

Economics 2810a  
Fall 2020 Semester

Department of Economics  
Harvard University

Lawrence F. Katz  
Littauer 224  
[lkatz@harvard.edu](mailto:lkatz@harvard.edu)

**LABOR ECONOMICS**  
**PRELIMINARY EC 2810a SYLLABUS for Fall 2020**  
Monday, Wednesday 10:30-11:45 AM

This is a graduate course in labor economics, appropriate for graduate students in the Department of Economics and other students with preparation in microeconomic theory and econometrics. The course teaches core topics in the field of labor economics as well as empirical methods for applied microeconomic analysis.

The syllabus contains readings of two sorts. The first, designated by an asterisk, will be emphasized in the lectures. Readings with no asterisk may be discussed in lectures briefly but are primarily offered as a guide to the literature.

Many comprehensive (although some are rather dated) surveys of key topics in labor economics are available in the *Handbook of Labor Economics*, published by Elsevier Science and available on-line from Science Direct through the Harvard Libraries. Volumes 1 and 2 from 1986 are edited by Orley Ashenfelter and Richard Layard. Volume 3 (in three volumes) from 1999 and Volume 4 (in two volumes) from 2010 are edited by Orley Ashenfelter and David Card. Useful undergraduate textbooks in labor economics for introductory background reference include George Borjas, *Labor Economics*, 8<sup>th</sup> Edition, McGraw Hill, 2019; and Derek Laing, *Labor Economics*, Norton, 2011. An existing graduate level textbook is Pierre Cahuc, Stéphane Carcillo, and André Zylberberg, *Labor Economics*, Second Edition, MIT Press, 2014. And a superb guide (with attitude) to the key empirical methods used in labor economics is Joshua Angrist and Jörn-Steffen Pischke, *Mostly Harmless Econometrics*, Princeton University Press, 2009.

Grading: Students will prepare a final examination (50%), a research paper/proposal (40%), and a referee report (10%). The referee report should be a serious but brief (2 to 5 page) critical evaluation of one (or two related) readings without an asterisk on the syllabus or a recent NBER working paper in labor economics available at <http://www.nber.org/papersbyprog/LS.html>. The referee report is due by October 9. A brief initial research proposal for the research paper should be turned in by November 6. Students are expected to have a virtual meeting with Prof. Katz and/or the TF John Tebes <jtebes@g.harvard.edu> to discuss paper topics before that date. The full research paper (or extended paper proposal) is due on December 9. The final exam will take place in exam period at a mutually agreed upon time and date during December 10-19 with the official exam time being the default.

**ECONOMICS 2810a: Expected Lecture Schedule for Fall 2020**

**I. Human Capital and Schooling**

- Sep 2 – Lecture 1: Course Introduction; Human Capital Investment
- Sep 7 – Lecture 2: Human Capital Schooling Models; Estimating Returns to Schooling I
- Sep 9 – Lecture 3: Estimating the Returns to Schooling II and Extensions
- Sep 14 – Lecture 4: Signaling and Learning Models of Education and Earnings
- Sep 16 – Lecture 5: The Education Production Function and Returns to School Quality

**II. Program Evaluation and Applications**

- Sep 21 – Lecture 6: Program Evaluation I
- Sep 23 – Lecture 7: Program Evaluation II
- Sep 28 – Lecture 8: Evaluating School Policies
- Sep 30 – Lecture 9: Neighborhood and Peer Effects

**III. Immigration, Self-Selection and Equalizing Differences Models**

- Oct 5 – Lecture 10: Self-Selection, Roy Model, Immigration and Assimilation
- Oct 7 – Lecture 11: Theory of Equalizing Differences and Applications
- Oct 12 – No Class – Indigenous Peoples' Day
- Oct 14 – Lecture 12: Spatial Equilibrium Models and Applications

**IV. Jobs, Matching, Labor Market Frictions, and Segmented Labor Markets**

- Oct 19 – Lecture 13: Matching, Mobility, and Life-Cycle Earnings
- Oct 21 – Lecture 14: Labor Market Frictions and Segmented Labor Markets
- Oct 26 – Lecture 15: Firm and Industry Wage Differentials I
- Oct 28 – Lecture 16: Firm and Industry Wage Differentials II

**V. Labor Demand, Unions, and Minimum Wages**

- Nov 2 – Lecture 17: Labor Demand Models; Unions
- Nov 4 – Lecture 18: Labor Demand Applications: Minimum Wages
- Nov 9 – Lecture 19: Labor Demand Applications: Monopsony Power

**VI. Changes in the Wage Structure and Wage Inequality**

- Nov 11 – Lecture 20: Understanding and Decomposing Changes in the Wage Structure
- Nov 16 – Lecture 21: Supply-Demand Models of Changes in the Wage Structure
- Nov 18 – Lecture 22: Technological Change and the Wage Structure I
- Nov 23 – Lecture 23: Technological Change and the Wage Structure II
- Nov 25 – No Class – Thanksgiving Break
- Nov 30 – Lecture 24: Trade, Immigration, and the Wage Structure
- Dec 2 – Lecture 25: Labor Market Institutions, Firms, and the Wage Structure

Background Reading

- \* A. Smith. (1776) *The Wealth of Nations*, Chapter 10 of Book I.
- G. Becker. (1975) *The Economic Approach to Human Behavior*, U. of Chicago Press, pp. 3-14.
- D. Kahneman, J.L. Knetsch and R.H. Thaler. (1986) "Fairness as a Constraint on Profit Seeking: Entitlements in the Market," *American Economic Review*, 76 (September), 728-41.
- J.D. Angrist and A.B. Krueger. (1999) "Empirical strategies in labor economics," in the *Handbook of Labor Economics*, Vol. 3A, O. Ashenfelter and D. Card, eds., Elsevier, 1278-1366.
- J.D. Angrist and J.S. Pischke. (2009) *Mostly Harmless Econometrics*, Princeton University Press.

**I. Human Capital**

I.a. Human Capital Investment: Theory and Basic Facts (Lectures 1 and 2)

- \* R. Willis. (1986) "Wage Determinants: A Survey and Reinterpretation of Human Capital Earnings Functions," *Handbook of Labor Economics*, Vol. 1, Elsevier, 1986, pp. 525-602.
- \* J. Mincer. (1974) *Schooling, Experience, and Earnings*. New York: Columbia University Press for the National Bureau of Economic Research, pp. 7-22.
- \* T. Lemieux. (2006) "The Mincer Equation Thirty Years after *Schooling, Experience and Earnings*," [http://www.economics.ubc.ca/files/2013/05/pdf\\_paper\\_thomas-lemieux-mincer-equation.pdf](http://www.economics.ubc.ca/files/2013/05/pdf_paper_thomas-lemieux-mincer-equation.pdf).
- \* M. Bhuller, M. Mogstad, and K. Salvanes. (2017) "Life-Cycle Earnings, Education Premiums and Internal Rates of Returns," September; *Journal of Labor Economics* 35(4), 993-1030.
- \* S. Jayachandran and A. Lleras-Muney. (2009) "Life Expectancy and Human Capital Investment: Evidence from Maternal Mortality Declines," *QJE* 124 (February), 349-98.
- R. Jensen. (2010) "The (Perceived) Returns to Education and the Demand for Schooling," *QJE* 125 (May), 515-48.
- G. Becker. (1993) *Human Capital*, 3rd ed. Chicago: University of Chicago Press, pp. 1-66.
- K. Lang. (1993) "Ability Bias, Discount Rate Bias and the Return to Education," *Boston University mimeo*.
- S. Bowles, H. Gintis, and M. Osborne. (2001) "The Determinants of Individual Earnings: A Behavioral Approach," *Journal of Economic Literature* 39 (December), 1136-76.
- F. Cunha and J. Heckman. (2007). "The Technology of Skill Formation," *AER* 97 (May), 31-47.

Y. Ben-Porath. (1967) "The Production of Human Capital and the Life Cycle of Earnings," *Journal of Political Economy*, 75 (August), 352-65.

E. Lazear. (2009) "Firm-Specific Human Capital: A Skill Weights Approach," *JPE* 117 (Oct).

L. Bursztyn and L. Coffman. (2012) "The Schooling Decision: Family Preferences, Intergenerational Conflict, and Moral Hazard in the Brazilian *Favelas*," *JPE* 120(3), 359-97.

E. Bettinger *et al.* (2012) "The Role of Application Assistance and Information in College Enrollment Decisions: Results from the H&R Block FAFSA Experiment," *QJE* 127 (August), 1205-42.

S. Dynarski. (2003) "Does Aid Matter? Measuring the Effect of Student Aid on College Attendance and Completion." *American Economic Review* 93 (March), 279-88.

R. Abramitzky and V. Lavy. (2014) "How Responsive is Investment in Schooling to Changes in Redistributive Policies and Returns?" *Econometrica* 82 (July), 1241-72.

K. Murphy and F. Welch. (1990) "Empirical Age-Earnings Profiles," *JOLE* 8 (April), 202-229.

K. Stange. (2012) "An Empirical Examination of the Option Value of College Enrollment," *AEJ: Applied Economics* 4 (January), 49-84.

D. Acemoglu and J. Pischke. (1998) "Why Do Firms Train? Theory and Evidence." *Quarterly Journal of Economics*, 113 (February), 79-119.

I.b. Estimating the Rate of Return to Schooling on Earnings and Other Outcomes (Lectures 2 and 3)

- \* D. Card. (1999) "The Causal Effect of Education on Earnings," in the *Handbook of Labor Economics*, Vol. 3A, O. Ashenfelter and D. Card, eds. Amsterdam: Elsevier Science
- \* J. Angrist and A. Krueger. (1991) "Does Compulsory School Attendance Affect Schooling and Earnings?" *Quarterly Journal of Economics*, 106 (November), 979-1015.
- \* Z. Griliches. (1979) "Sibling Models and Data in Economics: Beginnings of a Survey" *Journal of Political Economy (supplement)*, s37-s64.
- \* O. Ashenfelter and C. Rouse. (1998) "Income, Schooling and Ability: Evidence from a New Sample of Identical Twins," *Quarterly Journal of Economics* 113 (February), 253-84.
- \* T. Kane, C. Rouse, and D. Staiger. (1999) "Estimating Returns to Schooling When Schooling is Misreported." NBER WP No. 7235, July.
- \* S. Zimmerman. (2014) "The Returns to College Admission for Academically Marginal Students," *Journal of Labor Economics* 32(4), 711-54.

