SPI 593j: Combining Theory and Data to Evaluate Policy

Princeton University
Spring 2021, Session II

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(subject: SPI-593j)

Overview

Many key policy debates, including raising top taxes, EITC expansion, and health insurance reform, involve assessing how policy changes would affect economic activity, government budgets, and the distribution of resources. This course will explore several policy areas and focus on applied economic and empirical methods to show how economists combine theory and data to evaluate such policies. The goal is to enhance applied modeling skills and provide students with methods and practical examples of how these policies are evaluated in agencies such as the Congressional Budget Office, the Joint Committee on Taxation, the US Treasury, and state- and municipal-level economic development agencies.

After illustrating how these approaches apply to inequality and intergenerational mobility and covering some key applied tools, we will evaluate local economic development policies, the Tax Cuts and Jobs Act, Ultra-millionaire wealth taxation, capital gains tax reform, enhancing the EITC, and other policies. For each policy, we will usually start with applied theory of how the policy change could affect behavior, and then turn to how to structure the empirical analysis in light of the theory, estimate effects and important parameters, and then assess policy implications.

Course Outline (subject to change)

1. Combining theory and data to understand inequality and intergenerational mobility
    a. Topics: market and non-market causes of inequality, intergenerational mobility, pay disparities, optimization
    b. Methods: linking applied theory to regression, elasticities, calibration, potential outcomes and selection, Roy models, decomposition techniques, counterfactuals

2. Local economic development, place-based policies, Million dollar plants
    a. Topics: regional disparities, state and local business tax incentives, migration decisions, state and local fiscal policy
    b. Methods: Using Rosen-Roback model, event studies, discrete choice

3. Effects of Corporate Tax Reforms at State and National Levels
    a. Topics: Evaluating the Tax Cuts and Jobs Act, firm location decisions, distributional effects of corporate tax cuts, revenue maximizing tax rates
    b. Methods: revenue estimation, minimum distance, linking theory and regression specifications in practice, investment models and user cost of capital

4. Capital Taxation: Mechanical and Behavioral Responses
    a. Topics: wealth disparities, tax avoidance, mechanical and behavioral responses

   b. Methods: Using individual-level data and simulation to do revenue scoring, distributional analysis, using structural methods to model the effects of new policies

5. EITC, Value of Health Insurance, and Effects of Tax and Transfer System on Inequality
   a. Topics: labor force participation, labor supply models, mechanical and behavioral responses, Mandated benefits, Measuring inequality
   b. Methods: Using individual-level data and simulation to do revenue scoring, distributional analysis, behavioral responses, using structural methods to model the effects of new policies, Distributional National Accounts

Office Hours:
Office hours will be by appointment.

Grades:
The course grade will be determined as follows:

Weekly participation	30%
Two small group problem sets	40%
Final small group empirical project	30%

Course Format and Requirements:
The first class will describe the course, illustrate how to connect theory and data to analyze policy issues, and then provide an introductory discussion of recent theory and evidence on inequality and intergenerational mobility. Starting with the second class, each class will begin with a discussion of the following week's problem set, and then move on to that week's content.

Participation
Attendance and participation in class discussion are important components of the class. Students are expected to come to class having read and thought about the materials and problem set.

Two problem sets (small groups of three or fewer students)
Every week at the start of class will begin with a review of a problem set (due at midnight the day before class). You will pick one from the first set (on program evaluation) and one from the second set (on revenue scoring) via a signup at the start of class. [TBD – may provide additional problem set options that examine effects of reducing discrimination and expanding opportunity]

1. Program evaluation and local fiscal policy (signup for a or b)
   a. Million Dollar Plants. Due midnight before 2nd class.
      i. Analysis of selection
      ii. Analysis of effects
      iii. Welfare maximizing million dollar plant policy
   b. State and local tax policy. Due midnight before 3rd class. Please focus on one of the following taxes: corporate, sales, income, estate, or property.
      i. Analysis of selection
      ii. Analysis of effects
      iii. State revenue maximizing rate

