

Economics 2450B: Public Economics and Fiscal Policy II
Dept. of Economics, Harvard University
Spring 2024

Professors Raj Chetty and Xavier Jaravel
Teaching Fellow: Matt Jacob

Course Description

This is the second of two courses offered in the Public Economics sequence at Harvard in 2023-24. This course covers core issues related to the optimal design of government policies, with a special focus on recent empirical work analyzing the determinants of inequality, social mobility, and innovation. The broad goal of the course is to familiarize students with basic empirical methods and theoretical models in applied microeconomics, with a focus on connecting theory to data to inform economic policy. Specific topics include innovation, externalities and public goods, distributional effects of inflation, tax incidence, social insurance, welfare analysis in behavioral models, education and human capital, inequality and economic mobility, and corporate taxation.

Students are strongly encouraged to attend the Public Economics Seminar. The schedule of seminar speakers is available at <https://economics.harvard.edu/seminars-public-economics>.

Meeting Time and Location

Tuesdays and Thursdays 3:00PM-4:15PM, Harvard Hall 101. See schedule on next page for more details.

Course Website

<https://canvas.harvard.edu/courses/127779>

Syllabus, problem sets, problem set solutions, readings, and handouts/lecture slides will be available on the Canvas site.

Students with Documented Disabilities

Students who may need an academic accommodation based on the impact of a disability must initiate the request with the Office of Accessible Education (OAE). Professional staff will evaluate the request with required documentation, recommend reasonable accommodations, and prepare an Accommodation Letter for faculty dated in the current quarter in which the request is made. Students should contact the OAE as soon as possible since timely notice is needed to coordinate accommodations. The OAE is located at 1360 Massachusetts Avenue (<https://aeo.fas.harvard.edu>).

Economics 2450B Schedule

#	Date	Instructor	Topic
1	1/23	Xavier/Raj	Introduction
2	1/25	Xavier	Externalities, Public Goods and the Environment I
3	1/30	Xavier	Externalities, Public Goods and the Environment II
4	2/1	Xavier	Externalities, Public Goods and the Environment III
5	2/6	Xavier	Innovation I
6	2/8	Xavier	Innovation II
7	2/13	Xavier	Innovation III
8	2/15	Xavier	Shift-share Designs
9	2/20	Xavier	Inflation
10	2/22	Xavier	Cost-Benefit Analysis
11	2/27	Raj	Theory of Tax Incidence
12	2/29	Raj	Tax Incidence Applications
13	3/5	Raj	Behavioral Welfare Economics I
14	3/7	Raj	Behavioral Welfare Economics II
	3/12		NO CLASS – Spring Break
	3/14		NO CLASS – Spring Break
	3/19		NO CLASS*
15	3/21	Xavier	Social Insurance I
16	3/26	Xavier	Social Insurance II
17	3/28	Xavier	Social Insurance III / Event Studies
18	4/2	Raj	Human Capital and Education I
19	4/4	Raj	Human Capital and Education II
20	4/9	Raj	Measuring Opportunity and Intergenerational Mobility I
21	4/11	Raj	Measuring Opportunity and Intergenerational Mobility II
22	4/16	Raj	Corporate Taxation I
23	4/18	Raj	Corporate Taxation II
24	4/23	Raj	Corporate Taxation III

*There will be no class on 3/19. We will instead meet from 3pm – 5:30pm on 3/28.

Course Requirements

1. Two problem sets: 25% of grade. They will be assigned on 2/22 (due 3/7), and 4/4 (due 4/18). Problem sets are due on Canvas and no late problem sets will be accepted.
2. Research proposal (RE): 25% of grade. Develop a research proposal that: (1) discusses a question of interest and summarizes relevant literature, (2) proposes a methodology and potential data set to answer the question, and (3) presents preliminary/suggestive results to the extent feasible. Proposals that require access to proprietary data need not have preliminary results, but should have a thorough description of how you plan to implement your proposal once you have access to the data, and illustrative specifications using publicly available data if possible. The proposal should be 3-5 pages in length. Please email Matt by 4/2 to get your proposal approved. The completed proposal is due on 4/23.
3. Final examination: 50% of grade. The date will be set by the Registrar's Office later in the semester. Matt will hold a review section for the final a week before the exam.