- \* P. Oreopoulos and K. Salvanes. (2011) "Priceless: The Nonpecuniary Benefits of Schooling," *Journal of Economic Perspectives* 25(1), 159-84.
- \* M. Stephens and D. Yang. (2014) "Compulsory Education and the Benefits of Schooling," *AER* 104(6), 1777-92.
- D. Card. (2001) "Estimating the Return to Schooling: Progress on Some Persistent Econometric Problems," *Econometrica* 69 (September), 1129-60.
- O. Ashenfelter, C. Harmon and H. Oosterbeek. (1999) "A Review of Estimates of the Schooling/Earnings Relationship, with Tests for Publication Bias," *Labour Economics*, 6, 453-70.
- A. Leigh and C. Ryan. (2008) "Estimating Returns to Education Using Different Natural Experiment Techniques," *Economics of Education Review* 27, 149-60.
- Ö. Sandewall, D. Cesarini and M. Johannesson. (2014). "The Co-Twin Methodology and Returns to Schooling – Testing a Critical Assumption," *Labour Economics* 26 (January), 1-10.
- J. Bound, D. Jaeger, and R. Baker. (1995) "Problems with Instrumental Variables Estimation When the Correlation between the Instruments and the Endogenous Explanatory Variable Is Weak," *Journal of the American Statistical Association*, 90.430 (June), 443-50
- K. Buckles and D. Hungerman. (2013) "Season of Birth and Later Outcomes: Old Questions, New Answers," *RESTAT* 95(3), 711-24.
- E. Duflo (2001). "Schooling and Labor Market Consequences of School Construction in Indonesia: Evidence from an Unusual Policy Experiment," *AER* 91 (December), 795-813.
- L. Kirkeboen, E. Leuven, and M. Mogstad. (2016) "Field of Study, Earnings, and Self-Selection," *QJE* 131(3): 1057-1111.
- M. Grosz. (2019) "The Returns to a Large Community College Program: Evidence from Admissions Lotteries," *AEJ: Economic Policy*, forthcoming.
- J. Denning, B. Marx, and L. Turner. (2019) "ProPelled: The Effects of Grants on Graduation, Earnings and Welfare," *AEJ: Applied Economics* 11(3), 193-224.
- J. Currie and E. Moretti. (2003) "Mother's Education and the Intergenerational Transmission of Human Capital: Evidence from College Openings," *QJE* 118 (November), 1495-1532.
- A. Lleras-Muney. (2005) "The Relationship between Education and Adult Mortality in the United States," *Review of Economic Studies* 72 (January).
- M. Nybom (2017) "The Distribution of Lifetime Returns to College," *JOLE* 35(4), 903-52.

I.c. Signaling, Screening, and Learning Models of Education and Earnings (Lecture 4)

- \* A.M. Spence. (1973) "Job Market Signaling," *Quarterly Journal of Economics* 87 (Aug), 355-74.
  - \* K. Bedard. (2001) "Human Capital Versus Signaling Models: University Access and High School Dropouts," *Journal of Political Economy*, 109 (August), 749-775.
  - \* P. Martorell and D. Clark. (2014) "The Signaling Value of a High School Diploma," *JPE* 122(2), 283-318.
  - \* J. Altonji and C. Pierret. (2001), "Employer Learning and Statistical Discrimination," *QJE* 116(1), 313-50.
- H.S. Farber and R. Gibbons. (1996) "Learning and Wage Dynamics," *Quarterly Journal of Economics*, 111.4 (November), 1007-47.
- F. Lange. (2007) "The Speed of Employer Learning," *JOLE*, 25(1), 1-35.
- U. Schönberg. (2007). "Testing for Asymmetric Employer Learning." *JOLE* 25(4), 651–691.
- L. Kahn and F. Lange. (2014) "Employer Learning, Productivity, and the Earnings Distribution: Evidence from Performance Measures," *RESTUD* 81(4), 1575-1613.
- G. Aryal, M. Bhuller, and F. Lange. (2019) "Signaling and Employer Learning with Instruments," NBER WP No. 25885, May.
- J. Stiglitz. (1975) "The Theory of Screening, Education, and the Distribution of Income," *American Economic Review*, 65 (June), 283-300.
- K. Lang and D. Kropp. (1986) "Human Capital vs. Sorting: The Effects of Compulsory Schooling Laws," *Quarterly Journal of Economics*, 101 (August), 609-24.
- J. Tyler, R. Murnane, and J. Willett. (2000) "Estimating the Impact of the GED on the Earnings of Young Dropouts Using a Series of Natural Experiments," *QJE*, 115 (May), 431-69.
- P. Arcidiacono, P. Bayer, and A. Hizmo. (2010) "Beyond Signaling and Human Capital: Education and the Revelation of Ability," *AEJ: Applied Economics* 2(4), 76-104.
- K. Lang and M. Manove. (2011) "Education and Labor Market Discrimination," *AER* 101(4), 1467-96.
- W.B. McLeod, E. Riehl, J. Saavedra, and M. Urquiola. (2017) "The Big Sort: College Reputation and Labor Market Outcomes," *AEJ: Applied Economics* 9(3), 223-61.
- D. Austen-Smith and R. Fryer. (2005) "An Economic Analysis of 'Acting White'," *QJE* 120(2), 551-83.

I.d. Estimating the Labor Market Returns to School Quality and School Inputs (Lecture 5)

- \* D. Card and A. Krueger. (1992) "Does School Quality Matter? Returns to Education and Characteristics of Public Schools in the United States" *JPE*, 100 (February), 1-40.
- \* C. Jackson, R. Johnson, and C. Persico. (2016) "The Effects of School Spending on Educational and Economic Outcomes: Evidence from School Finance Reforms," *QJE* 131(1): 157-218.
- \* R. Chetty, J. Friedman, N. Hilger, E. Saez, D. Schanzenbach, and D. Yagan. (2011) "How Does Your Kindergarten Classroom Affect Your Earnings? Evidence from Project STAR" *Quarterly Journal of Economics* 126 (November), 1593-1660.
- E. Lazear. (2001) "Education Production," *Quarterly Journal of Economics* 116 (Aug.), 777-803.
- D. Card and A. Krueger. (1992) "School Quality and Black-White Relative Earnings: A Direct Assessment," *QJE* 107 (February), 151-200.
- D. Card and A. Krueger. (1996) "Labor Market Effects of School Quality: Theory and Evidence," NBER WP 5450, February.
- J. Heckman, A. Layne-Farrar, and P. Todd. (1996) "Human Capital Pricing Equations with an Application to Estimating the Returns to School Quality" *RESTAT* 78 (Nov), 562-610.
- E. Hanushek and L. Woessman. (2008) "The Role of Cognitive Skills in Economic Development," *Journal of Economic Literature* 46 (September), 607-68.
- S. Dale and A. Krueger. (2002) "Estimating the Payoff to Attending a More Selective College: An Application of Selection on Observables and Unobservables," *QJE* 117 (Nov), 1491-1527.
- J. Bound and S. Turner. (2007) "Cohort Crowding: How Resources Affect Collegiate Attainment," *Journal of Public Economics* (June), 877-899.
- C. Pop-Eleches and M. Urquiola. (2013) "Going to a Better School: Effects and Behavioral Responses." *American Economic Review* 103 (4), 1289-1324.
- C. Jackson. (2018) "Does School Spending Matter? New Evidence on an Old Question," NBER WP No. 25368, December.

**II. Program Evaluation and Applications**

II.a. Program Evaluation: The Basics and Training Programs (Lecture 6)

- \* J.D. Angrist, G.W. Imbens, and D.B. Rubin. (1996) "Identification of Causal Effects Using Instrumental Variables," *Journal of the American Statistical Association*, 91.434 (June), 444-55.

- \* R. LaLonde. (1986) "Evaluating the Econometric Evaluations of Training Programs with Experimental Data," *American Economic Review* 76 (September), 604-620.
- \* R. Dehejia and S. Wahba. (1999) "Causal Effects in Non-Experimental Studies: Re-Evaluating the Evaluation of Training Programs," *JASA*, 94.448 (December), 1053-1062.
- \* E. Oster. (2016) "[Unobservable Selection and Coefficient Stability: Theory and Evidence](#)," *JBES*, forthcoming.
- J. Altonji, T. Elder, and C. Taber. (2005) "Selection on Observed and Unobserved Variables: Assessing the Effectiveness of Catholic Schools," *JPE* 113(1), 151-84.
- J. Angrist and J. Pischke. (2009) *Mostly Harmless Econometrics*, especially chs. 2, 4, 5, and 6.
- M. Mogstad and A. Torgovitsky. (2018) "Identification and Extrapolation with Instrumental Variables," *Annual Review of Economics* 10, 577-613.
- J. Heckman and E. Vytlacil. (2005) "Structural Equations, Treatment Effects and Econometric Policy Evaluation," *Econometrica* 73(3), 669-738.
- P. Kline and C. Walters. (2019) "On Heckits, LATE, and Numerical Equivalence," *Econometrica* 87(2), 677-96.
- G. Imbens and T. Lemieux. (2008) "Regression Discontinuity Designs: A Guide to Practice," *Journal of Econometrics* 142 (February), 615-35.
- R. Chetty. (2009) "Sufficient Statistics for Welfare Analysis: A Bridge between Structural and Reduced Form Models," [http://www.rajchetty.com/chettyfiles/suffstat\\_ar.pdf](http://www.rajchetty.com/chettyfiles/suffstat_ar.pdf).
- D. Card, J. Kluve, and A. Weber. (2015) "What Works? A Meta Analysis of Recent Labor Market Program Evaluations," NBER WP No. 21431, July.
- O. Ashenfelter and D. Card. (1985) "Using the Longitudinal Structure of Earnings to Estimate the Effect of Training Programs on Earnings," *RESTAT*, 67 (November), 648-60.
- S. Freyaldenhoven, C. Hansen, and J. Shapiro (2019) "Pre-Event Trends in Panel Event-Study Design," *AER*; <http://www.brown.edu/Research/Shapiro/pdfs/prerends.pdf>.

