

# ECONOMICS 970: THE ECONOMICS OF REGULATION

Dept. of Economics, Harvard University

Spring 2026

Instructor: Jo Ellery [joellery@fas.harvard.edu]

When/Where: T/Th 10:30 to 11:45 in Sever 305

Office hours: Sign up is here.

Course site: Canvas.

## COURSE OVERVIEW

Regulation is one of the most powerful tools which the federal government wields to shape the private sector in the United States. Regulation refers to the directives by executive agencies, like the EPA or Department of Education, which enact the authority given to the agencies by Congress. How does a law go from a bill in Congress—often broad and vague—to something enforceable in practice? And how can and should economics be used to discipline the rules that govern us all?

In this tutorial, we'll uncover the process of making regulation and investigate its impact on three domains: transportation, the environment, and education. We'll apply economic theory to each area to understand where regulation succeeds in achieving its aims and where it falls short. Along the way, we'll understand how laws get enforced, how regulation shapes our lives, and how public participation can influence the rules we live by.

### *Course Aims*

This course seeks to teach you how to analyze policy like an economist: to think through costs and benefits and to consider incentives and externalities. Additionally, we'll walk through how to read and write like an economist, how to engage with scholarship in controversial areas, and how to design and complete your own research projects.

### *Prerequisites*

This course expects prior completion of intermediate microeconomics (Ec 1010A or Ec 1011A) and introductory statistics (Stat 104 or 110 or equivalent).

### *Course Policies*

**Attendance.** Attendance is crucial for participation in this seminar. If you are unable to attend a session, please notify me in advance when possible. Absences without prior notice or a valid reason may result in a zero for that day's participation. If you experience an emergency or unexpected issue, please follow up as soon as you are able.

**Office Hours.** Please sign up for **one office hour by the third week** so that I can get to know you and your interests better. You should meet with me at least **three** times during the semester. I will circulate a sheet with weekly office hour availability.

**Assignment Submission.** Please type all assignments and submit all assignments on Canvas.

**Extensions and Lateness.** Please email me at least twelve hours before the due date to request an extension. Late assignments with no confirmed extension will be docked 10% of the final assignment grade per day late. Extensions will be given only once for any assignment (no double extensions).

I will be flexible with one extension per student; further extensions will require significant unexpected circumstances (e.g. a medical issue, family circumstances, or likewise).

**Technology in Class.** Laptops and tablets are permitted for note-taking, though this policy may be revisited if it becomes a problem. Extensive use may increase the likelihood of being cold called.

**Generative AI.** Please use responsibly. AI makes a good research assistant, and a poor coauthor: it is better for your words and work to be your own, even if AI helps you to find your sources. I will be asking you to fill out a form with each assignment discussing whether and how you used AI. AI for the use of Stata/R problem sets is strictly prohibited (this is a 970-wide policy).

**Collaboration.** You are welcome to collaborate with your classmates, but each person should submit their own assignment, and your thinking and writing must be your own. Remember to cite your sources properly, and feel free to ask if you have any questions about citation. Plagiarism will result in a failing grade.

Feel free to ask me if you have any questions about this policy in general. You might also refer to the relevant section of the student handbook.

**Wellness and Support.** College, and life outside of college, can be challenging, particularly in today's environment. If you find yourself in need of help in this class or in others, the Academic Resource Center provides tutoring services, workshops, and coaching, among other services. For challenges beyond academics, you might also look to Counseling and Mental Health Services, Harvard University Health Services, or the Center for Wellness and Health Promotion. Harvard Disability Access Office can also assist with any accommodations or issues of accessibility.

## COURSE REQUIREMENTS

Engaged participation is essential to this class. As such, encouraging participation and deep thought informs all of the assignments. Each assignment will be described in more detail as they are assigned.

Throughout the course, we will be reading pieces from *Writing Economics*. There is a great deal of helpful information contained here, including the specifics of writing pieces like the introduction and your literature review.

### *Class Participation, Discussion Leaders and Class Roundtables*

You should read all of the starred papers for a given session before the session begins. It is encouraged to come to class with your own thoughts and questions about the works we read. If a topic catches your interest, reading the non-starred papers is a great idea.

You will also be asked to help lead one class discussion of your choice. In the first week, I will circulate a sign up sheet for discussions.