2. Revenue Scoring (signup for a, b, c, or d)
    a. Wealth Taxation. Due midnight before 4th class
        i. Mechanical Effects of Warren and Sanders wealth tax
        ii. Behavioral and Avoidance Effects
        iii. Bottom line: how much revenue would the Warren and Sanders wealth tax raise?
    b. Raising Capital Gains Tax Rate to top ordinary rates. Due midnight before 4th class
        i. Mechanical Effects
        ii. Behavioral and Avoidance Effects
        iii. Bottom line: how much revenue would the cap gains tax raise?
        iv. Bonus. How much more would removing step-up-basis raise if the reform was top rates+ step-up?
    c. Distributional Impacts of Reducing Student Loan Debt. Due midnight before 4th class
        i. Mechanical Effects
        ii. Behavioral Effects
        iii. Bottom line: what is the effect on the distribution of wealth? How does this policy affect the racial wealth gap?
    d. EITC Expansion (5K max for single, 10K for married, and expanding to qualifying non-parents). Due midnight before 5th class.
        i. Mechanical Effects of EITC expansion
        ii. Behavioral Effects of EITC expansion
        iii. Bottom line: how much would this EITC expansion cost in terms of tax revenue?

Problem set presentation
Starting with the second week of class, each class session will have students who signed up for that week jointly lead a discussion of the problem set by presenting their analysis and brining up points of discussion. We will schedule these during the first week of class at the break.

Final empirical project (small groups of three or fewer students)
Each student (group) will conduct an empirical analysis of one of the topics listed below. The empirical project will consist of a write up of their results with supporting tables and figures (3-6 pages including exhibits). The topic must be different than the topics that each student selected to work on for the problem sets (there is some overlap in topics). Here are potential topics (subject to change):

1. How much tax revenue could be raised by taxing the rich?

2. How expensive is Medicare for All?

3. Does the EITC pay for itself?

4. How would median worker compensation (wages + benefits) have evolved if health care costs grew with inflation? Or if healthcare costs were Medicare costs per beneficiary adjusted for demographic and cost differences?

5. How much does each state collect in federal tax revenue and how much does it receive in federal spending? How does that vary by tax and program? How has that changed overtime?

6. How will changing demographics affect social security and Medicare revenues and expenditures in the coming decades?

7. How progressive are state+local+federal taxes in the US (measured as tax liability/national income) in recent years? How has this varied over time and by program?

8. How much would New Jersey have to raise taxes or cut spending to prevent it's pension obligations from growing as a share of GDP?

9. How much growth since 1980 went to the top 1% (using panel data rather than repeated cross sections)? How does this vary by type of income? How do health benefits fit in?

10. Tax Reform
    a. What are the revenue, growth, and distributional effects of raising *capital gains* taxes to personal income tax rates?
    b. What are the revenue, growth, and distributional effects of *eliminating step up basis* at death?
    c. What are the revenue, growth, and distributional effects of *extending the EITC* to childless adults?

11. How large are subsidies for housing in the United States? Please include the mortgage interest deduction, imputed rents, capital gains provisions for home sales, and other major provisions.

12. What are the effects on growth and the income distribution of reducing barriers to historically underrepresented groups? Use Hsieh, Hurst, Jones, Klenow (2019) and/or Chetty, van Reenen, Zidar, Zwick (2021) framework to explore this question

13. What is the effect of social security on the racial wealth gap? How would social security reforms affect wealth by group?