II.b. Program Evaluation II: External Validity, Spillovers, and General Equilibrium Effects (Lecture 7)

- \* L. Bursztyrn and R. Jensen. (2015) "How Does Peer Pressure Affect Educational Investments?" *QJE* 130(3), 1329-67.
- \* K. Muralidharan and V. Sundararaman. (2015) "The Aggregate Effects of School Choice: Evidence from a Two-Stage Experiment in India." *QJE* 130(3), 1011-66.



- \* B. Crépon, E. Duflo, M. Gurgand, R. Rathelot, P. Zamora. (2013) “Do Labor Market Policies Have Displacement Effects? Evidence from a Clustered Randomized Design,” *QJE* 128(2).
- S. Athey and G. Imbens. (2016) “The Econometrics of Randomized Experiments,” *Handbook of Field Experiments*; <https://arxiv.org/pdf/1607.00698.pdf>.
- J. Ludwig, J. Kling, and S. Mullainathan. (2011) “Mechanism Experiments and Policy Evaluations,” *Journal of Economic Perspectives* 25 (Summer), 17-38.
- H. Allcott. (2015) “Site Selection Bias in Program Evaluation,” *QJE* 130(3), 1117-65.
- B. Olken. (2015) "Promises and Perils of Pre-Analysis Plans," *JEP*, 29(3), 61-80.
- S. DellaVigna, J. List, and U. Malmendier (2012). "Testing for Altruism and Social Pressure in Charitable Giving" *Quarterly Journal of Economics* 1(127): 1-56.
- J. Rothstein and T. von Wachter (2016). “Social Experiments in the Labor Market,” NBER WP No. 22585, September.

II.c. Evaluating the Impacts of School Policies on Student Outcomes (Lecture 8)

- \* J. Angrist and V. Lavy. (1999) “Using Maimonides' Rule to Estimate the Effect of Class Size on Scholastic Achievement,” *Quarterly Journal of Economics*, 114 (May), 533-575.
- \* A. Krueger. (1999) “Experimental Estimates of Education Production Functions,” *Quarterly Journal of Economics*, 114 (May), 497-532.
- \* P. Fredriksson, B. Öckert, and H. Oosterbeek. (2013) “Long-Term Effects of Class Size,” *QJE* 128 (February), 249-85.
- \* R. Chetty, J. Friedman, and J. Rockoff. (2014) “Measuring the Impacts of Teachers II: Teacher Value-Added and Student Outcomes as Adults,” *AER* 104(9): 2593-2632.
- \* J. Ludwig and D. Miller. (2007) "Does Head Start Improve Children's Life Chances? Evidence from a Regression Discontinuity Design," *Quarterly Journal of Economics* 122 (Feb), 159-208.
- P. Todd and K. Wolpin. (2006) "Assessing the Impact of a School Subsidy Program in Mexico: Using a Social Experiment to Validate a Dynamic Behavioral Model of Child Schooling and Fertility." *American Economic Review*, 96(5), 1384–1417.
- R. Chetty, J. Friedman, and J. Rockoff. (2016) “Using Lagged Outcomes to Evaluate Bias in Valued Added Models,” *AER P&P* 106:5, 393-99.
- J. Angrist, P. Hull, P. Pathak, and C. Walters. (2017) “Leveraging Lotteries for School Value-Added: Testing and Estimation,” *QJE* 132(2), 871-919.

A. Abdulkadiroglu, J. Angrist, Y. Narita and P. Pathak. (2017) "Research Design Meets Market Design: Using Centralized Assignment for Impact Evaluation," *Econometrica* 85(4), 1373-1432.

T. Kane et al. (2013) "[Have We Identified Effective Teachers?](#)" Gates Foundation, January.

J. Hastings and J. Weinstein. (2008) "Information, School Choice and Academic Achievement: Evidence from Two Experiments," *QJE*, 123 (November), 1373-1414.

R. Fryer. (2014) "Injecting Charter School Best Practices into Traditional Public Schools: Evidence from Field Experiments," *QJE* 129 (3), 1355-1407.

J. Chabrier, S. Cohodes, and P. Oreopoulos. (2016) "What Can We Learn from Charter School Lotteries?" *Journal of Economic Perspectives* 30(3): 57-84.

H. Chiang. (2009) "How Accountability Pressure on Failing Schools Affects Student Achievement," *Journal of Public Economics* 93 (October), 1045-57.

S. Black. (1999) "Do Better Schools Matter? Parental Evaluation of Elementary Education," *Quarterly Journal of Economics* 114 (May), 577-600.

E. Duflo, P. Dupas, and M. Kremer. (2011). "Peer Effects and the Impacts of Tracking: Evidence from a Randomized Evaluation in Kenya." *American Economic Review* 101(5): 1739-1774.

D. Miller, N. Shenhav, and M. Grosz. (2019) "Selection into Identification in Fixed Effect Models, with Application to Head Start," NBER WP No. 26174, August.

P. Kline and C. Walters. (2016) "Evaluating Programs with Close Substitutes: The Case of Head Start," *QJE* 131(4), 1795-1848.

J. Heckman, S. Moon, R. Pinto, P. Savelyev, and A. Yavitz. (2010) "Analyzing Social Experiments as Implemented: A Reexamination of the Evidence from the HighScope Perry Preschool Program," *Quantitative Economics* 1(1), 1-46.

#### II.d. Neighborhood Effects and Peer Effects (Lecture 9)

- \* J. Kling, J. Liebman, and L. Katz. (2007) "Experimental Analyses of Neighborhood Effects," *Econometrica* 75 (January), 81-119.
- \* R. Chetty, N. Hendren, and L. Katz. (2016) "The Effects of Exposure to Better Neighborhoods on Children: New Evidence from the Moving to Opportunity Experiment," *AER* 106(4): 855-902.
- \* R. Chetty and N. Hendren. (2018) "The Effects of Neighborhoods on Intergenerational Mobility I: Childhood Exposure Effects," *QJE* 133(3), 1107-62.
- \* C. Manski. (2000) "Economic Analysis of Social Interactions," *JEP* 14(3), 115-36.

- \* E. Duflo and E. Saez. (2003) "The Role of Information and Social Interactions in Retirement Plan Decisions: Evidence from a Randomized Experiment," *QJE* 118 (August), 815-42.
- S. Mayer and C. Jencks. (1989) "Growing Up in a Poor Neighborhood: How Much Does it Matter?" *Science*, (March 17), pp. 1441-45.
- D. Aaronson. (1998) "Using Sibling Data to Estimate the Impact of Neighborhoods on Children's Educational Outcomes," *Journal of Human Resources* 33 (Fall), 915-46.
- E. Chyn. (2018) "Moved to Opportunity: The Long-Run Effects of Public Housing Demolition on Children," *AER*, 108(10), 3028-56.
- D. Cutler and E. Glaeser. (1997) "Are Ghettos Good or Bad?" *QJE* 112 (August), 87-122.
- B. Graham. (2018) "Identifying and Estimating Neighborhood Effects," *JEL* 56(2), 450-500.
- C. Manski. (1993) "Identification of Endogenous Social Effects: The Reflection Problem," *Review of Economic Studies* 60, 531-42.
- E. Glaeser, B. Sacerdote, and J. Scheinkman. (1996) "Crime and Social Interactions," *Quarterly Journal of Economics*, 111, 507—548
- E. Glaeser, B. Sacerdote and J. Scheinkman. (2003) "The Social Multiplier," *JEEA* 1(Apr/May).
- J. Angrist. (2014) "The Perils of Peer Effects," *Labour Economics* 30 (October), 98-108.
- S. Carrell, B. Sacerdote, and J. West. (2013) "From Natural Variation to Optimal Policy? The Importance of Endogenous Peer Group Formation," *Econometrica* 81 (May): 855-82.
- A. Case and L. Katz. (1991) "The Company You Keep: The Effects of Family and Neighborhood on Disadvantaged Youths," NBER WP No. 3706, May.
- A. Damm and C. Dustmann. (2014) "The Effect of Growing Up in a High Crime Neighborhood on Criminal Behavior," *American Economic Review* 104(6), 1806-32.
- D. Ang. (2020) "[The Effects of Police Violence on Inner City Youth](#)," *QJE*, forthcoming.
- B. Sacerdote. (2001) "Peer Effects with Random Assignment: Results for Dartmouth Roommates," *Quarterly Journal of Economics* 116 (May), 681-704.
- L. Bursztyn, F. Ederer, B. Ferman, and N. Yuchtman. (2014) "Understanding Mechanisms Underlying Peer Effects: Evidence from a Field Experiment on Financial Decisions," *Econometrica* 82(4), 1273-1301.
- G. Dahl, A. Kostol and M. Mogstad. (2014) "Family Welfare Cultures," *QJE* 129(4), 1711-52.

