outlining + Comments: 15% Prior to each class (before 8am on the day of discussion) each student will post (1) a brief outline of the introduction and (2) 1-2 paragraphs of comments/questions on the paper. You will post these to the Canvas discussion board. See attached guidelines on the outline and paper comments. Outlines & Comments will be required for the Hornbeck (2010) paper onwards (e.g., not required for the first 3 classes). Expect to provide one outline/comments *per assigned paper*. So on days where we review 2 papers, you will provide 2 intros and comments to Canvas.
6. Summaries of ECON and/or AAE Seminars (10%): Seminars are an excellent opportunity for you to (i) engage with cutting edge research in AAE-related fields; (ii) learn how to structure and prepare an economics talk; and (iii) apply the microeconomics toolkit on the fly. I strongly encourage you to attend as many seminars as you can throughout your time in the graduate program. As part of this class, you are required to attend **at least 2** AAE, ECON, or econ-adjacent seminars this semester. You must choose a seminar conducted either by an invited speaker or a faculty member. (You *should* go to departmental brown bag talks, but for purposes of this assignment, I would like you to attend talks on (mostly) completed work – ideally from a researcher outside UW). Within 24 hours of these seminars, you will be required to write and submit to Canvas 1 healthy paragraph describing the following aspects of the paper presented:
 1. Its main research question(s)
 2. Its theoretical/empirical approach
 3. Its main conclusions
 4. Its strengths/weaknesses

AAE department seminars occur weekly on Fridays (12-1:15pm). [Schedule](#).

ECON seminars occur throughout the week, but the seminars most likely relevant to this class include the Public seminars (Tuesdays at 3:45pm in Room 7142 Social Sciences, [Schedule](#)) and the Industrial Organization seminar (Wednesdays at 3:45pm in Room 7142 Social Sciences, [Schedule](#)). Real Estate (Thursdays at 11:00am in Grainger 4580, [Schedule](#))
You must attend both seminars BEFORE the last day of class, Dec 9

Canvas.

Class announcements, readings, and assignments will be posted on the course website on Canvas. All important announcements will be posted there.

Late Assignments:

No late assignments will be accepted except in the case of documented medical or family emergency. Students are responsible for making sure, at the beginning of the term, that they can submit assignments on time. If you foresee a conflict, contact me as soon as possible in order to make alternate arrangements for you to complete the requirements of this course.

USE OF AI

Generative AI is a useful technology that can be useful for writing, coding, and research. It will probably become even more useful over your time in the workforce. I encourage you to experiment with AI, learn how to use it well, and familiarize yourself with its strengths and limitations. At the same time, I want this class to be an opportunity for you to build your own skills. Using AI as a substitute for your own effort will be a disservice to you, me, and your classmates. Here are some guidelines for appropriate and inappropriate use of AI as it pertains to this class. If you're not sure what's okay, please ask!

- *READINGS & CLASS DISCUSSION:*

Appropriate uses include using AI for background and contextual research (e.g., asking for information about Denmark when reading a Danish research paper) and asking for definitions or explanations of new concepts. Effectively, you can use AI as a search engine.

Inappropriate uses include asking AI for summaries of the paper (since I want you to learn how to read and understand papers yourself) or using AI to generate content for in class discussion. I would prefer grammatically incorrect or fragmentary posts from you to more polished posts that have been put through AI.

- *REFEREE REPORT & REPLICATION:*

Appropriate uses include using AI to identify unclear writing or grammatical errors, or using AI to find relevant literature (which you should always double check! AI can often cite things incorrectly!).

Inappropriate uses include asking AI to write sections of your paper, or taking reasoning, summaries of literature, or other output from AI without checking and reworking them yourself. Effectively, you can use AI in the same way that you would use the writing center or the college librarians. Note – it is very obvious when someone uses AI as a substitute for their own thoughts and writing. I would rather you turn in original work with grammatical errors than something polished, but spineless from AI.

Classroom etiquette.

I value your presence in my class, and I want your classmates to feel the same way. I am requesting that you NOT eat/drink during class because it can be distracting. Please silence your cell phones and other electronic devices during class. If you need to respond to a text message or make a phone call, please leave the classroom before doing so.

Accommodations for Students with Disabilities.