14. Other topics (approval from instructor required)

Lecture Schedule and Readings (subject to change):

Week 1: Inequality and Intergenerational Mobility

Katz, Lawrence F., and Kevin M. Murphy. 1992. "Changes in relative wages, 1963–1987: supply and demand factors." *The Quarterly Journal of Economics* 107.1: 35-78. https://doi.org/10.2307/2118323

*Autor, David, 2014. "Skills, education, and the rise of earnings inequality among the `other 99 percent,'" David Autor. *Science* 23 May 2014: Vol. 344 no. 6186 pp. 843-851 http://www.sciencemag.org/content/344/6186/843.full

*Hsieh, Chang-Tai, Erik Hurst, Chad Jones, and Pete Klenow, 2019, "The Allocation of Talent and U.S. Economic Growth, 2019," *Econometrica* 87.5, 1439-1474. http://klenow.com/HHJK.pdf and 10-minute video summary: https://www.youtube.com/watch?v=cBDR0yVXS78

*Chetty, Raj, Nathan Hendren, Jones, Maggie, and Sonya Porter, 2020, "Race and Economic Opportunity: An Intergenerational Perspective" *Quarterly Journal of Economics 135.2, 711-783.* https://academic.oup.com/qje/article/135/2/711/5687353

Chetty, Raj, Nathaniel Hendren, Patrick Kline, and Emmanuel Saez, 2014. "Where is the Land of Opportunity? The Geography of Intergenerational Mobility in the United States." *Quarterly Journal of Economics* 129(4): 1553-1623. https://opportunityinsights.org/paper/land-of-opportunity/

Heckman, Jim critique of Chetty et al 2018. See lecture video II starting at 1:27:00. https://opportunityinsights.org/updates/raj-chetty-addresses-precision-institute-at-national-university/

*Becker, Gary, Scott Kominers, Kevin M. Murphy and Jörg L. Spenkuch, 2018. "A Theory of Intergenerational Mobility." *Journal of Political Economy*.126:S1, S7-S25. https://www.journals.uchicago.edu/doi/abs/10.1086/698759

Murphy, Kevin, and Bob Topel, 2016, "Human capital investment, inequality, and growth," NBER Working Paper No 21841.http://www.nber.org/papers/w21841

*Train, Ken. 2009. Discrete Choice Methods with Simulation. Chapters 1-3 https://eml.berkeley.edu/books/choice2.html

Week 2: Local Economic Development and place-based policies

(*) Greenstone, Michael, and Enrico Moretti, 2004. Bidding for Plants: Does winning a `Million Dollar Plant' increase welfare? https://www.nber.org/papers/w9844

Greenstone, Michael, Richard Hornbeck and Enrico Moretti. 2010. "Identifying Agglomeration Spillovers: Evidence from Winners and Losers of Large Plant Openings." *Journal of Political Economy* 118(3): 536-598.

Bartik, Tim. Making Sense of Incentives: Taming Business Incentives to Promote Prosperity (Upjohn Press, 2019). https://research.upjohn.org/cgi/viewcontent.cgi?article=1277&context=up_press

Giroud, Xavier and Joshua Rauh. 2019. "State Taxation and the Reallocation of Business Activity: Evidence from Establishment-Level Data." *Journal of Political Economy*.

Holmes, Thomas. 1998. "The Effect of State Policies on the Location of Industry: Evidence from State Borders." *Journal of Political Economy* 106(4): 667-705.

(*) Kline, Pat, and Enrico Moretti, 2014, "People, Places, and Public Policy: Some Simple Welfare Economics of Local Economic Development Policies," *Annual Review of Economics,* August, *629-662.*
http://www.annualreviews.org/doi/full/10.1146/annurev-economics-080213-041024

Kline, Pat, and Enrico Moretti, 2013, "Local Economic Development, Agglomeration Economies, and the big push: 100 years of evidence from the Tennessee Valley Authority" *Quarterly Journal of Economics,* 129 (February), pp. 275-331.
https://eml.berkeley.edu//~pkline/papers/TVA_web.pdf

(*) Slattery, Cailin, and Owen Zidar, 2019, "Evaluating State and Local Business Tax Incentives". *Journal of Economic Perspectives.*

Kline, Patrick. 2010. "Place Based Policies, Heterogeneity, and Agglomeration." *American Economic Review* 100(2): 383–387.