### III. Immigration, Self-Selection, and Equalizing Differences Models

#### III.a. Self-Selection, The Roy Model, Immigration, and Assimilation (Lecture 10)

- \* A. Roy. (1951) "Some Thoughts on the Distribution of Earnings" *Oxford Ec Papers*, 235-246.
- \* G. Borjas. (1987) "Self-Selection and the Earnings of Immigrants," *AER* 77 (September), 531-53.
- \* R. Abramitzky, L. Boustan, and K. Eriksson. (2012) "Europe's Tired, Poor, Huddled Masses: Self-Selection and Economic Outcomes in the Age of Mass Migration," *AER* 102(5), 1832-56.
- \* D. McKenzie, J. Gibson, and S. Stillman. (2010) "How Important is Selection? Experimental vs. Nonexperimental Measures of the Income Gain from Migration," *JEEA* 8(4), 913-45.
- \* G. Borjas. (1985) "Assimilation, Changes in Cohort Quality, and the Earnings of Immigrants," *Journal of Labor Economics* 3(4), 463-89.
- \* H. Bleakley and A. Chin. (2004) "Language Skills and Earnings: Evidence from Childhood Immigrants," *RESTAT* 86 (May), 481-96.
- C. Dustmann and A. Glitz. (2011) "Migration and Education," *Handbook of the Economics of Education*, Vol. 4, ch. 4, Hanushek, Machin, & Woessmann (eds.), pp 327-441.
- G. Borjas. (2014) *Immigration Economics*, Harvard U. Press, pp. 8-37.
- D. Chiquiar and G. Hanson. (2005) "International Migration, Self-Selection and the Distribution of Wages," *Journal of Political Economy* 113 (April), 239-81.
- G. Hanson, C. Liu, and C. McIntosh. (2017) "The Rise and Fall of U.S. Low-Skilled Migration." *Brookings Papers on Economic Activity*, no. 1, 83-168.
- G. Borjas and B. Bratsberg. (1996) "Who Leaves? The Outmigration of the Foreign-Born." *Review of Economics and Statistics* 78 (1), 165-176.
- J. Grogger and G. Hanson. (2011) "Income Maximization and the Selection and Sorting of Immigrants," *Journal of Development Economics* 95(1), 42-57.
- M. Clemens. (2013) "Why Do Programmers Earn More in Houston than Hyderabad? Evidence from Randomized Processing of US Visas," *AER P&P* 103 (May), 198-202.
- M. Clemens, C. Montenegro, and L. Pritchett. (2019) "Bounding the Price Equivalent of Migration Barriers," *RESTAT* 101(2), 201-13.
- R. Abramitzky. (2009) "The Effect of Redistribution on Migration: Evidence from the Israeli Kibbutz," *Journal of Public Economics* 93, 498-511.

- R. Willis and S. Rosen. (1979) "Education and Self-Selection," *JPE*, 87, S7-S36.
- G. Dahl. (2001) "Mobility and Returns to Education: Testing a Roy Model with Multiple Markets," *Econometrica* 70 (December), 2367-2420.
- A. Chandra and D. Staiger. (2007) "Productivity Spillovers in Healthcare: Evidence from the Treatment of Heart Attacks," *Journal of Political Economy* 115: 103-140.
- C. Dustmann and J. Görlach. (2015) "[Selective Outmigration and the Estimation of Immigrants' Earnings Profiles](#)," *Handbook of Economics of Migration*, vol. 1A, 489-533.
- B. Chiswick. (1978) "The Effects of Americanization on the Earnings of Foreign-Born Men," *Journal of Political Economy* 86(October), 897-921.
- D. Lubotsky. (2007) "Chutes or Ladders? A Longitudinal Analysis of Immigrant Earnings," *JPE* 115, 820-67.
- R. Abramitzky, L. Boustan, and K. Eriksson. (2014) "A Nation of Immigrants: Assimilation and Economic Outcomes in the Age of Mass Migration," *JPE* 122(3), 467-506.
- R. Abramitzky, L. Boustan, and K. Eriksson. (2019) "Do Immigrants Assimilate More Slowly Today Than in the Past?," *AER Insights*, forthcoming.
- P. Oreopoulos. (2011) "Why Do Skilled Immigrants Struggle in the Labor Market? A Field Experiment with Six Thousand Resumes," *AEJ: Economic Policy* 3(4), 148-71.

III.b. Equalizing Wage Differentials – Theory, Econometrics, and Evidence (Lecture 11)

- \* S. Rosen. (1986) "The Theory of Equalizing Differences" *Handbook of Labor Economics*, Vol. 1, O. Ashenfelter and R. Layard, eds. Amsterdam: Elsevier Science, 641-92.
  - \* K. Lavetti. (2018) "The Estimation of Compensating Wage Differentials: Lessons from the *Deadliest Catch*," *JBES*, forthcoming; [http://kurtlavetti.com/DLS\\_vc.pdf](http://kurtlavetti.com/DLS_vc.pdf).
  - \* A. Mas and A. Pallais. (2017) "Valuing Alternative Work Arrangements." *AER* 107(12), 3722-59.
  - \* S. Stern. (2004) "Do Scientists Pay to Do Science?" *Management Science* 50 (June), 835-53.
  - \* L. Summers. (1989) "Some Simple Economics of Mandated Benefits," *AER* 79 (May), 177-83.
  - \* J. Gruber. (1994) "The Incidence of Mandated Maternity Benefits," *AER*, 84 (June), 622-41.
- C. Brown. (1980) "Equalizing Differences in the Labor Market," *Quarterly Journal of Economics*, 94 (February), 113-34.

G. Duncan and B. Holmlund. (1983) "Was Adam Smith Right After All? Another Test of the Theory of Compensating Differentials" *Journal of Labor Economics*, 1 (October), 366-79.

C. Taber and R. Vejlín. (2016) "Estimation of a Roy/Search/Compensating Differential Model of the Labor Market," NBER WP No. 22439, July.

K. Lavetti and I. Schmutte. (2018) "Estimating Compensating Wage Differentials with Endogenous Job Mobility," February; [http://www.kurtlavetti.com/CDEM\\_vc.pdf](http://www.kurtlavetti.com/CDEM_vc.pdf).

C. Goldin and L. Katz. (2011) "The Cost of Workplace Flexibility for High-Powered Professionals," *Annals, AAPS* 638 (November), 45-67.

C. Goldin and L. Katz. (2016) "A Most Egalitarian Profession: Pharmacy and the Evolution of a Family-Friendly Occupation," *JOLE* 34(3): 705-45.

J. Denning, B. Jacob, L. Lefgren, and C. von Lehn. (2019) "The Return to Hours Worked Within and Across Occupations: Implications for the Gender Wage Gap," NBER WP No. 25739, April.

G. Kaplan and S. Schulhofer-Wohl. (2018) "The Changing (Dis-) Utility of Work," *JEP* 32(3), 239-58.

J. Gruber and A. Krueger (1991) "The Incidence of Mandated Employer-Provided Insurance: Lessons from Workers' Compensation Insurance" *Tax Policy and the Economy*, 111-43.

P. Fishback and S. Kantor. (1995) "Did Workers Pay for the Passage of Workers' Compensation Laws?" *Quarterly Journal of Economics*, 110 (August), 713-42.

C. Jackson. (2009) "Student Demographics, Teacher Sorting, and Teacher Quality: Evidence from the End of School Desegregation" *Journal of Labor Economics* 27(2), 213-256.

### III.c. Spatial Equilibrium: Models and Applications (Lecture 12)

\* J. Roback. (1982) "Wages, Rent and the Quality of Life," *JPE*, 90 (December), 1257-78.

\* O. Blanchard and L. Katz. (1992) "Regional Evolutions," *BPEA*, no. 1, 1-75.

\* E. Moretti. (2004) "Estimating the Social Return to Higher Education: Evidence from Longitudinal and Repeated Cross-Section Data," *Journal of Econometrics* 121 (1-2), 175-212.

\* R. Diamond. (2016) "The Determinants and Welfare Implications of US Workers' Diverging Location Choices by Skill: 1980-2000," *AER* 106(3): 479-524.

\* M. Busso, J. Gregory, and P. Kline. (2013) "Assessing the Incidence and Efficiency of a Prominent Place-Based Policy," *AER* 103(2), 897-947.

E. Moretti. (2010), "Local Labor Markets," *Handbook of Labor Economics*, vol. 4B, 1237-1313.

- E. Glaeser and J. Gottlieb. (2008) "The Economics of Place-Making Policies," *BPEA*, no. 1.
- P. Kline and E. Moretti. (2014) "Local Economic Development, Agglomeration Economies, and the Big Push: 100 Years of Evidence from the Tennessee Valley Authority," *QJE* 129(1).
- P. Kline and E. Moretti. (2014) "People, Places and Public Policy: Some Simple Welfare Economics of Local Economic Development Policies," *Annual Review of Economics* 6: 629-62.
- D. Black, N. Kolesnikova, and L. Taylor. (2009) "Earning Functions when Wages and Prices Vary by Location," *Journal of Labor Economics* 27 (January), 21-47.
- P. Beaudry, D. Green, and B. Sand. (2014) "Spatial Equilibrium with Unemployment and Wage Bargaining: Theory and Estimation," *Journal of Urban Economics* 79(1), 2-19.
- M. Greenstone, R. Hornbeck, and E. Moretti. (2010) "Identifying Agglomeration Spillovers: Evidence from Million Dollar Plants," *JPE* 118 (June), 536-98.
- R. Hornbeck and E. Moretti. (2018) "Who Benefits from Productivity Growth? Direct and Indirect Effects of Local TFP Growth on Wages, Rents, and Inequality," NBER WP No. 24661.
- P. Ganong and D. Shoag. (2017) "Why Has Regional Convergence Stopped?" *Journal of Urban Economics* 102(Nov.), 76-90.
- M. Dao, D. Furceri, and P. Loungani. (2017) "Regional Labor Market Adjustment in the United States: Trend vs. Cycle," *RESTAT* 99(2), 243-57.
- D. Yagan. (2019) "[Employment Hysteresis from the Great Recession](#)," *JPE* 127(5), 2505-58.
- K. Charles, E. Hurst, and M. Schwartz. (2019) "[The Transformation of Manufacturing and the Decline in U.S Male Employment](#)," *NBER Macroeconomics Annual* 2018 (33), 307-72.
- M. Amior and A. Manning (2018) "The Persistence of Local Joblessness," *AER* 108(7), 1942-70.
- P. Goldsmith-Pinkham, I. Sorkin, and H. Swift. (2019) "Bartik Instruments: What, When, Why, and How," [https://paulgp.github.io/papers/bartik\\_gpss.pdf](https://paulgp.github.io/papers/bartik_gpss.pdf).
- R. Saks. (2008) "Job Creation and Housing Construction: Constraints on Metropolitan Employment Growth," *Journal of Urban Economics* 64, 178-95.
- A. Saiz. (2010) "The Geographic Determinants of Housing Supply," *QJE* 125(3), 1253-96.
- R. Malloy, C. Smith, and A. Wozniak. (2017) "Declining Migration within the U.S.: The Role of the Labor Market," *Demography* 54(2), 631-53.
- C. Hsieh and E. Moretti. (2019) "Housing Constraints and Spatial Misallocation," *AEJ: Macroeconomics*, 11(2), 1-39.