The University of Wisconsin-Madison supports the right of all enrolled students to a full and equal educational opportunity. The Americans with Disabilities Act (ADA), Wisconsin State Statute (36.12), and UW-Madison policy ([UW-855](#)) require the university to provide reasonable accommodations to students with disabilities to access and participate in its academic programs and educational services. Faculty and students share responsibility in the accommodation process. Students are expected to inform faculty of their need for instructional accommodations during the beginning of the semester, or as soon as possible after being approved for accommodations. Faculty will work either directly with the student or in coordination with the McBurney Center to provide reasonable instructional and course-related accommodations. Disability information, including instructional accommodations as part of a student's educational record, is confidential and protected under FERPA. (See: [McBurney Disability Resource Center](#))

Academic Integrity.

I do not tolerate academic misconduct. I will not hesitate to assign failing grades to students who do not fully comply with the University's academic misconduct policy (<http://www.students.wisc.edu/doso/academic-integrity/>.) If you find yourself contemplating cheating, plagiarism, or other forms of academic misconduct, please come see me first. Help is available if you are struggling. I want everyone in the class to try their best and to do their own work. Please be advised that I reserve the right to utilize anti-plagiarism resources when grading assignments.

Mental and Emotional Health. In the best of times, graduate school can be an incredibly stressful experience. University Health Services provides a number of useful resources for mental health (<https://www.uhs.wisc.edu/mental-health/>), and my door is always open should you need it. If a situation arises where you find yourself emotionally or physically unable to keep pace with our schedule, please do not hesitate to contact me and we can discuss how to best address the situation.

Child/Dependent Care and the Classroom: Arranging dependent care is a complicated process (I deeply sympathize). Should you find yourself suddenly without coverage during class time and still wanting to attend, please feel free to bring children or other dependents to lecture. Similarly, parents with infants in need of regular feedings are welcome to bring them to class. I ask only that you sit somewhere with easy access to an exit such that, if a situation requires a hasty retreat, you can do so with minimum disruption. Out of consideration for your classmates, please do not bring in any dependents that are unwell.

All other Syllabus Statements apply! <https://guide.wisc.edu/courses/#SyllabusStatements>

Course Schedule (subject to change)

Date	Module	Papers covered in class*	Due
R Sep 4	Intro & Expectations		
T Sep 9	Applied Micro Methods	Angrist, J. D., & Pischke	
R Sep 11	Public Goods & Property Rights	Stavins (2011)	
T Sep 16	Public Goods & Property Rights	Hornbeck (2010)	
R Sep 18	Public Goods & Property Rights	Fier et al. (2024)	
T Sep 23	Hedonics & Sorting	Chay & Greenstone (2005)	

R Sep 25	Hedonics & Sorting	Christensen et al (2023)	
T Sep 30	Hedonics & Sorting	Heblich et al (2021)	
R Oct 2	Hedonics & Sorting	STUDENT LECTURE 1	<i>Due: Referee Report</i>
T Oct 7	Environment & Health	Currie & Niedell (2005)	
R Oct 9	Environment & Health	Clay, Lewis & Severnini (2024)	
T Oct 14	Environment & Health	Alsan & Goldin (2019)	
R Oct 16	Environment & Health	STUDENT LECTURE 2,3	<i>Due: Choose replication paper</i>
T Oct 21	Transportation	Davis (2008)	
R Oct 23	Transportation	Burchfield et al (2006)	
T Oct 28	Transportation	Jedwab & Storeygard (2022)	
R Oct 30	Transportation	STUDENT LECTURE 4 & 5	
T Nov 4	Natural Disasters	Deryugina (2017)	
R Nov 6	Natural Disasters	Kocornick et al. (2020)	
T Nov 11	NO CLASS		
R Nov 13	NO CLASS		
T Nov 18	Natural Disasters	Hornbeck & Keniston (2017)	<i>Due: Replications</i>
R Nov 20	Natural Disasters	STUDENT LECTURE 6 & 7	
T Nov 25	New Methods	Ito & Zhang (2020)	
R Nov 27	NO CLASS - THANKSGIVING		
T Dec 2	New Methods	Barwick et al (2024)	
R Dec 4	New Methods	STUDENT LECTURE 8 & 9	
T Dec 9	New Methods	Toledo (2016)	<i>Deadline to submit 2 seminar summaries</i>

Replication Assignment

This project asks you to write an essay that reviews, replicates, and extends an empirical paper (approved by the instructor by mid-October at the latest) in one of the topics we cover in class. You must choose an empirical paper that has available data. You are very welcome to replicate the paper that you present in class – in fact you might find this very helpful. In any event, choose something of interest to you! At the risk of stating the obvious, you MAY NOT choose a paper on which you were a research assistant. Try to choose a paper for which the data source is pretty complete, i.e., it includes not only the processed data to produce the tables in the paper and code to go with them, but also clear documentation.