Three days prior to the discussion you will lead, you will write up a short set of slides which lay out the topics and questions you want to discuss, any additional sources you plan to describe, and some conclusions that you might draw from the reading. I will read your slides and provide suggestions before the discussion. You will also meet with me before the discussion to go over what we'll cover.

At the end of our units on environment and education, we'll spend a class session discussing whether the benefits of a certain regulation are worth its costs. You'll write a short policy brief outlining your opinion on the matter, citing at least three sources.

### *Literature Review Exercise*

One of the hardest parts of research is understanding how your work fits into the existing literature. In this assignment, you'll come up with three research ideas. You'll then check the existing literature to find the closest paper to your ideas. If the idea has been done exactly, you'll explain the methods used; if it hasn't been done, you'll explain how the closest paper to you falls short of your idea.

### *Referee Reports*

To help facilitate a deep understanding of the topics discussed, prior to each of the three main units (transportation, the environment, and education), you will write a 2-3 page referee report about one of the starred papers for that unit.

### *Public Comment*

In this class, we'll not only be learning about the regulatory process, we'll also be learning how to participate in the regulatory process. As a result, you will be asked to write a 3-5 page comment on a regulation of your choice from any agency. Bonus points will be given if the regulation is currently in its comment period and you submit the comment to the regulatory agency.

### *R/Stata Problem Sets*

All Ec970 tutorials require four problem sets to be completed with either Stata or R. These problem sets will be a crucial foundation for your empirical work in your final project and in any future research. We will be using the standard problem sets. More information can be found here, including tutorials and course-wide office hours.

## *Final Project*

A major focus of this course is to teach you how to read, write, and finish projects like an economist. As such, the centerpiece of this tutorial is an independent research project.

**Early ideas.** You will provide at least two early-stage research ideas, each with a brief overview of the question, intended (empirical or theoretical) methods and data, and a brief overview of related literature. It doesn't need to be polished, but you should start thinking about this early—research almost always takes longer than you think it will. I will provide feedback on your ideas and help you to narrow your choice.

**Research proposal.** The proposal is a 3-6 page document expanding on your chosen idea with an introduction and literature review, and overview of data and methods, and some preliminary summary statistics.

**Revised proposal.** The revised proposal will expand on the initial proposal, taking into account feedback on the first draft.

**Final paper.** The final paper will be 18-20 pages and present evidence on some question of interest, ideally with some causal identification. If your identification is not causal, you should be able to explain why it isn't causal, what you can still learn from your work, and what you might do in an ideal world to move toward causal identification.

Assignment	Weight	Pages
Class Participation	20%	
Discussion Leader Slides	5%	
Policy Brief (x2)	5%	2 (each)
Literature Review Exercise	5%	3
Referee Reports (x3)	10%	2-3 (each)
Public Comment	5%	3-5
R/Stata Problem Sets	10%	
Final Project	40%	
Early Ideas	5%	2-3
Proposal	5%	3-6
Revised Proposal	5%	5-8
Final Paper	15%	15-18
Presentation	10%	

## CLASS SCHEDULE

Class	Date	Topics	Assignment Due	Leader
Introduction to Regulation				
1	1/27	What is Regulation?		
2	1/29	Theories of Regulation: Origins		
3	2/3	Econometrics Day		
4	2/5	Theories of Regulation: Modern Theory	Literature Exercise	
5	2/10	Agencies: How We Make Rules		
6	2/12	The Costs and Benefits of Regulation		1
	2/13		Coding PS #1	
7	2/17	Public Participation in Regulation		2
Transportation Regulation				
8	2/19	How to Regulate Transit	Ref. Rep. 1	3
9	2/24	Federalism and Transportation	Early Ideas	4
10	2/26	Deregulation and Transportation		5
	2/27		Coding PS #2	
11	3/3	Transportation: What's New?		
Environmental Regulation				
12	3/5	Environmental Regulation	Ref. Rep. 2	6
13	3/10	Market Methods		7
14	3/12	Costs and Benefits of Conservation		8
	3/13		Coding PS #3	
15	3/24	The Porter Hypothesis	Proposal	9
16	3/26	Environment: Policy Discussion	Policy Brief	
Education Regulation				
17	3/31	Education Regulation	Ref. Rep. 3	10
18	4/2	Student Loans		11
	4/3		Coding PS #4	
19	4/7	Teacher Value Added		12
20	4/9	Education: Policy Discussion	Policy Brief	
Topics in Regulation				
21	4/14	Regulation Today & How to Write a Comment	Revised Proposal	
22	4/16	Regulating Social Media		
23	4/21	Regulating Firearms	Public Comment	
24	4/23	Regulating AI		
Presentations				
25	4/28	Presentations		
26	4/30	Presentations		
	5/6		Final Paper	

## COURSE READINGS

The reading list here may change. Readings marked with (\*) should be completed before the relevant class in order for you to be prepared for discussion. Any starred paper in a given unit is fair game for a referee report. I will provide digital copies of all starred readings. Other papers are available with Harvard logins from journals or from Harvard Hollis.