#### IV. Jobs, Matching, Labor Market Frictions, and Segmented Labor Markets

##### IV.a. Job Matching, Turnover, Life Cycle Wage Growth, Costs of Job Loss (Lecture 13)

- \* B. Jovanovic. (1979) "Job Matching and the Theory of Turnover" *JPE* 87 (October), 972-990.
  - \* C. Flinn. (1986) "Wages and Mobility of Young Workers," *JPE* 94 (June), S88-S110.
  - \* R. Topel and M. Ward. (1992) "Job Mobility and the Careers of Young Men," *QJE*, 107(2).
  - \* R. Topel. (1991) "Specific Capital, Mobility, and Wages: Wages Rise with Job Seniority," *Journal of Political Economy*, 99(February), 145-167.
  - \* L. Jacobson, R. LaLonde, and D. Sullivan. (1993) "Earnings Losses of Displaced Workers," *AER* 83(4), 685-709.
- H. Farber. (1999) "Mobility and stability: the dynamics of job change in labor markets," in the *Handbook of Labor Economics*, Vol. 3B, O. Ashenfelter and D. Card, eds. Amsterdam: Elsevier.
- B. Jovanovic. (1979) "Firm-Specific Capital and Turnover" *JPE* 87 (December), 1246-60.
- B. McCall. (1990) "Occupational Matching: A Test of Sorts" *JPE*, 98.1 (February), 45-69.
- R. Gibbons and L. Katz. (1991) "Layoffs and Lemons," *JOLE*, 9 (October), 351-380.
- C. Gathmann and U. Schönberg. (2010) "How General is Human Capital: A Task-Based Approach," *Journal of Labor Economics* 28(1): 1-49.
- Y. Rubinstein and Y. Weiss (2006). "Post Schooling Wage Growth: Investment, Search, and Learning," in E. Hanushek and F. Welch, eds., *Handbook of the Economics of Education*, vol. 1.
- J. Altonji, A. Smith, and I. Vidangos. (2013) "Modeling Earnings Dynamics," *Econometrica* 81(July), 1395-1454.
- J. Bagger, F. Fontaine, F. Postel-Vinay and J.-M. Robin. (2013) "Tenure, Experience, Human Capital and Wages: A Tractable Equilibrium Search Model of Wage Dynamics", *AER* 104(6).
- I.S. Buhai, M. Portela, C. Teulings, and A. van Vuuren. (2014) "Returns to Tenure or Seniority?" *Econometrica* 82(2): 705-30.
- D. Sullivan and T. von Wachter. (2009) "Job Displacement and Mortality: An Analysis using Administrative Data," *QJE* 124(August), 1265-1306.
- S. Davis and T. von Wachter. (2011) "Recession and the Costs of Job Loss." *Brookings Papers on Economic Activity*, Fall, 1-72.



IV.b. Segmented Labor Markets, Frictions, and Fairness Considerations (Lecture 14)

- \* J. Yellen. (1984) "Efficiency Wage Models of Unemployment," *AER*, 74 (May), 200-205.
  - \* A. Manning. (2011) "Imperfect Competition in Labor Markets," *H. Labor Econ*, 4B, 973-1041.
  - \* H. Holzer, L. Katz, and A. Krueger. (1991) "Job Queues and Wages," *QJE* 106 (August), 739-68.
  - \* A. Mas. (2006) "Pay, Reference Points, and Police Performance." *QJE* 121(3): 783 – 821.
  - \* E. Breza, S. Kaur, and Y. Shamdasani. (2018) "The Morale Effects of Pay Inequality," *QJE* 133(2), 611-63.
- G. Becker and G. Stigler. (1974) "Law Enforcement, Malfeasance, and the Compensation of Enforcers," *Journal of Legal Studies*, 3, 1-18.
- C. Shapiro and J. Stiglitz. (1984) "Equilibrium Unemployment as a Worker Discipline Device," *American Economic Review* 74, 433-444.
- P. Cappelli and K. Chauven. (1991) "An Interplant Test of the Efficiency Wage Hypothesis," *QJE* 106 (August), 769-87.
- M. Bertrand and S. Mullainathan. (2003) "Enjoying the Quiet Life? Corporate Governance and Managerial Preferences," *Journal of Political Economy* 111 (October), 1043-75.
- G. Akerlof. (1982) "Labor Contracts as Partial Gift Exchange." *QJE* 97(4), 1982, 543-69.
- E. Fehr, G. Kirchsteiger, and A. Riedl. (1993) "Does Fairness Prevent Market Clearing? An Experimental Investigation," *QJE* 108(2), 437–459.
- D. Card, A. Mas, E. Moretti, and E. Saez. (2012) "Inequality at Work: The Effect of Peer Salaries on Job Satisfaction," *AER* 102(6): 2981–3003.
- S. Kaur. (2018) "[Nominal Wage Rigidity in Village Labor Markets](#)," *AER*, forthcoming.
- A. Dube, L. Giuliano, and J. Leonard. (2019) "Fairness and Frictions: The Impact of Unequal Raises on Quit Behavior," *AER* 109(2), 620-63.

IV.c. Firm and Industry Wage Differentials (Lectures 15 and 16)

- \* A. Krueger and L.H. Summers. (1988) "Efficiency Wages and the Inter-Industry Wage Structure," *Econometrica* 56 (March), 259-93.
- \* R. Gibbons and L. Katz. (1992) "Does Unmeasured Ability Explain Inter-Industry Wage Differentials?" *Review of Economic Studies*, 59 (July), 515-35.

- \* D. Card, A. Cardoso, J. Heining, and P. Kline. (2018) "Firms and Wage Inequality: Evidence and Some Theory," *JOLE* 36 (S1), S13-S70.
  - \* D. Card, A. Cardoso, and P. Kline. (2016) "Bargaining, Sorting and the Gender Wage Gap: Quantifying the Impact of Firms on the Relative Pay of Women," *QJE* 131(2), 631-86.
  - \* P. Kline, N. Petkova, H. Williams, and O. Zidar. (2019) "Who Profits from Patents? Rent Sharing at Innovative Firms," *QJE* 134(3), 1343-1404.
  - \* T. Lamadon, M. Mogstad, and B. Setzler. (2019) "Imperfect Competition, Compensating Differentials, and Rent Sharing in the U.S. Labor Market," NBER WP No. 25954, June.
- S. Slichter. (1950) "Notes on the Structure of Wages," *RESTAT*, 32, 80-91.
- L. Reynolds. (1951) *The Structure of Labor Markets*, 1951.
- P. Doeringer and M. Piore. (1971) *Internal Labor Markets and Manpower Analysis*, Lexington, MA: D.C. Heath, especially chapters 1, 2, and 8.
- L. Katz and L. Summers. (1989) "Industry Rents: Evidence and Implications," *Brookings Papers in Economic Activity: Microeconomics*, 209-75.
- R. Gibbons, L. Katz, T. Lemieux, and D. Parent. (2005) "Comparative Advantage, Learning and Sectoral Wage Determination," *Journal of Labor Economics* 23 (October), 681-723.
- C. Brown and J. Medoff. (1989) "The Employer Size Wage Effect," *JPE*, October.
- N. Bloom, F. Guvenen, B. Smith, J. Song, and T. von Wachter. (2018) "The Disappearing Large Firm Wage Premium," *AER P&P* 108, 317-22.
- S. Black and P. Strahan. (2001) "The Division of the Spoils: Rent-Sharing and Discrimination in a Regulated Industry," *American Economic Review* 91 (September), 914-31.
- J. Abowd and T. Lemieux. (1993) "The Effects of Product Market Competition on Collective Bargaining Agreements: The Case of Foreign Competition in Canada," *QJE* 108, 983-1014.
- J. Van Reenen. (1996) "The Creation and Capture of Rents: Wages and Innovation in a Panel of UK Companies," *Quarterly Journal of Economics* 111 (February), 195-226.
- J. Budd and M. Slaughter. (2004) "Are Profits Shared Across Borders?" *Journal of Labor Economics* 22 (July), 525-52.
- A. Garin and F. Silvério. (2018) "[How Responsive are Wages to Demand within the Firm? Evidence from Idiosyncratic Export Demand Shocks](#)," November

J. Abowd, F. Kramarz, and D. Margolis. (1999) "High Wage Workers and High Wage Firms," *Econometrica* 67 (March).

P. Kline, R. Saggio, and Sølvssten. (2018) "Leave-out Estimation of Variance Components," <https://arxiv.org/pdf/1806.01494.pdf>.

S. Bonhomme, T. Lamadon, and E. Manresa. (2019) "A Distributional Framework for Matched Employer-Employee Data," *Econometrica*, 87, 699–739.

I. Sorkin. (2018). "Ranking Firms Using Revealed Preference," *QJE* 133(3), 1331-93.

K. Burdett and D. Mortensen. (1998) "Wage Differentials, Employer Size and Unemployment," *International Economic Review* 39 (May), 257-73.

P. Cahuc, F. Postal-Vinay, and J-M Robin. (2006) "Wage Bargaining with On-the-Job Search: Theory and Evidence," *Econometrica* 74(2): 323-64.

## V. Labor Demand

### V.a. Basic Models of Labor Demand: Comparative Statics and Marshall's Rules (Lecture 17)

- \* D. Hamermesh. (1993) *Labor Demand*, Princeton University Press, chs. 2, 6.
  - \* R. Freeman. (1994) "Enterprise Labor Demand," Labor Demand Notes, February.
  - \* L. Katz. (1998) "Wage Subsidies for the Disadvantaged," in R. Freeman and P. Gottschalk, eds., *Generating Jobs*, Russell Sage Foundation, 21-53; also NBER WP No. 5679.
  - \* A. Akerman, I. Gaarder, and M. Mogstad. (2015) "The Skill Complementarity of Broadband Internet." *QJE* 130 (4), 1781-824.
- Z. Griliches. (1969) "Capital-Skill Complementarity," *RESTAT* 51 (November), 465-68.
- C. Goldin and L. Katz. (1998) "The Origins of Technology-Skill Complementarity," *Quarterly Journal of Economics* 113, 693-732.
- A. Bartel and F. Lichtenberg. (1987) "The Comparative Advantage of Educated Workers in Implementing New Technology," *RESTAT* 69 (February), 1-11.
- K. Clark and R. Freeman. (1980) "How Elastic is the Demand for Labor?" *Review of Economics and Statistics* 62 (November), 509-20.
- D. Acemoglu and A. Finkelstein. (2008) "Input and Technology Choices in Regulated Industries: Evidence from the Health Care Sector," *Journal of Political Economy* 116(5), 837-80.
- D. Hamermesh. (1989) "Labor Demand and the Structure of Adjustment Costs," *AER* 79, 674-89.