Collaboration Policy

You are encouraged to consult with your classmates as you work on problem sets. However, after discussions with peers, make sure that you work through the problem yourself and ensure that any answers you submit for evaluation are the result of your own effort. In addition, you must list the names of students with whom you have collaborated on problem sets.

In contrast, all work on the research proposal should be entirely your own. You must use appropriate citation practices to acknowledge the use of books, articles, websites, lectures, discussions, etc., that you used to complete the proposal.

Professor Jaravel's Office Hours: Tuesdays, 4:30-5:30pm in Littauer 214. Please use the following link to schedule a meeting (students may sign-up for multiple slots).

<https://calendar.google.com/calendar/u/0/appointments/schedules/AcZssZ2z5SOahAprKM-hDCxiWMca3jzQxouENF7ao-VKdqNEH5hnEQF6pkFtuYLrth6t6tWe-uAU2j7G>

Email: X.Jaravel@lse.ac.uk

Professor Chetty's Office Hours: E-mail Anya Calderon <chetty_ea@opportunityinsights.org> to schedule an appointment.

Teaching Fellow: Matt Jacob <mjacob@g.harvard.edu>

Section: Wednesdays, 3:00-4:00pm (Lowell Hall B-13) and Thursdays, 4:30-5:30pm (Sever 110).

Office Hours: Thursdays, 6:00-7:00pm on Zoom (<https://harvard.zoom.us/my/matthewjacob>)

Readings

A subset of readings for the course and background materials is included below.

Lecture slides

Slides and videos for previous iterations of Raj's part (prepared jointly with Gregory A. Bruich) are at: <https://rajchetty.com/research/public-economics-lectures-2nd-year-ph-d-course/>

The slides that have been posted should be used as a general guide rather than as a comprehensive list of the material that will be covered in this year's course. We will post updated slides shortly before each lecture on the course website.

Reading List

Externalities, Public Goods and the Environment

1. Isen, A., Rossin-Slater, M. and Walker, W.R., 2017. "[Every breath you take—every dollar you'll make: The long-term consequences of the clean air act of 1970](#)," *Journal of Political Economy*, 125(3), pp.848-902.
2. P. Samuelson, "[The Pure Theory of Public Expenditure](#)," *Review of Economics and Statistics*, 387-89, 1954.
3. M. Weitzman, "[Prices vs. Quantities](#)," *Review of Economic Studies*, 41(4), October 1974, 477-491.
4. Carleton, T., Jina, A., Delgado, M., Greenstone, M., Houser, T., Hsiang, S., Hultgren, A., Kopp, R.E., McCusker, K.E., Nath, I., Rising, J., Rode, A., Seo, H.K., Viaene, A., Yuan, J., Zhang, A.T., 2022. "[Valuing the Global Mortality Consequences of Climate Change Accounting for Adaptation Costs and Benefits](#)," *Quarterly Journal of Economics*, 137(4), pp.2037-2105.

Innovation

1. Basker, E. and Simcoe, T., 2021. "[Upstream, downstream: Diffusion and impacts of the universal product code](#)," *Journal of Political Economy*, 129(4), pp.1252-1286.
2. Bell, Alexander M., Raj Chetty, Xavier Jaravel, Neviana Petkova, and John Van Reenen. 2019. "[Who Becomes an Inventor in America? The Importance of Exposure to Innovation](#)," *Quarterly Journal of Economics* 134(2): 647-713.
3. Bloom, Nicholas, Charles I. Jones, John Van Reenen, and Michael Webb., 2020. "[Are ideas getting harder to find?](#)," *American Economic Review*, 110(4), pp. 1104-44.
4. Howell, Sabrina T., 2017. "[Financing innovation: Evidence from R&D grants](#)," *American Economic Review*, 107(4), pp. 1136-64.
5. Jaravel, Xavier, 2019. "[The unequal gains from product innovations: Evidence from the us retail sector](#)," *Quarterly Journal of Economics*, 134(2), pp. 715-783.
6. Smith, M., Yagan, D., Zidar, O. and Zwick, E., 2019. "[Capitalists in the Twenty-first Century](#)," *Quarterly Journal of Economics*, 134(4), pp. 1675-1745.