### *Introduction to Regulation*

#### **What is Regulation?**

(\*) Sunstein, C. R. The Office of Information and Regulatory Affairs: Myths and Realities. *Harvard Law Review* 2013.

(\*) Look through Regulations.gov.

#### **Theories of Regulation: Origins**

(\*) Stigler, G. J. The Theory of Economic Regulation. *The Bell Journal of Economics and Management Science* 1971, 2 (1), 3–21.

Posner, R. Theories of Economic Regulation. *The Bell Journal of Economics and Management Science* 1974, 5 (2), 335–358.

Peltzman, S. *Toward a More General Theory of Regulation*. Working Paper No. 133. Working Paper Series. National Bureau of Economic Research, April 1976.

#### **Theories of Regulation: Modern Theory**

(\*) Peltzman, S. “The Theory of Economic Regulation” after 50 Years. *Public Choice* 2022, 193 (1), 7–21.

Sunstein, C. R. *Interest-Group Theories of Regulation: A Skeptical Note*. April 18, 2021.

#### **Agencies: How We Make Rules**

(\* Chapter 5 only.) McCraw, T. K. *Prophets of Regulation: Charles Francis Adams, Louis D. Brandeis, James M. Landis, Alfred E. Kahn*; ACLS Humanities E-Book; Belknap Press of Harvard University Press: Cambridge, Mass., 1984.

Carpenter, D. P. *Reputation and Power: Organizational Image and Pharmaceutical Regulation at the FDA*; Princeton studies in American politics; University Press: Princeton, 2010.

#### **The Costs and Benefits of Regulation**

(\*) Trebbi, F.; Zhang, M. B. *The Cost of Regulatory Compliance in the United States*. National Bureau of Economic Research November 2022.

Bombardini, M.; Trebbi, F.; Zhang, M. B. *Measuring the Costs and Benefits of Regulation*. National Bureau of Economic Research September 2024.

Sunstein, C. R. *On Neglecting Regulatory Benefits*. Rochester, NY February 20, 2020.

Egorov, G.; Harstad, B. Private Politics and Public Regulation. *Rev. Econ. Stud.* 2017, 84 (4), 1652–1682.

### **Public Participation in Regulation**

(\*) Bertrand, M.; Bombardini, M.; Fisman, R.; Hackinen, B.; Trebbi, F. Hall of Mirrors: Corporate Philanthropy and Strategic Advocacy. *The Quarterly Journal of Economics* 2021, 136 (4), 2413–2465.

Yackee, S. W. *The Politics of Rulemaking in the United States*. Social Science Research Network: Rochester, NY May 1, 2019.

### *Transportation Regulation*

### **How to Regulate Transit**

(\* Volume II Chapter 1 only) Kahn, A. E. *The Economics of Regulation: Principles and Institutions*; MIT Press: Cambridge, Mass., 1988.

Brancaccio, G.; Kalouptsi, M.; Papageorgiou, T.; Rosaia, N. Search Frictions and Efficiency in Decentralized Transport Markets. *The Quarterly Journal of Economics* 2023, 138 (4), 2451–2503.

Joskow, Paul L. 2007. “Chapter 16: Regulation of Natural Monopoly.” In *Handbook of Law and Economics*, vol. 2.

### **Federalism and Transportation**

(\*) Agrawal, D. R.; Brueckner, J. K.; Brühlhart, M. Fiscal Federalism in the Twenty-First Century. *Annual Review of Economics* 2024, 16 (Volume 16, 2024), 429–454.

### **Deregulation and Transportation**

(\*) Rose, N. L. After Airline Deregulation and Alfred E. Kahn. *American Economic Review* 2012, 102 (3), 376–380.

(\*) Card, David. *Deregulation and Labor Earnings in the Airline Industry*. National Bureau of Economic Research, July 1996.