T. Sargent. (1978) "Estimation of Dynamic Labor Demand Schedules under Rational Expectations," *Journal of Political Economy* 86, 1009-44.

D. Hamermesh and S. Trejo. (2000) "The Demand for Hours: Direct Evidence from California," *Review of Economics and Statistics* 82 (February), 38-47.

S. Jäger and J. Heining. (2019) "How Substitutable Are Workers? Evidence from Worker Deaths," <http://economics.mit.edu/files/16635>.

V.b. The Economics of Unions: Union Wage and Employment Determination (Lectures 17 and 18)

\* J. Brown and O. Ashenfelter. (1986) "Testing the Efficiency of Employment Contracts," *Journal of Political Economy* 94 (June, part 2).

\* D. Card. (1990) "Unexpected Inflation, Real Wages, and Employment Determination in Union Contracts," *American Economic Review* 79 (September).

\* J. DiNardo and D. Lee. (2004) "Economic Impact of New Unionization on Private Sector Employers: 1984-2001," *Quarterly Journal of Economics* 119 (Nov.), 1383-1441.

\* S. Jäger, B. Schoefer, and J. Heining. (2019) "Labor in the Boardroom," <http://economics.mit.edu/files/17273>.

R. Freeman and J. Medoff. (1984) *What Do Unions Do?* Basic Books.

H. Farber. (1978) "Individual Preferences and Union Wage Determination: The Case of the United Mine Workers," *JPE* 86 (October): 923-42.

M. Espinosa and C. Rhee (1989) "Efficient Wage Bargaining as a Repeated Game," *QJE*, 565-88.

P. Grout. (1984) "Investment and Wages in the Absence of Binding Contracts," *Econometrica* 52.

D. Card, F. Devicienti, and A. Maida. (2014) "Rent-Sharing, Holdup and Wages: Evidence from Matched Panel Data," *Review of Economic Studies* 81(1): 84-111.

M. Bils. (1991) "Testing for Contracting Effects on Employment," *QJE* Nov.

J. Abowd. (1989) "The Effect of Wage Bargains on the Stock Market Value of the Firm," *American Economic Review*, 79 (September), 774-809.

R. Freeman and M. Kleiner. (1990) "The Impact of New Unionization on Wages and Working Conditions," *Journal of Labor Economics* 8 (Jan), S8-S25.

D. Lee and A. Mas. (2012) "Long Run Impacts of Unions on Firms: New Evidence from Financial Markets, 1961-99," *Quarterly Journal of Economics* 127 (February), 333-78.

B. Frandsen. (2014) "The Surprising Impacts of Unionization on Establishments: Evidence from Matched Employer-Employee Data," BYU.

B. Frandsen. (2016) "The Effects of Public Bargaining Rights on Public Employee Compensation: Evidence from Teachers, Fire Fighters and Police," *ILRR* 69(1), 84-112.

D. Card. (1996) "The Effect of Unions on the Structure of Wages: A Longitudinal Analysis," *Econometrica* 64 (July).

T. Lemieux. (1998) "Estimating the Effect of Unions on Wage Inequality in a Model with Comparative Advantage and Non-Random Selection," *JOLE* 16 (April), 261-91.

M. Gittleman, M. Klee, and M. Kleiner. (2018) "Analyzing the Labor Market Outcomes of Occupational Licensing," *Industrial Relations* 57(1), 57-100.

A. Dube, E. Kaplan, and O. Thompson. (2016) "Nurse Unions and Patient Outcomes," *ILRR* 69(4): 803-33.

V.c. Labor Demand Applications: The Minimum Wage (Lecture 18)

- \* D. Card. (1992) "Using Regional Variation to Estimate the Effects of the Federal Minimum Wage," *Industrial and Labor Relations Review*, October, 22-37.
  - \* D. Cengiz, A. Dube, A. Lindner, B. Zipperer. (2019) "The Effect of the Minimum Wage on Low-Wage Jobs: Evidence from the United State using a Bunching Estimator," *QJE* 134(3), 1405-54.
  - \* A. Dube, T.W. Lester, and M. Reich. (2010) "Minimum Wage Effects across State Borders: Estimates Using Contiguous Counties," *RESTAT* 92(4), 945-64.
- C. Brown. (1999) "Minimum Wages, Employment, and the Distribution of Income," in O. Ashenfelter and D. Card, eds., *Handbook of Labor Economics*, vol. 3B.
- D. Lee and E. Saez. (2012) "Optimal Minimum Wage Policy in Competitive Labor Markets," *Journal of Public Economics* 96, 739-49.
- D. Card and A. Krueger. (1995) *Myth and Measurement*, Princeton University Press.
- L. Katz and A. Krueger. (1992) "The Effect of the Minimum Wage on the Fast Food Industry," *Industrial and Labor Relations Review*, October, 6-21.
- D. Card and A. Krueger. (1994) "Minimum Wages and Employment: A Case Study of the Fast Food Industry in New Jersey," *American Economic Review* 84(4): 772-93.
- S. Machin, A. Manning, and L. Ruhman. (2003) "Where the Minimum Wage Bites Hard: Introduction of the Minimum Wage to a Low-Wage Sector," *JEEA1* (March), 154-80.

- D. Neumark, I. Salas, and W. Wascher. (2014) "Revisiting the Minimum Wage and Employment Debate: Throwing out the Baby with the Bathwater?" *ILRR* 67, 608-48.
- P. Brochu, D. Green, T. Lemieux, and J. Townsend. (2018) "The Minimum Wage, Turnover, and the Shape of the Wage Distribution," University of British Columbia, January.
- P. Harasztosi and A. Lindner. (2019) "Who Pays for the Minimum Wage?" *AER* 109(8).
- C. Dustmann et al. (2019) "Reallocation Effects of the Minimum Wage: Evidence from Germany," [https://conference.nber.org/conf\\_papers/f127666.pdf](https://conference.nber.org/conf_papers/f127666.pdf).
- D. Aaronson, E. French, I. Sorkin, and T. To. (2018). "Industry Dynamics and the Minimum Wage: A Putty-Clay Approach." *International Economic Review*, 59(1), 51-84.
- J. Clemens. (2016) "Redistribution through Minimum Wage Regulation: An Analysis of Program Linkages and Budgetary Spillovers," *Tax Policy and the Economy*, vol. 30.
- B. Bell and S. Machin. (2018) "Minimum Wages and Firm Value," *JOLE* 36(1), 159-95.
- A. Falk, E. Fehr, and C. Zehnder. (2006) "Fairness Perceptions and Reservation Wages – the Behavioral Effects of Minimum Wages," *QJE* 121 (Nov), 1347-82.
- J. Cawley, D. Grabowski, and R. Hirth. (2006) "Factor Substitution in Nursing Homes," *Journal of Health Economics* 25 (March), 235-47.
- E. Hall, C. Propper, and J. Van Reenen. (2010) "Can Pay Regulation Kill? Panel Data Evidence on the Effects of Labor Markets on Hospital Performance," *JPE* 118(2), 222-73.

VI.d. Monopsony Power in the Labor Market (Lecture 19)

- \* D. Sullivan. (1989) "Monopsony Power in the Market for Nurses," *Journal of Law and Economics* 32, S135-S178.
  - \* D. Staiger, J. Spetz, C. Phibbs. (2010) "Is There Monopsony in the Labor Market? Evidence from a Natural Experiment," *Journal of Labor Economics* 28(2), 211-36.
  - \* A. Dube, J. Jacobs, S. Naidu, and S. Suri. (2018) "Monopsony in Online Labor Markets," NBER WP No. 24416; *AER Insights*, forthcoming.
- A. Manning. (2003) *Monopsony in Motion*. Princeton University Press.
- J. Azar, I. Marinescu, and M. Steinbaum. (2017) "Labor Market Concentration," NBER WP No. 24147, December.

J. Azar et al. (2019) "Minimum Wage Employment Effects and Labor Market Concentration," NBER WP No. 26101, July.

E. Benmelech, N. Bergman, and H. Kim. (2018) "Strong Employers and Weak Employees: How Does Employer Concentration Affect Wages?" NBER WP No. 24307, February.

G. Schubert, A. Stansbury, and B. Taska. (2019) "Getting Labor Markets Right: Occupational Mobility, Outside Options, and Labor Market Concentration," Harvard University.

O. Ashenfelter and A. Krueger. (2018) "Theory and Evidence on Employer Collusion in the Franchise Sector," NBER WP No. 2483, July.

S. Caldwell and O. Danieli. (2018) "Outside Options in the Labor Market," [https://sydneec.github.io/Website/Caldwell\\_Danieli.pdf](https://sydneec.github.io/Website/Caldwell_Danieli.pdf).

P. Beaudry, D. Green, and B. Sand. (2012) "Does Industrial Composition Matter for Wages? A Test of Search and Bargaining Theory, *Econometrica* 80 (May), 1063-1104.

S. Jäger, B. Schoefer, S. Young, and J. Zweimüller. (2020) "Wages and the Value of Nonemployment," *QJE*, forthcoming; <http://economics.mit.edu/files/15256>.

D. Berger, K. Herkenhoff, and S. Monge. (2019) "Labor Market Power," NBER WP No. 25719.

E. Praeger and M. Schmitt. (2019) "Employer Concentration and Wages: Evidence from Hospitals," Northwestern, May.

M. Ransom and R. Oaxaca. (2010) "New Market Power Models and Sex Differences in Pay," *JOLE* 28(2): 267-89.

M. Ransom and D. Sims. (2010) "Estimating the Firms' Labor Supply in a 'New Monopsony' Framework: Schoolteachers in Missouri," *JOLE* 28(2): 331-55.