Shift-Share Designs

1. Goldsmith-Pinkham, P., Sorkin, I. and Swift, H., 2020. "[Bartik instruments: What, when, why, and how](#)," *American Economic Review*, 110(8), pp. 2586-2624.
2. Borusyak, K., Hull, P. and Jaravel, X., 2022. "[Quasi-experimental shift-share research designs](#)," *Review of Economic Studies*, 89(1), pp. 181-213.

Inflation

1. Broda, C. and Weinstein, D.E., 2010. "[Product creation and destruction: Evidence and price implications](#)," *American Economic Review*, 100(3), pp. 691-723.
2. Jaravel, X., 2021. "[Inflation inequality: Measurement, causes, and policy implications](#)," *Annual Review of Economics*, 13, pp. 599-629.

Cost-Benefit Analysis

1. Hendren, N. and Sprung-Keyser, B., 2020. "[A unified welfare analysis of government policies](#)," *Quarterly Journal of Economics*, 135(3), pp. 1209-1318.
2. Finkelstein, A. and Hendren, N., 2020. "[Welfare analysis meets causal inference](#)," *Journal of Economic Perspectives*, 34(4), pp. 146-167.

Tax Incidence and Efficiency

1. R. Chetty, A. Looney, and K. Kroft, 2009. "[Salience and Taxation: Theory and Evidence](#)," *American Economic Review* 99(4), pp. 1145-1177, Section V.C.
2. L. Kotlikoff and L. Summers, 1987. "[Tax Incidence](#)," in A. Auerbach and M. Feldstein, *Handbook of Public Economics*, Volume 2, 1043-1092, Sections 0, 1, 2.2.1-2.2.3, 2.3, 3.1, and 4.4.
3. A. Auerbach, 1985. "[The Theory of Excess Burden and Optimal Taxation](#)", in A. Auerbach and M. Feldstein, *Handbook of Public Economics*, Volume 1, 61-127, Sections 1, 2, 3.1, and 4.
4. R. Chetty, 2009. "[Sufficient Statistics for Welfare Analysis: A Bridge Between Structural and Reduced-Form Methods](#)," *Annual Review of Economics*, 1, pp. 451-488, Sections 2 and 6.

Behavioral Welfare Analysis

1. Raj Chetty, John N. Friedman, Søren Leth-Petersen, Torben Heien Nielsen, Tore Olsen, 2014. "[Active vs. Passive Decisions and Crowd-Out in Retirement Savings Accounts: Evidence from Denmark](#)," *Quarterly Journal of Economics*, Volume 129(3), pp. 1141–1219.
2. Chetty, Raj, Adam Looney, and Kory Kroft. 2009. "[Salience and Taxation: Theory and Evidence](#)," *American Economic Review*, 99 (4), pp. 1145-77.

Social Insurance

1. Chetty, R. and Finkelstein, A. 2013. "[Social Insurance: Connecting Theory to Data](#)," *Handbook of Public Economics*, Vol. 5(3), pp. 111-193.
2. Schmieder, J. F., & Von Wachter, T. 2016. "[The effects of unemployment insurance benefits: New evidence and interpretation](#)," *Annual Review of Economics*, 8, pp. 547-581.
3. Kolsrud, J., Landais, C., Nilsson, P., & Spinnewijn, J. 2018. "[The optimal timing of unemployment benefits: Theory and evidence from Sweden](#)," *American Economic Review*, 108(4-5), pp. 985-1033.
4. Hendren, N., Landais, C., & Spinnewijn, J. 2021. "[Choice in Insurance Markets: A Pigouvian Approach to Social Insurance Design](#)," *Annual Review of Economics*, 13, pp. 457-486.
5. Einav, L., Finkelstein, A. and M. Cullen. 2010. "[Estimating Welfare in Insurance Markets Using Variations in Prices](#)," *Quarterly Journal of Economics*, 123(3), pp. 877-921.