After the replication of the paper, you must make at least one sensible extension to the paper. (Note, in certain circumstances where the code has several errors or where documentation is poor, you may be able to receive full credit without an extension. We should have an explicit conversation about this where I grant you permission to skip the extension by the mid-October meeting.)

Due October 16th: Deadline to select your paper and to meet with me to approve your selection. Please come to the meeting having also located the data necessary for replication, and the replication code, if available.

Due Nov 18th: Final Essay and replication code (posted to Canvas)

Details

Your essay should have three components, outlined below. Try to keep each section under 2 pages of writing not including figures or tables (so in total your essay will be no more than 6 pages, excluding figures and tables and references). Please use 1.5x or 2x line spacing with 11 or 12 point font.

A. Overview

- What question does the study ask, and why is this of economic interest? What are the most important findings in the paper? Briefly explain their contribution over prior literature. Explain the data sources used, and give some sense of the temporal and panel unit-level of variation employed.
- Describe an ideal research design for the question at hand. Is the work causal or descriptive?
 - If the former, which assumptions support a causal interpretation of the results presented in your chosen paper? Are the econometric techniques used in the study likely to yield estimates with a causal interpretation? Are the results convincing?
 - If the paper is descriptive, can you comment on their method/process of analyzing the data? Thoughts on their data sources or context? How does their approach compare to an ideal dataset or an ideal setting?

B. Replication

- Identify the main findings and use the authors' data to replicate the published/working paper findings if possible. Note that you need only to replicate the main results of the paper, not all the tables.
- Please give a high-level explanation as to what the replication code does, and the process of the authors went through to create their results.
- Summarize and compare your replication results to the original results, with original and replication results reported side-by-side in a single table. Highlight any differences. Explain why you think your results differ from the original (if they do).

- Post the code attached with your report to Canvas. This should include the construction from the raw data sets to the data set ready for analysis to the extent you have these data available.

*C. Extension** (*Required for papers that have replication code available).

Extend the work in a substantiative way. Here are some suggestions, though you are welcome to get creative and discuss your ideas with me:

- if available, start from the very raw data to produce different variables than what the authors chose (or a different way to compute some of their main outcomes). Why do you think they chose the main outcome they did rather than the alternative variable(s) you selected?
- estimating alternative specifications or estimators that may illuminate issues and questions raised by the paper. For instance, try alternative specifications; subsamples of special interest; explore distributional effects, or use an alternative estimator (TWFE literature has many to pick from now!). Do the paper's main conclusions change if you use different specifications, estimation methods, or subsamples? If so, why or why not?
- Incorporate a new dataset into the author's existing data to help explain their results, or explore a new margin of variation or heterogeneity. For instance, if the authors have data on the location of pollution sources, can you incorporate demographic information from the ACS or Census to understand social correlates of the pollution sites?

Resources

The product of this exercise is a short essay. Start polishing your writing skills now rather than the summer before you go on the job market. Learn to tell stories with numbers by imitating the good work of others.

Your tables and figures should look professional. Don't just rely on the replication code – if the output looks scrappy, make it look nice!

And as is increasingly required in economics as well, please submit a documented code to go with your results. Most top journals and top field journals have their data available for replication, at least within the last 5 years. The papers in the journals of the *American Economic Association* (AEA) have their data available for replication as of 2015 onward. That could be a good place to look for papers to replicate!

Please note most of your learning in this exercise will happen in the journey, not necessarily with the end result. Therefore, my evaluation of your replication will be heavily influenced by whether I can observe a good-faith effort from you, rather than your success in replicating the precise results of a paper.

Intro Outline & Paper Comments

The goal of the introduction outlining exercise is not only to get you to carefully read introductions to papers, but also to pay close attention to how authors motivate their paper (the pitch).