E. Dal Bó, F. Finan, and M. Rossi. (2013) "Strengthening State Capabilities: The Role of Financial Incentives in the Call to Public Service," *QJE* 128(3), 1169-1218.

## **VI. Changes in the Wage Structure and Earnings Inequality**

### VI.a. Understanding Wage Structure Changes: Supply-Demand-Institutions Analysis (Lectures 20 & 21)

- \* L. Katz and D. Autor. (1999) "Changes in the Wage Structure and Earnings Inequality," in O. Ashenfelter and D. Card, eds., *Handbook of Labor Economics*, vol. 3A, pp. 1463-1555.
- \* L. Katz and K.M. Murphy. (1992) "Changes in Relative Wages, 1963-87: Supply and Demand Factors," *Quarterly Journal of Economics*, February, 35-78.

- \* C. Goldin and L. Katz. (2009) "The Race between Education and Technology: The Evolution of U.S. Educational Wage Differentials, 1890 to 2005," updated chapter 8 of *RBET* (2008).
  - \* D. Autor, C. Goldin, and L. Katz. (2020) "[Extending the Race between Education and Technology](#)," *AEA P&P* 110, 347-51.
  - \* D. Autor. (2019) "Work of the Past, Work of the Future," *AEA P&P* 109(5), 1-32.
  - \* D. Card and T. Lemieux. (2001), "Can Falling Supply Explain the Rising Return to College for Younger Men? A Cohort-Based Analysis," *Quarterly Journal of Economics* 116(2): 705-46.
  - \* P. Carneiro and S. Lee. (2011) "Trends in Quality-Adjusted Skill Premia in the United States, 1960-2000," *AER* 101 (October), 2309-49.
  - \* C. Juhn, K.M. Murphy, and B. Pierce. (1993) "Wage Inequality and the Rise in the Returns to Skill," *Journal of Political Economy* 101 (June): 410-42.
  - \* W. Kopczuk, E. Saez, and J. Song. (2010), "Earnings Mobility and Inequality in the United States: Evidence from Social Security Data since 1937," *QJE* 125(1), 91-128.
  - \* J. Song, D. Price, F. Guvenen, N. Bloom, and T. von Wachter. "Firming Up Inequality," *QJE* 134(1), 1-50.
- C. Goldin and L. Katz. (2008) *The Race between Education and Technology*, Harvard U. Press.
- J. Bound and G. Johnson. (1992) "Changes in the Structure of Wages in the 1980s: An Evaluation of Alternative Explanations." *American Economic Review* 82 (June): 371-92.
- D. Autor, L. Katz, and M. Kearney. (2008) "Trends in U.S. Wage Inequality: Revising the Revisionists," *Review of Economics and Statistics* 90 (May), 30-23.
- D. Acemoglu and D. Autor. (2012) "What Does Human Capital Do? A Review of Goldin and Katz's *The Race between Education and Technology*." *JEL* 50(2): 426-63.
- D. Autor. (2014) "Skills, Education and the Rise of Inequality among the Other 99 Percent," *Science* 344 (May 23), 843-51.
- T. Lemieux. (2006) "Increasing Residual Wage Inequality: Composition Effects, Noisy Data, or Rising Demand for Skill?" *American Economic Review* 96 (September), 461-98.
- N. Fortin, T. Lemieux and S. Firpo. (2010) "Decomposition Methods in Economics," *HLE*, vol. 4A, 1-102.
- N. Fortin, T. Lemieux, and S. Firpo. (2018) "Decomposing Wage Distributions using Recentered Influence Function Regressions." *Econometrics* 6, pp. 1-40.



- L. Karabarbounis. and B. Neiman. (2014) "The Global Decline of the Labor Share." *QJE* 129(1).
- D. Autor, D. Dorn, L. Katz, C. Patterson, and J. Van Reenen. (2020) "[The Fall of the Labor Share and the Rise of Superstar Firms](#)," *QJE* 135(2): 645-709.
- C. Goldin and L. Katz. (2007) "Long-Run Changes in the Wage Structure: Narrowing, Widening, Polarizing," *Brookings Papers on Economic Activity*, no. 2, 135-67.
- C. Goldin and R. Margo. (1992) "The Great Compression: The Wage Structure at Mid-Century," *Quarterly Journal of Economics*, February, 1-33.
- N. Fortin. (2006) "Higher-Education Policies and the College Wage Premium: Cross-State Evidence from the 1990s," *American Economic Review* 96 (4), 959-87.
- P. Gottschalk and R. Moffitt. (1994) "The Growth of Earnings Instability in the U.S. Labor Market," *Brookings Papers on Economic Activity*, 217-72.
- J. DeBacker, B. Heim, V. Panousi, and I. Vidangos. (2013) "Rising Inequality: Transitory or Permanent? Evidence from a Panel of U.S. Tax Returns," *BPEA* (Spring), 67-142.
- P. Gottschalk and R. Moffitt (2009) "The Rising Instability of U.S Earnings," *JEP* 23(Fall), 3-24.
- D. Hamermesh. (1999) "Changing Inequality in Markets for Workplace Amenities," *Quarterly Journal of Economics* 114 (November), 1085-1123.
- B. Pierce. (2001) "Compensation Inequality," *QJE* 116 (Nov.), 1493-1525.
- M. Aguiar and M. Bils. (2015) "Has Consumption Inequality Mirrored Income Inequality?," *AER* 105(9), 2725-56.
- O. Attanasio and L. Pistaferri. (2016) "Consumption Inequality," *JEP* 30 (Spring), 3-28.
- X. Jaravel. (2019) "The Unequal Gains from Product Innovations: Evidence from the U.S. Retail Sector," *QJE* 134(2), 715-83.

VI.b. Technical Change and Wage Inequality (Lectures 22 & 23)

- \* D. Acemoglu. (2002) "Technical Change, Inequality and the Labor Market," *JEL* 40(1), 7-72.
- \* D. Autor, F. Levy, and R. Murnane. (2003) "The Skill Content of Recent Technological Change: An Empirical Exploration," *Quarterly Journal of Economics* 118 (November), 1279-1333.
- \* D. Deming. (2017) "The Growing Importance of Social Skills in the Labor Market," *QJE* 132(4), 1593-1640.

- \* D. Autor. (2015). "Why Are There Still So Many Jobs? The History and Future of Workplace Automation." *Journal of Economic Perspectives* 29(3), 3-30.
- \* D. Acemoglu and P. Restrepo. (2020) "[Robots and Jobs: Evidence from U.S. Labor Markets](#)," *JPE* 128(6), 2188-2244.
- \* P. Aghion, C. Antonin, S. Bunel, and X. Jaravel. (2020) "[What are the Labor and Product Market Effects of Automation? New Evidence from France](#)," July.
- \* D. Acemoglu and P. Restrepo. (2019) "Automation and New Tasks: How Technology Displaces and Reinstates Labor," *JEP* 33(2), 3-30.
- D. Acemoglu and D. Autor. (2011). "Skills, Tasks and Technologies: Implications for Employment and Earnings." *Handbook of Labor Economics*, vol. 4B, 1043-1171.
- O. Galor and O. Moav. (2000) "Ability-Biased Technological Transition, Wage Inequality and Economic Growth," *Quarterly Journal of Economics* 115 (May), 469-97.
- D. Acemoglu and P. Restrepo. (2018) "Modeling Automation," *AEA P&P* 108, 48-53.
- D. Acemoglu and P. Restrepo. (2020) "[Unpacking Skill Bias: Automation and New Tasks](#)," *AEA P&P* 110, 356-61.
- D. Autor, L. Katz, and M. Kearney. (2006) "The Polarization of the U.S. Labor Market," *American Economic Review* 96 (May), 189-94.
- D. Autor and D. Dorn. (2013) "The Growth of Low Skill Service Jobs and the Polarization of the U.S. Labor Market." *American Economic Review* 103(5), 1553–1597.
- M. Goos, A. Salomons, and A. Manning. (2014). "Explaining Job Polarization: Routine-Biased Technological Change and Offshoring," *AER* 104(8), 2509-26.
- C. Gathmann and U. Schoenberg. (2010) "How General is Human Capital? A Task-Based Approach," *Journal of Labor Economics*, 28(1), 1-49
- D. Autor, L. Katz, and A. Krueger. (1998) "Computing Inequality: Have Computers Changed the Labor Market?" *Quarterly Journal of Economics* 113 (November), 1169-1213.
- A. Bartel, C. Ichniowski, and K. Shaw. (2007) "How Does Information Technology Affect Productivity? Plant-Level Comparisons of Product Innovation, Process Improvement and Worker Skills." *Quarterly Journal of Economics* 122(4), 1721-1758.
- D. Acemoglu. (2002) "Directed Technical Change." *Review of Economic Studies*, 69, 781-809.

G. Michaels, A. Natraj, and J. Van Reenen. (2014) "Has ICT Polarized Labor Demand? Evidence from 11 Countries over 25 Years," *RESTAT* 96(1), 60-77.

D. Autor and A. Salomons. (2018) "Is Automation Labor-Share Displacing? Productivity Growth, Employment and the Labor Share," *BPEA* (Spring), 1-63.

E. Atalay, P. Phongthiengtham, S. Sotelo, and D. Tannenbaum. (2020) "[The Evolution of Work in the United States](#)," *AEJ: Applied* 12(2), 1-34.