Event Studies

1. Borusyak, Kirill, Xavier Jaravel, and Jann Spiess. 2024. "[Revisiting Event-Study Designs: Robust and Efficient Estimation](#)," *Review of Economic Studies*.

Inequality and Intergenerational Mobility

1. R. Chetty, D. Grusky, M. Hell, N. Hendren, R. Manduca, and J. Narang, 2017. "[The Fading American Dream: Trends in Absolute Income Mobility Since 1940](#)," *Science* 356 (6336), pp. 398-406.
2. R. Chetty and N. Hendren, 2018. "The Impacts of Neighborhoods on Intergenerational Mobility [I \(Childhood Exposure Effects\)](#) and [II \(County Level Estimates\)](#)," *Quarterly Journal of Economics*.

Human Capital and Education

1. Raj Chetty, John N. Friedman, Nathaniel Hilger, Emmanuel Saez, Diane Whitmore Schanzenbach, Danny Yagan, 2011. "[How Does Your Kindergarten Classroom Affect Your Earnings? Evidence from Project Star](#)," *The Quarterly Journal of Economics*, Volume 126(4), pp. 1593–1660.
2. Chetty, Raj, John N. Friedman, and Jonah E. Rockoff. 2014. "Measuring the Impacts of Teachers [I \(Evaluating Bias in Teacher Value-Added Estimates\)](#) and [II \(Teacher Value-Added and Student Outcomes in Adulthood\)](#)," *American Economic Review*, 104 (9), pp. 2633-79.

Corporate Taxation

1. R. Chetty and E. Saez, 2010. "[Dividend and Corporate Taxation in an Agency Model of the Firm](#)," *American Economic Journal: Economic Policy* 2(3), pp. 1-31.
2. D. Yagan, 2015. "[Capital Tax Reform and the Real Economy: The Effects of the 2003 Dividend Tax Cut](#)," *American Economic Review* 105(12), pp. 3531–3563.
3. G. Zucman, 2014. "[Taxing across Borders: Tracking Personal Wealth and Corporate Profits](#)," *Journal of Economic Perspectives* 28(4), pp. 121-148.
4. G. Chodorow-Reich, M. Smith, O. Zidar, E. Zwick. [Tax Policy and Investment in a Global Economy](#). *Working Paper*, 2023.

BACKGROUND READING AND REFERENCES

General Public Economics

- A. Atkinson and J. Stiglitz, *Lectures on Public Economics*. McGraw Hill, 1980.
- A. Auerbach and M. Feldstein, eds., [*Handbook of Public Economics*](#) (4 volumes). Amsterdam: North Holland, 1985, 1987, 2002, and 2003.
- R. Chetty. [Public Economics Lecture Videos](#).
- L. Kaplow. *The Theory of Taxation and Public Economics*. Princeton University Press, 2008.
- J.J. Laffont, *Fundamentals of Public Economics*. MIT Press, 1988.
- G. Myles, *Public Economics*. Cambridge University Press, 1995.
- B. Salanie. *The Economics of Taxation*, Cambridge: MIT Press, 2011
- E. Saez Berkeley public economics lecture [notes](#):

References for a simple description of the U.S. tax system and government programs

- J. Gruber, *Public Finance and Public Policy*. Worth Publishers, 2008.
- J. Stiglitz, *Economics of the Public Sector*. Norton, 1999.
- J. Slemrod and J. Bakija. *Taxing Ourselves: A Citizen's Guide to the Debate over Taxes*. MIT Press, 2004.

References for applied econometrics methods used in this course

- A. Angrist and J.S. Pischke, *Mostly Harmless Econometrics*. Princeton University Press, 2008.
- E. Duflo. [Empirical Methods](#). MIT mimeo, 2002.
- E. Duflo, R. Glennerster, and M. Kremer. “[Using Randomization in Development Economics Research: A Toolkit](#),” in T. Schultz and J. Strauss (eds.), *Handbook of Development Economics* Vol 4, 2007, pp3896-62.
- Guido Imbens, and Jeffrey Wooldridge (2007) What's New in Econometrics? [NBER Summer Institute Mini Course](#).