Borenstein, S. Why Can’t US Airlines Make Money? *American Economic Review* 2011, 101 (3), 233–237.

### **Transportation: What’s New?**

(\*) Read recent transportation regulation here. Find and take notes on at least one recent regulation.

### *Environmental Regulation*

### **Environmental Regulation**

(\*) Jacobsen, M. R.; Sallee, J. M.; Shapiro, J. S.; van Benthem, A. A. Regulating Untaxable Externalities: Are Vehicle Air Pollution Standards Effective and Efficient?. *The Quarterly Journal of Economics* 2023, 138 (3), 1907–1976.

Goulder, L. H.; Stavins, R. N. Challenges from State-Federal Interactions in US Climate Change Policy. *American Economic Review* 2011, 101 (3), 253–257.

Bushnell, J. B.; Mansur, E. T. Vertical Targeting and Leakage in Carbon Policy. *American Economic Review* 2011, 101 (3), 263–267.

Fowlie, M.; Holland, S. P.; Mansur, E. T. What Do Emissions Markets Deliver and to Whom? Evidence from Southern California’s NOx Trading Program. *American Economic Review* 2012, 102 (2), 965–993.

### **Environmental Regulation: Market Methods**

(\*) Fowlie, M.; Holland, S. P.; Mansur, E. T. What Do Emissions Markets Deliver and to Whom? Evidence from Southern California’s NOx Trading Program. *American Economic Review* 2012, 102 (2), 965–993.

### **Costs and Benefits of Conservation**

(\*) Anderson, S. T.; Sallee, J. M. Using Loopholes to Reveal the Marginal Cost of Regulation: The Case of Fuel-Economy Standards. *American Economic Review* 2011, 101 (4), 1375–1409.

Shapiro, J. S.; Walker, R. Why Is Pollution from US Manufacturing Declining? The Roles of Environmental Regulation, Productivity, and Trade. *American Economic Review* 2018, 108 (12), 3814–3854.

Blundell, W.; Gowrisankaran, G.; Langer, A. Escalation of Scrutiny: The Gains from Dynamic Enforcement of Environmental Regulations. *American Economic Review* 2020, 110 (8), 2558–2585.

### **The Porter Hypothesis**

(\*) Porter, M. E.; van der Linde, C. Toward a New Conception of the Environment-Competitiveness Relationship. *The Journal of Economic Perspectives* 1995, 9 (4), 97–118.

Lambec, S.; Cohen, M. A.; Elgie, S.; Lanoie, P. The Porter Hypothesis at 20: Can Environmental Regulation Enhance Innovation and Competitiveness? *Review of Environmental Economics and Policy* 2013, 7 (1), 2–22.

Aghion, P.; Bergeaud, A.; Van Reenen, J. The Impact of Regulation on Innovation. *American Economic Review* 2023, 113 (11), 2894–2936.

### *Education Regulation*

### **Education Regulation**

(\* Chapter 18 only) Cantwell, B.; Coates, H.; King, R.; Edward Elgar Publishing. *Handbook on the Politics of Higher Education*; Edward Elgar Pub., Inc.: Northampton, MA, 2018.

Jackson, C. K.; Mackevicius, C. L. What Impacts Can We Expect from School Spending Policy? Evidence from Evaluations in the United States. *American Economic Journal: Applied Economics* 2024, 16 (1), 412–446.

### **Student Loans**

(\*) Cellini, S. R.; Darolia, R.; Turner, L. J. Where Do Students Go When For-Profit Colleges Lose Federal Aid? *American Economic Journal: Economic Policy* 2020, 12 (2), 46–83.

Looney, A.; Yannelis, C. The Consequences of Student Loan Credit Expansions: Evidence from Three Decades of Default Cycles. *Journal of Financial Economics* 2022, 143 (2), 771–793.

Catherine, S.; Pérez Clanton, M.; Yannelis, C. The Distributional Effects of Student Loan Forgiveness: An Update on SAVE and the Covid Moratorium. *National Tax Journal* 2024.

Catherine, S.; Yannelis, C. The Distributional Effects of Student Loan Forgiveness. *Journal of Financial Economics* 2023, 147 (2), 297–316.

### **Teacher Value Added**

(\*) Chetty, R.; Friedman, J. N.; Rockoff, J. E. Measuring the Impacts of Teachers I: Evaluating Bias in Teacher Value-Added Estimates. *American Economic Review* 2014, 104 (9), 2593–2632.