Read the following guides in advance:

- <http://blogs.ubc.ca/khead/research/research-advice/formula>
- <https://www.cgdev.org/blog/how-write-introduction-your-development-economics-paper>
- <http://macromomblog.com/2019/09/29/we-need-to-talk-more/>

For each paper, write a bullet-point list of the broad point of each paragraph (one sentence max). Here is an example (from my old job-market paper):

1. Motivate with an anecdote that sets up some tension: how can small towns pay for large wastewater infrastructure?
2. Set up the main objective of the paper & the context
3. Explain primary contribution - CWA impacted small towns, not just large cities.
4. Set up why my question is an empirical question.
5. Empirical Approach: Explain what I do – data, method, and how my methods meet my objectives.
6. Empirical Approach; Set up the endogeneity and the IV
7. Results 1: main objectives and how my approach could uniquely answer my question.
8. Results 2: mechanisms and relevance to urban literature
9. Results 3: robustness checks
10. Antecedents & Value-add: Relevance of existing water pollution literature and my contribution
11. Antecedents & Value-add: Contributions to environmental federalism
12. Road map

(2) Comments on the paper

Write 1-2 healthy paragraphs that include at least two comments/reactions to the paper, e.g.:

- potential concerns with the analysis and, ideally, suggestions to address them
- alternative interpretation of the results
- suggestions for future research
- general thoughts on the paper – including anything you found confusing or unclear

READING LIST:

Applied Micro Basics:

* Angrist, J. D., & Pischke, J. S. (2010). The credibility revolution in empirical economics: How better research design is taking the con out of econometrics. *Journal of economic perspectives*, 24(2), 3-30.

- Nevo, A., & Whinston, M. D. (2010). Taking the dogma out of econometrics: Structural modeling and credible inference. *Journal of Economic Perspectives*, 24(2), 69-82.
- See supplemental list from Louis Prenoas (on Canvas) for a longer list of methodological references

Public Goods & Property Rights

* Stavins, R. N. (2011). The problem of the commons: Still unsettled after 100 years. *American Economic Review*, 101(1), 81-108

* Hornbeck, 2010. "Barbed Wire: Property Rights and Agricultural Development" *Quarterly Journal of Economics* 125(2), pp. 767-810.

* Feir, Gillezaue, Jones "The Slaughter of the Bison and Reversal of Fortunes on the Great Plains" ReStud 2024

- Hardin, 1968. "The Tragedy of the Commons" *Science* 162(3859).
- Coase, Ronald H, "The Problem of Social Cost" *Journal of Law and Economics* (III) (1960)
- Ostrom, Elinor, "Coping with Tragedies of the Commons" *Annual Review of Political Science* 2 (1999), 493-535
- Ayers, Andrew B., Kyle C. Meng and Andrew J. Plantinga, "Do Environmental Markets Improve on Open Access? Evidence from California Groundwater Rights" *JPE*, 129(10) 2021
- Samuelson, 1954. "The Pure Theory of Public Expenditure" *Review of Economic Studies*, 26(4), November. Use Coate's notes on this in class

The Environment & Sorting

* Chay, Kenneth and Michael Greenstone (2005). "Does Air Quality Matter? Evidence from the Housing Market." *Journal of Political Economy*, 112(2)

*Christensen, Peter, David A. Keiser, and Gabriel E. Lade. 2023. "Economic Effects of Environmental Crises: Evidence from Flint, Michigan." *American Economic Journal: Economic Policy*, 15 (1): 196–232

*Heblich, S., Trew, A., & Zylberberg, Y. (2021). East-side story: Historical pollution and persistent neighborhood sorting. *Journal of Political Economy*, 129(5), 1508-1552

- Currie, Janet, Lucas Davis, Michael Greenstone, and Reed Walker. 2015. "Environmental Health Risks and Housing Values: Evidence from 1,600 Toxic Plant Openings and Closings." *American Economic Review*, 105 (2): 678–709.
- Muehlenbachs, Lucija, Elisheba Spiller, and Christopher Timmins. 2015. "The Housing Market Impacts of Shale Gas Development." *American Economic Review*, 105 (12): 3633–59.
- Davis, L. W. (2011). The effect of power plants on local housing values and rents. *Review of Economics and Statistics*, 93(4), 1391-1402

- Yu and Zhang (2023) “The Value of Waterways: Evidence from the Black-and-Smelly Water Program in China” Working Paper
- Kuminoff, N. V., Smith, V. K., & Timmins, C. (2013). The new economics of equilibrium sorting and policy evaluation using housing markets. *Journal of economic literature*, 51(4), 1007-1062
- Coury, M., Kitagawa, T., Shertzer, A., & Turner, M. A. (2024). The value of piped water and sewers: Evidence from 19th century Chicago. *Review of Economics and Statistics*, 1-47.
- Bakkensen, L. A. and Ma, L. (2020). Sorting over flood risk and implications for policy reform. *Journal of Environmental Economics and Management*, page 102362

Environment & Health

* Currie, J., & Neidell, M. (2005). Air pollution and infant health: what can we learn from California's recent experience?. *The quarterly journal of economics*, 120(3), 1003-1030.