Avenancio-Leon, Carlos, and Troup Howard, 2020, "The Assessment Gap: Racial Inequalities in Property Taxation"
http://www.trouphoward.com/uploads/1/2/7/7/127764736/the_assessment_gap_-_racial_inequalities_in_property_taxation.pdf

Derenoncourt, Ellora, 2019, "Can you move to opportunity? Evidence from the Great Migration" https://www.dropbox.com/s/l34h2avpjomylrb/derenoncourt_2019.pdf?dl=0

Supplemental:
Rosen, Sherwin. 1979. "Wage-Based Indexes of Urban Quality of Life." In *Current Issues in Urban Economics*, eds. Peter Mieszkowski and Mahlon Straszheim. Baltimore: Johns Hopkins University Press.

Roback, Jennifer. 1982. "Wages, Rents, and the Quality of Life." *Journal of Political Economy* 90(6): 1257-1278.

Albouy, David. 2009. "The Unequal Geographic Burden of Federal Taxation." *Journal of Political Economy* 117(4): 635-667

Gyourko, Joseph and Joseph Tracy. 1989. "The Importance of Local Fiscal Conditions in Analyzing Local Labor Markets." *Journal of Political Economy* 97(5): 1208–1231.

Murphy, Kevin M., Andrei Shleifer and Robert Vishny. 1989. "Industrialization and the Big Push." *Journal of Political Economy* 97(5): 1003-1026.

Week 3: Tax Cuts and Jobs Act and State Corporate Taxes

(*) Suárez Serrato, Juan Carlos, and Owen Zidar, "Who Benefits from State Corporate Tax Cuts? A Local Labor Market Approach with Heterogeneous Firms" *American Economic Review*, 106(9): 2582-2624, September 2016.
https://www.aeaweb.org/articles?id=10.1257/aer.20141702

(*) Barro, Robert and Jason Furman, 2018, "The macroeconomic effects of the 2017 tax reform," *Brookings Papers on Economic Activity.* https://www.brookings.edu/wp-content/uploads/2018/03/4_barrofurman.pdf

Council of Economic Advisers, 2017. "Corporate Tax Reform and Wages: Theory and Evidence"
https://www.whitehouse.gov/sites/whitehouse.gov/files/documents/Tax%20Reform%20and%20Wages.pdf

(*) Gale, Bill, Hilary Gelfond, Aaron Krupkin, Mark J. Mazur, Eric Toder. 2018. "Effects of the Tax Cuts and Jobs Act: A Preliminary Analysis" *Tax Policy Center Paper. https://www.taxpolicycenter.org/publications/effects-tax-cuts-and-jobs-act-preliminary-analysis/full*

Joint Committee on Taxation, December 2017.

- Macroeconomic Analysis Of The Conference Agreement For H.R. 1, The "Tax Cuts And Jobs Act"
- Distributional Effects Of The Conference Agreement For H.R.1, The "Tax Cuts And Jobs Act"
- Estimated Budget Effects Of The Conference Agreement For H.R.1, The "Tax Cuts And Jobs Act"
- https://www.jct.gov/publications.html?func=select&id=76

Gravelle, Jane, and Donald Marples (2019). "The Economic Effects of the 2017 Tax revision: Preliminary Observations" *Congressional Research Service. #R45736.* https://fas.org/sgp/crs/misc/R45186.pdf

Week 4: Capital Taxation

(*) Saez, Emmanuel and Gabriel Zucman, 2019, Scoring of Warren Wealth Tax Proposal
https://eml.berkeley.edu/~saez/saez-zucman-wealthtax-warren-online.pdf

(*) Sarin, Natasha and Larry Summers, 2019, "A `wealth tax' presents a revenue estimation puzzle," *Washington Post*.
https://www.washingtonpost.com/opinions/2019/04/04/wealth-tax-presents-revenue-estimation-puzzle/