(\*) Skim the comments on this regulation introducing TVA. Focus on Priority 4.

#### *Topics in Regulation*

### **How to Write a Comment**

(\*) So you want to comment on a regulation? Here’s how. Brookings. [\[link\]](#)

Government commenting guidance here.

### **Regulating Social Media**

(\*) Fasel, Mathieu, and Sophie Weerts. 2025. Between Regulation, Pressure and Collaboration: The Public–Private Entanglement in Content Moderation. *Telecommunications Policy* 49 (9): 103024.

Lubin, Nathaniel, Kalie Mayberry, Dylan Moses, Manon Revel, Luke Thorburn, and Andrew West. 2024. “Mapping the Space of Social Media Regulation.” *MIT Science Policy Review*, August 27.

Allcott, Hunt, Luca Braghieri, Sarah Eichmeyer, and Matthew Gentzkow. 2020. “The Welfare Effects of Social Media.” *American Economic Review* 110 (3): 629–76.

Levy, Ro’ee. 2021. “Social Media, News Consumption, and Polarization: Evidence from a Field Experiment.” *American Economic Review* 111 (3): 831–70.

Cen, Sarah H., and Devavrat Shah. 2021. *Regulating Algorithmic Filtering on Social Media*. arXiv:2006.09647. Preprint, arXiv, November 2.

Khan, Shehroze, and James R. Wright. 2022. *Disinformation, Stochastic Harm, and Costly Effort: A Principal-Agent Analysis of Regulating Social Media Platforms*. arXiv:2106.09847. Preprint, arXiv, June 27.

## Regulating Firearms

(\*) Koenig, Christoph, and David Schindler. 2023. Impulse Purchases, Gun Ownership, and Homicides: Evidence from a Firearm Demand Shock. *The Review of Economics and Statistics* 105 (5): 1271–86.

Alsan, Marcella, Joshua Schwartzstein, and Stefanie Stantcheva. *The Universal Pursuit of Safety and the Demand for (Lethal, Non-Lethal or No) Guns*. March 2026.

Anderson, D. Mark, and Joseph J. Sabia. 2018. “Child-Access-Prevention Laws, Youths’ Gun Carrying, and School Shootings.” *The Journal of Law and Economics* 61 (3): 489–524.

## Regulating AI

(\*) Cajueiro, Daniel Oliveira, and Victor Rafael Rezende Celestino. 2026. “A Comprehensive Review of Artificial Intelligence Regulation: Weighing Ethical Principles and Innovation.” *Journal of Economy and Technology* 4 (January): 77–91.

(\* Introduction only) Acemoglu, Daron, and Todd Lensman. 2024. “Regulating Transformative Technologies.” *American Economic Review: Insights* 6 (3): 359–76.

Hoffmann-Riem, Wolfgang. 2020. “Artificial Intelligence as a Challenge for Law and Regulation.” In *Regulating Artificial Intelligence*, edited by Thomas Wischmeyer and Timo Rademacher. Springer International Publishing.

Laufer, Benjamin, Jon Kleinberg, and Hoda Heidari. 2025. *The Backfiring Effect of Weak AI Safety Regulation*. arXiv:2503.20848. Preprint, arXiv, June 17.

Qiu, Tori, Benjamin Laufer, Jon Kleinberg, and Hoda Heidari. 2025. *Modeling the Economic Impacts of AI Openness Regulation*. arXiv:2507.14193. Preprint, arXiv, October 24. <https://doi.org/10.48550/arXiv.2507.14193>.

## Topics Not Covered

### Regulating Agriculture

Lichtenberg, Erik, and David Zilberman. “The Welfare Economics of Price Supports in U.S. Agriculture.” *The American Economic Review* 76, no. 5 (1986): 1135–41.

Gardner, Bruce L. “Economic Analysis of the Regulation of Agriculture.” *American Journal of Agricultural Economics* 61, no. 4 (1979): 732–40.

### Regulating Medicine

Carpenter, D. P. *Reputation and Power: Organizational Image and Pharmaceutical Regulation at the FDA*; Princeton studies in American politics; University Press: Princeton, 2010.

### **Regulating Finance**

Campbell, John Y. Restoring Rational Choice: The Challenge of Consumer Financial Regulation. *American Economic Review* 106, no. 5 (2016): 1–30.