* Clay, K., Lewis, J., & Severnini, E. (2024). Canary in a coal mine: infant mortality and tradeoffs associated with mid-20th century air pollution. *Review of Economics and Statistics*, 106(3), 698-711.

* Alsan, M., & Goldin, C. (2019). Watersheds in child mortality: The role of effective water and sewerage infrastructure, 1880–1920. *Journal of Political Economy*, 127(2), 586-638

- Currie, J., Davis, L., Greenstone, M., & Walker, R. (2015). Environmental health risks and housing values: evidence from 1,600 toxic plant openings and closings. *American Economic Review*, 105(2), 678-709.
- Alexander, D., & Schwandt, H. (2022). The impact of car pollution on infant and child health: Evidence from emissions cheating. *The Review of Economic Studies*, 89(6), 2872-2910.
- Graff Zivin, J., M. Neidell, N. Sanders, and G. Singer, "When Externalities Collide: Influenza and Pollution," *American Economic Journal: Applied Economics*, 15(2023): 320-351
- Clay, K., Lewis, J., & Severnini, E. (2018). Pollution, infectious disease, and mortality: Evidence from the 1918 Spanish influenza pandemic. *The Journal of Economic History*, 78(4), 1179-1209.
- Galiani, S., Gertler, P., & Schargrodsky, E. (2005). Water for life: The impact of the privatization of water services on child mortality. *Journal of political economy*, 113(1), 83-120.
- Chang, T., J. Graff Zivin, T. Gross, and M. Neidell, "The Effect of Pollution on Worker Productivity: Evidence from Call-Center Workers in China," *American Economic Journal: Applied Economics*, 11(2019): 151-172.
- Ebenstein, A. (2012). The consequences of industrialization: evidence from water pollution and digestive cancers in China. *Review of Economics and Statistics*, 94(1), 186-201.
- Ariaster B. Chimeli and Rodrigo R. Soares. 2017. "The Use of Violence in Illegal Markets: Evidence from Mahogany Trade in the Brazilian Amazon." *American Economic Journal: Applied Economics* 9 (4): 30–57.
- Hansen-Lewis, J., & Marcus, M. M. (2025). Uncharted waters: Effects of maritime emission regulation. *American Economic Journal: Economic Policy*: 17(1), 37-69.
- Currie, Janet, John Voorheis, and Reed Walker. 2023. "What Caused Racial Disparities in Particulate Exposure to Fall? New Evidence from the Clean Air Act and Satellite-Based Measures of Air Quality." *American Economic Review*, 113 (1): 71–97.

Transportation

* Davis, Lucas (2008). The effect of driving restrictions on air quality in Mexico City. *Journal of Political Economy*, 116(1), 38-81.

* Jedwab, Rémi and Adam Storeygard. (2022). The average and heterogeneous effects of transportation investments: evidence from Sub-Saharan Africa 1960-2010. *Journal of the European Economic Association* 20(1): 1-38.

* Burchfield, M., Overman, H. G., Puga, D., & Turner, M. A. (2006). Causes of sprawl: A portrait from space. *The Quarterly Journal of Economics*, 121(2), 587-633.

- Li, Shanjun. (2018). Better lucky than rich? Welfare analysis of automobile license allocations in Beijing and Shanghai. *The Review of Economic Studies*, 85(4), 2389-2428.
- Balboni, Clare. 2025. "In Harm's Way? Infrastructure Investments and the Persistence of Coastal Cities." *American Economic Review*, 115 (1): 77–116.
- Anderson, Michael L. 2014. "Subways, Strikes, and Slowdowns: The Impacts of Public Transit on Traffic Congestion." *American Economic Review*, 104 (9): 2763–96.
- Severen, C., & Van Benthem, A. A. (2022). Formative experiences and the price of gasoline. *American Economic Journal: Applied Economics*, 14(2), 256-284
- Hanna, R., Kreindler, G., & Olken, B. A. (2017). Citywide effects of high-occupancy vehicle restrictions: Evidence from “three-in-one” in Jakarta. *Science*, 357(6346), 89-93
- Wolff, H. (2014). Value of time: Speeding behavior and gasoline prices. *Journal of Environmental Economics and Management*, 67(1), 71-88.
- Henderson, J. V., Squires, T., Storeygard, A., & Weil, D. (2018). The global distribution of economic activity: nature, history, and the role of trade. *The Quarterly Journal of Economics*, 133(1), 357-406
- Asher, S., Garg, T., & Novosad, P. (2020). The ecological impact of transportation infrastructure. *The Economic Journal*, 130(629), 1173-1199
- Busse, M. R., & Keohane, N. O. (2007). Market effects of environmental regulation: coal, railroads, and the 1990 Clean Air Act. *The RAND Journal of Economics*, 38(4), 1159-1179.