Saez, Emmanuel and Gabriel Zucman, 2019, "Response to Summers and Sarin, `A wealth tax presents a revenue estimation puzzle,' Washington Post, April 4"
http://gabriel-zucman.eu/files/saez-zucman-responseto-summers-sarin.pdf

(*) Sarin, Natasha and Larry Summers, 2019, "Be very skeptical about how much revenue Elizabeth Warren's wealth tax could generate" *Washington Post*
https://www.washingtonpost.com/opinions/2019/06/28/be-very-skeptical-about-how-much-revenue-elizabeth-warrens-wealth-tax-could-generate/

(**) Saez, Emmanuel, and Gabriel Zucman, 2019, Progressive Wealth Taxation. *Brookings Papers on Economic Activity.* September.
https://www.brookings.edu/bpea-articles/progressive-wealth-taxation/

Saez, Emmanuel and Gabriel Zucman, 2016, "Wealth Inequality in the United States Since 1913: Evidence from Capitalized Income Tax Data," *Quarterly Journal of Economics,* 131(2): 519-578.
http://gabriel-zucman.eu/files/SaezZucman2016QJE.pdf

(*) Saez, Emmanuel and Gabriel Zucman, 2019, "How would a progressive wealth tax work? Evidence from the economics literature https://eml.berkeley.edu/~saez/saez-zucman-wealthtaxobjections.pdf

Kopczuk, Wojciech, 2015, "What do we know about the evolution of top wealth shares in the united states? *Journal of Economic Perspectives,* 29(1): 47-66.
https://www.aeaweb.org/articles?id=10.1257/jep.29.1.47

Smith, Matt, Owen Zidar, and Eric Zwick, 2019, "Top Wealth In the United States: New Estimates and Implications," working paper.

Joint Committee on Taxation, 2015, "History, Present Law, and Analysis of the Federal Wealth Transfer Tax System,"
https://www.jct.gov/publications.html?func=startdown&id=4744

(*) Jakobsen, Katrine, and Kristian Jakobsen, Henrik Kleven, and Gabriel Zucman, 2019, "Wealth Taxation and Wealth Accumulation: Evidence from Denmark," NBER working paper 24371. https://www.nber.org/papers/w24371

(*) Agersnap, Ole, and Owen Zidar, 2020, "The Tax Elasticity of Capital Gains and Revenue Maximizing Rates," *American Economic Review: Insights*. https://scholar.princeton.edu/sites/default/files/zidar/files/capgains.pdf

(**) Sarin, Natasha, Larry Summers, Owen Zidar, Eric Zwick (2020), "Rethinking how we score capital gains tax reform," working paper.

Week 5 and 6: EITC, Health Benefits, and Effects of Tax and Transfer System on Inequality

Kleven, Henrik, 2019. "The EITC Reconsidered," working paper.

Rothstein, Jesse, 2010, "Is the EITC as Good as an NIT? Conditional Cash Transfers and Tax Incidence." *American Economic Journal: Economic Policy* 2 (1), February, p.p. 177-208. http://pubs.aeaweb.org/doi/pdfplus/10.1257/pol.2.1.177

Bastian, Jacob, and Maggie Jones. 2019. "Does the EITC pay for itself? Effects on Tax Revenue and Public Assistance Spending," Working paper. http://jacobbastian.squarespace.com/research

Einav, Liran, and Amy Finkelstein, 2011. "Selection in Insurance Markets: Theory and Empirics in Pictures." *Journal of Economic Perspectives*. 25 (1): 115-138. http://economics.mit.edu/files/5810

Finkelstein, Amy, and Nathaniel Hendren and Erzo F.P. Luttmer. 2018. "The Value of Medicaid: Interpreting Results from the Oregon Health Insurance Experiment" *Journal of Political Economy*, forthcoming. http://economics.mit.edu/files/15248