VI.c. Trade, Immigration, and the Wage Structure (Lecture 24)

- \* P. Krugman. (2000) "Technology, Trade and Factor Prices," *J. Int. Economics* 50 (1), 51-71.
- \* E. Berman, J. Bound, and S. Machin. (1998) "Implications of Skill-Biased Technological Change: International Evidence," *QJE* 113(4), 1245-79.
- \* D. Autor, D. Dorn, and G. Hanson. (2013) "The China Syndrome: Local Labor Market Effects of Import Competition in the United States," *AER* 103(6), 2121-68.
- \* G. Borjas, R. Freeman, and L. Katz. (1997) "How Much Do Immigration and Trade Affect Labor Market Outcomes?" *Brookings Papers on Economic Activity*, no. 1, 1-90.
- \* G. Borjas. (2003) "The Labor Demand Curve Is Downward Sloping: Reexamining the Impact of Immigration on the Labor Market," *Quarterly Journal of Economics* 118 (November), 1335-74.
- \* C. Dustmann, U. Schönberg, and J. Stuhler. (2016) "The Impact of Immigration: Why Do Studies Reach Such Different Results?" *JEP* 30 (Fall), 30-56.

E. Helpman. (2018) [Globalization and Inequality](#). Harvard University Press.

D. Autor, D. Dorn, and G. Hanson. (2016) "The China Shock: Learning from Labor-Market Adjustment to Large Changes in Trade," *Annual Review of Economics* 8, 205-40.

N. Bloom, K. Handley, A. Kurman, and P. Luck. (2019) "The Impact of Chinese Trade on U.S. Employment: The Good, The Bad, and the Debatable,"  
[http://webuser.bus.umich.edu/handleyk/BHKL\\_posted\\_draft.pdf](http://webuser.bus.umich.edu/handleyk/BHKL_posted_draft.pdf).

R. Lawrence and M. Slaughter. (1993), "International Trade and American Wages in the 1980s: Giant Sucking Sound or Small Hiccup," *BPEA: Microeconomics*, 161-226.

C. Hsieh and K. Woo. (2005) "The Impact of Outsourcing to China on Hong Kong's Labor Market." *American Economic Review* 95(5), 1673-1687.

J. Haskel, R. Lawrence, E. Leamer, and M. Slaughter. (2012) "Globalization and U.S. Wages: Modifying Classic Theory to Explain Recent Facts." *JEP*, 26(2): 119-40.

- G. Johnson and F. Stafford. (1999) "The Labor Market Implications of International Trade," in O. Ashenfelter and D. Card, eds., *Handbook of Labor Economics*, vol. 3B, pp. 2215-88.
- P. Krugman. (2008) "Trade and Wages Reconsidered," *BPEA*, no. 1, 103-54.
- A. Wood. (1995). "How Trade Hurt Unskilled Workers." *JEP* 9(3), 57 – 80.
- D. Autor, D. Dorn, G. Hanson, and J. Song. (2014) "Trade Adjustment: Worker Level Evidence," *QJE* 129(4), 1799-1860.
- D. Hummels, R. Jørgensen, J. Munch, and C. Xiang. (2014) "The Wage Effects of Offshoring: Evidence from Danish Matched Worker-Firm Data." *AER* 104(6): 1597-1629.
- E. Verhoogen. (2008) "Trade, Quality Upgrading and Wage Inequality in the Mexican Manufacturing Sector." *Quarterly Journal of Economics*, 123(2), 489-530.
- G. Ottaviano and G. Peri. (2012) "Rethinking the Effect of Immigration on Wages," *Journal of the European Economic Association* 10(1), 152-97.
- G. Peri. (2016) "Immigrants, Productivity, and Labor Markets," *JEP* 30 (Fall), 3-30.
- C. Dustmann, T. Frattini, and I. Preston. (2013) "The Effect of Immigration along the Distribution of Wages," *RESTUD* 80(1), 145-73.
- D. Card. (1990) "The Impact of the Mariel Boatlift on the Miami Labor Market," *ILRR*, Jan.
- D. Card. (2009) "Immigration and Inequality," *AER* 99 (May), 1-21
- G. Borjas. (1995) "The Economic Benefits from Immigration," *JEP* 9 (Spring), 3-22.
- E. Lewis. (2011) "Immigration, Skill Mix, and Capital-Skill Complementarity," *QJE* 126 (May).
- J. Altonji and D. Card. (1991) "The Effects of Immigration on the Labor Market Outcomes of Less-Skilled Natives," in J. Abowd and R. Freeman, eds., *Immigration, Trade, and the Labor Market*, U. of Chicago Press and NBER.
- G. Borjas. (2001) "Does Immigration Grease the Wheels of the Labor Market?" *Brookings Papers on Economic Activity*, no. 1, 69-133.
- B. Cadena and B. Kovak. (2016) "Immigrants Equilibrate Local Labor Markets: Evidence from the Great Recession," *AEJ: Applied Economics* 8(1), 257-90.
- A. Aydemir and G. Borjas. (2011), "Attenuation Bias in Measuring the Wage Impact of Immigration," *Journal of Labor Economics* 29 (January), 69-112.

G. Peri and C. Sparber. (2009) "Task Specialization, Immigration, and Wages," *AEJ: Applied Economics* 1 (July), 135-69.

M. Clemens, E. Lewis, and H. Postel. (2018) "Immigration Restrictions as Active Labor Market Policy: Evidence from the Mexican Bracero Exclusion." *AER* 108 (June), 1468-87.

W. Kerr and W. Lincoln. (2010) "The Supply Side of Innovation: H-1B Visa Reforms and U.S. Ethnic Invention." *Journal of Labor Economics* 28 (July), 473-508.

P. Cortes. (2008) "The Effect of Low-skilled Immigration on U.S. Prices: Evidence from CPI Data," *Journal of Political Economy*, 116(3), 381-422.

VI.d. Labor Market Institutions, Firms, and Wage Inequality (Lecture 25)

- \* J. DiNardo, N. Fortin, and T. Lemieux. (1996) "Labor Market Institutions and the Distribution of Wages, 1973-1992: A Semiparametric Approach," *Econometrica*, 64 (Sept): 1001-44.
  - \* D. Autor, A. Manning, and C. Smith. (2016) "The Contribution of the Minimum Wage to US Wage Inequality over Three Decades," *AEJ: Applied Economics* 8(1): 58-99.
  - \* A. Stansbury and L. Summers. (2020) "[The Declining Worker Power Hypothesis: An Explanation for the Recent Evolution of the American Economy](#)," *BPEA* (Spring).
  - \* T. Lemieux, W.B. MacLeod and D. Parent. (2009) "Performance Pay and Wage Inequality," *Quarterly Journal of Economics*, 124 (February), 1-49.
  - \* X. Gabaix and A. Landier. (2008) "Why has CEO Pay Increased so Much?" *QJE* 123(1), 49-100.
  - \* E. Leuven, E. H. Oosterbeek, and H. van Ophern. (2004) "Explaining International Differences in Male Skill Wage Differentials by Differences in Demand and Supply of Skill." *Economic Journal* 114 (Apr.), 466-86.
- S. Rosen. (1981) "The Economics of Superstars." *AER* 71(5), 845-858.
- D. Card, J. Heining, and P. Kline. (2013) "Workplace Heterogeneity and the Rise of German Wage Inequality," *QJE* 128(3), 67-1015.
- D. Lee. (1999) "Wage Inequality in the U.S. during the 1980s: Rising Dispersion or Falling Minimum Wage?" *Quarterly Journal of Economics* 114 (August), 977-1023.
- D. Card, T. Lemieux, and W. Riddell. (2018) "Unions and Wage Inequality: The Role of Gender, Skill, and Public Employment," NBER WP No. 25313, November.
- D. Acemoglu, P. Aghion, and G. Violante. (2001), "Deunionization, Technical Change and Inequality," *Carnegie Rochester Conference Series on Public Policy* 55 (December), 229-64.

- F. Blau and L. Kahn. (2005), "Do Cognitive Test Scores Explain Higher U.S. Wage Inequality?" *RESTAT* 87(1), 184-93.
- F. Blau and L. Kahn. (1996) "International Differences in Male Wage Inequality: Institutions versus Market Forces," *Journal of Political Economy* 104 (August), 791-837.
- E. Hanushek, G. Schwerdt, S. Wiederhold, and L. Woessmann. (2015). "Returns to Skills around the World: Evidence from PIAAC," *European Economic Review*, 73(C), 103-130.
- S. Broecke, G. Quintini, and M. Vandeweyer. (2016) "Wage Inequality and Cognitive Skills: Re-Opening the Debate," NBER WP No. 21965, February.
- L. Kahn. (2000) "Wage Inequality, Collective Bargaining, and Relative Employment from 1985 to 1994: Evidence from Fifteen OECD Countries," *RESTAT* 72 (November), 564-79.
- D. Acemoglu. (2003) "Cross-Country Inequality Trends," *Economic Journal* 70 (April), 199-230.
- C. Dustmann, B. Fitzenberger, U. Schönberg, and A. Spitz-Oehner. (2014) "From Sick Man of Europe to Economic Superstar: Germany's Resurgent Economy," *JEP* 28(1), 167-88.
- D. Card. (2001) "The Effects of Unions on Wage Inequality in the U.S. Labor Market" *Industrial and Labor Relations Review* 54 (January), 296-315; also NBER WP No. 6520, April 1998.
- B. Frandsen. (2012) "Why Unions Still Matter: The Effects of Unionization on the Distribution of Employee Earnings," MIT; <http://economics.mit.edu/files/6950>.
- H. Farber, D. Herbst, I. Kuziemko, and S. Naidu. (2018) "Unions and Inequality over the Twentieth Century: New Evidence from Survey Data," NBER WP No. 24587.
- A. Dube and E. Kaplan. (2010) "Does Outsourcing Reduce Wages in Low-Wage Service Occupations? Evidence from Janitors and Guards," *ILRR* 62(2).
- D. Goldschmidt and J. Schmieder. (2017) "The Rise of Domestic Outsourcing and the Evolution of the German Wage Structure," *QJE* 132(3), 1165-1217.
- C. Frydman and R. Saks. (2010) "Executive Compensation: A New View from a Long-Term Perspective," *Review of Financial Studies* 23 (May), 2099-2138.
- T. Philippon and A. Reshef. (2012) "Wages and Human Capital in the U.S. Financial Industry: 1909-2006," *QJE* 127 (4), 1551-1609.
- D. Haanwinckel. "[Supply, Demand, Institutions and Firms: A Theory of Labor Market Sorting and Wage Distribution](#)," UC Berkeley, Dec. 2018.