Natural Disasters

* Deryugina, T. (2017). The fiscal cost of hurricanes: Disaster aid versus social insurance. *American Economic Journal: Economic Policy*, 9(3):168–98.

* Hornbeck , Richard and Daniel Keniston. 2017. Creative destruction: Barriers to urban growth and the Great Boston Fire of 1872. *American Economic Review*, forthcoming

* Kocornik-Mina, Adriana, Thomas K. J. McDermott, Guy Michaels, and Ferdinand Rauch. 2020. "Flooded Cities." *American Economic Journal: Applied Economics*, 12 (2): 35–66.

- Bakkensen, L. A. and Ma, L. (2020). Sorting over flood risk and implications for policy reform. *Journal of Environmental Economics and Management*, page 102362
- Boustan, L. P., Kahn, M. E., Rhode, P. W., and Yanguas, M. L. (2020). The effect of natural disasters on economic activity in us counties: A century of data. *Journal of Urban Economics*, 118.
- Davis, D. R. and Weinstein, D. E. (2002). Bones, bombs, and break points: the geography of economic activity. *American Economic Review*, 92(5):1269–1289

- Ortega, F., & Taspinar, S. (2018). Rising sea levels and sinking property values: Hurricane Sandy and New York's housing market. *Journal of Urban Economics*, 106, 81-100
- Young, R., & Hsiang, S. (2024). Mortality caused by tropical cyclones in the United States. *Nature*, 1-8.

New Approaches & Topics in Environmental

i. Valuation & Welfare:

* Ito, Koichiro and Shuang Zhang. "Willingness to Pay for Clean Air: Evidence from Air Purifier Markets in China" *The Journal of Political Economy*. May 2020.

- Gabriel E. Kreindler. 2023. "Peak-Hour Road Congestion Pricing: Experimental Evidence and Equilibrium Implications." *Econometrica*: forthcoming
- Gianmarco León and Edward Miguel. 2017. "Risky Transportation Choices and the Value of a Statistical Life." *American Economic Journal: Applied Economics* 9 (1): 202–228.
- [Frank, Eyal. The economic impacts of ecosystem disruptions: Costs from substitution biological pest control. *Science*, 385, eadg0344, 2024](#)

ii. Remote Sensing / "Big" Data / Administrative Data

* Barwick, Panle Jia, Shanjun Li, Liguang Lin, and Eric Zou. "From Fog to Smog: The Value of Pollution Information", *American Economic Review*, May 2024

- "Unwatched Pollution: The Effect of Intermittent Monitoring on Air Quality" Eric Zou *American Economic Review*, July 2021
- Grant, Laura and Matthew Kotchen, "Does Daylight Saving Time Save Energy? Evidence from a Natural Experiment in Indiana" *Review of Economics and Statistics*, Nov 2011
- Burgess, Robin, Francisco Costa and Benjamin Olken. 2023. "National Borders and the Conservation of Nature". Working Paper.
- Gertler, Shelef, Wolfram and Fuchs. 2016. "The Demand for Energy-Using Assets among the World's Rising Middle Classes", *American Economic Review*, vol 106(6).

iii. Experimental Design

* Toledo, Chantal. 2016. "Do Environmental Messages Work on the Poor? Experimental Evidence from Brazilian Favelas." *Journal of the Association of Environmental and Resource Economists* 3 (1): 37–83.

- Esther Duflo, Michael Greenstone, Rohini Pande, and Nicholas Ryan. 2013. "Truth-telling by Third-party Auditors and the Response of Polluting Firms: Experimental Evidence from India." *Quarterly Journal of Economics* 128 (4).
- Kenneth Lee, Edward Miguel, and Catherine Wolfram. 2020. "Experimental Evidence on the Economics of Rural Electrification." *Journal of Political Economy* 128 (4): 1523–1565
- Andres Gonzalez-Lira and Ahmed Mushfiq Mobarak. 2024. "Slippery Fish: Enforcing Regulation when Agents Learn and Adapt." Working Paper.