Finkelstein, Amy, Nathaniel Hendren, Mark Shepard. 2019. "Subsidizing Health Insurance for Low Income Adults: Evidence from Masschusetts" *American Economic Review*, 109(4): 1530-67. https://pubs.aeaweb.org/doi/pdfplus/10.1257/aer.20171455

(*) Piketty, Thomas, Emmanuel Saez, and Gabriel Zucman, 2018, "Distributional National Accounts: Methods and Estimates for the United States," *Quarterly Journal of Economics*, 2018, 133(2): 553-609. http://gabriel-zucman.eu/files/PSZ2018QJE.pdf

(*) Auten, Gerald, and David Splinter (2019) "Income Inequality in the United States: Using Tax Data to Measure Long term trends." http://davidsplinter.com/AutenSplinter-Tax_Data_and_Inequality.pdf

Supplemental:

Finkelstein, Amy, 2019. "Welfare Analysis Meets Causal Inference: A Suggested Interpretation of Hendren," MIT teaching note. https://economics.mit.edu/files/16272

Hendren, Nathan. 2016. "The Policy Elasticity." *Tax Policy and the Economy* 30. NBER Working Paper #19177

Hendren, Nathan and Ben Spring-Keyser. 2019. "A United Welfare Analysis of Government Policies." http://www.policyinsights.org and https://scholar.harvard.edu/files/hendren/files/welfare_vnber.pdf

Mogstad, Magne, and Alexander Torgovitsky, 2018. "Identification and Extrapolation of Causal Effects with Instrumental Variables." *Annual Review of Economics*, 10 (1), pp. 577–613. https://doi.org/10.1146/annurev-economics-101617-041813

Chandra, Amitabh, and Douglas O. Staiger, 2007. "Productivity Spillovers in Health Care: Evidence from the Treatment of Heart Attacks." *Journal of Political Economy*115:1, 103-140
https://www.journals.uchicago.edu/doi/10.1086/512249

Walters, Chris, 2018. "The Demand for Effective Charter Schools" *Journal of Political Economy.* 126.6. https://www.journals.uchicago.edu/doi/abs/10.1086/699980

Kline, Patrick, and Chris Walters, 2016, "Evaluating Public Programs with close substitutes: the case of Head Start." *Quarterly Journal of Economics.* 131(4): 1795-1848. https://doi.org/10.1093/qje/qjw027

Finkelstein, Amy, Matt Gentzkow, Heidi Williams, 2016. "Sources of Geographic Variation in Health Care: Evidence from Patient Migration." *Quarterly Journal of Economics*. 131(4): 1681-1726. http://web.stanford.edu/~gentzkow/research/movers.pdf

Einav, Liran, Amy Finkelstein, and Paul Schrimpf. 2017. "Bunching at the kink: implications for spending responses to health insurance contracts." *Journal of Public Economics* 146: 27-40.
http://economics.mit.edu/files/12401

Murphy, Kevin M. and Robert H. Topel. 2006. "The Value Of Health And Longevity," *Journal of Political Economy*, 2006, v114 (No. 5, Oct), 871-904.
https://www.journals.uchicago.edu/doi/10.1086/508033

Einav, Liran, Amy Finkelstein, and Pietro Tebaldi. 2019. "Market Design in Regulated Health Insurance Markets: Risk Adjustment vs. Subsidies" Working paper.
http://economics.mit.edu/files/15313

Diamond, Peter, and Emmanuel Saez. 2011. "The Case for a Progressive Tax: From Basic Research to Policy Recommendations." *Journal of Economic Perspectives*, 25(4): 165-90. http://pubs.aeaweb.org/doi/pdfplus/10.1257/jep.25.4.165

Saez, Emmanuel. 2001. "Using Elasticities to derive optimal tax rates." *Review of Economic Studies.* 68:205-229. https://eml.berkeley.edu/~saez/derive.pdf