Graduate Labor Economics

Course Overview and Reading List

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The reading list below is adapted from UC Davis course ECN 250A, which I taught in Winter 2018 and Spring 2019. This is a PhD course on labor economics, with an emphasis on demand-side topics. The lecture materials and readings explore firms' decisions about how many workers to hire and how much to pay them; the rise in wage inequality and the polarization of the occupational structure; the determinants of job search; the costs of job loss and other adverse workplace events; and the evolution of local labor markets.

Along the way, we'll encounter many theoretical and empirical tools that are commonly used in labor research, such as CES production functions, decomposition methods, border designs, the AKM model, event studies, search theory, and hazard models. You'll see identifying variation ranging from policy changes and field experiments to job switchers and Bartik shocks.

For an up-to-date, comprehensive overview of the field, see *Labor Economics* by Cahuc, Carcillo, and Zylberberg (2014). The *Handbook of Labor Economics* is a great place to get comprehensive introductions to more specialized topics. David Autor's lecture notes for his MIT course 14.662 are an invaluable resource for many of the topics we will be covering.

Lastly, any aspiring labor economist should develop a working knowledge of the laws and institutions that govern employment relationships. For US law, I recommend *Understanding Employment Law: Second Edition*, by Hirsch, Secunda, and Bates (2013).

PART I. EMPLOYMENT AND WAGES IN A NEOCLASSICAL WORLD

➢ LECTURES 1–2: STATIC LABOR DEMAND

OPTIONAL REFERENCES:

Hamermesh, D. S. (1986). The Demand for Labor in the Long Run. *Handbook of Labor Economics*, 1:429–471.

Hamermesh, D. S. (1996). *Labor Demand*. Princeton University Press, Princeton, NJ.

➢ LECTURE 3: THE COLLEGE WAGE PREMIUM AND THE "CANONICAL MODEL"

REQUIRED READING:

Katz, L. F. and Murphy, K. M. (1992). Changes in Relative Wages, 1963-1987: Supply and Demand Factors. *Quarterly Journal of Economics*, 107(1):35–78.

Acemoglu, D. and Autor, D. (2011). Skills, Tasks and Technologies: Implications for Employment and Earnings. In *Handbook of Labor Economics*, volume 4B, pages 1043–1171.

 Email: brendan.m.price@frb.gov. This reading list is adapted from UC Davis course ECN 250A, which I taught in Winter 2018 and Spring 2019. Any views or opinions expressed here are my own and do not necessarily represent the views or policies of the Board of Governors of the Federal Reserve System or its staff. Citations are current as of Spring 2019.

ADDITIONAL REFERENCES:

Juhn, C., Murphy, K. M., and Pierce, B. (1993). Wage Inequality and the Rise in Returns to Skill. *Journal of Political Economy*, 101(3):410–442.

Acemoglu, D. (1998). Why Do New Technologies Complement Skills? Directed Technical Change and Wage Inequality. *Quarterly Journal of Economics*, 113(4):1055–1089.

Krusell, P., Ohanian, L. E., Ríos-Rull, J.-V., and Violante, G. L. (2000). Capital-Skill Complementarity and Inequality: A Macroeconomic Analysis. *Econometrica*, 68(5):1029–1053.

Card, D. and Lemieux, T. (2001a). Can Falling Supply Explain the Rising Return to College for Younger Men? A Cohort-Based Analysis. *Quarterly Journal of Economics*, 116(2):705–746.

Card, D. and Lemieux, T. (2001b). Going to College to Avoid the Draft: The Unintended Legacy of the Vietnam War. *American Economic Review Papers and Proceedings*, 91(2):97–102.

Goldin, C. and Katz, L. F. (2007). Long-Run Changes in the Wage Structure: Narrowing, Widening, Polarizing. *Brookings Papers on Economic Activity*, 2:135–165.

Goldin, C. and Katz, L. F. (2010). *The Race Between Education and Technology*. Belknap Press, Cambridge, MA.

Carneiro, P. and Lee, S. (2011). Trends in Quality-Adjusted Skill Premia in the United States, 1960–2000. *American Economic Review*, 101(6):2309–2349.

Bowlus, A., Bozkurt, E., Lochner, L., and Robinson, C. (2017). Wages and Employment: The Canonical Model Revisited. NBER working paper 24069.

➢ LECTURE 4: SKILL-BIASED TECHNICAL CHANGE

REQUIRED READING:

Berman, E., Bound, J., and Griliches, Z. (1994). Changes in the Demand for Skilled Labor within US Manufacturing: Evidence from the Annual Survey of Manufacturers. *Quarterly Journal of Economics*, 109(2):367–397.

Akerman, A., Gaardner, I., and Mogstad, M. (2015). The Skill Complementarity of Broadband Internet. *Quarterly Journal of Economics*, 130(4):1781–1824.

ADDITIONAL REFERENCES:

Krueger, A. B. (1993). How Computers Have Changed the Wage Structure: Evidence from Microdata. *Quarterly Journal of Economics*, 108(1):33–60.

DiNardo, J. E. and Pischke, J.-S. (1997). The Returns to Computer Use Revisited: Have Pencils Changed the Wage Structure Too? *Quarterly Journal of Economics*, 112(1):291–303.

Doms, M., Dunne, T., and Troske, K. R. (1997). Workers, Wages, and Technology. *Quarterly Journal of Economics*, 112(1):253–290.

Autor, D. H., Katz, L. F., and Krueger, A. B. (1998). Computing Inequality: Have Computers Changed the Labor Market? *Quarterly Journal of Economics*, 113(4):1169–1213.

Card, D. and DiNardo, J. E. (2002). Skill-Biased Technological Change and Rising Wage Inequality: Some Problems and Puzzles. *Journal of Labor Economics*, 20(4):733–783.

Bresnahan, T. F., Brynjolfsson, E., and Hitt, L. M. (2002). Information Technology, Workplace Organization, and the Demand for Skilled Labor: Firm-Level Evidence. *Quarterly Journal of Economics*, 117(1):339–376.

Lemieux, T. (2006). Increasing Residual Wage Inequality: Composition Effects, Noisy Data, or Rising Demand for Skill? *American Economic Review*, 96(3):461–498.

Bartel, A., Ichniowski, C., and Shaw, K. (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.

Beaudry, P., Doms, M., and Lewis, E. (2010). Should the Personal Computer Be Considered a Technological Revolution? Evidence from US Metropolitan Areas. *Journal of Political Economy*, 118(5):988–1036.

Acemoglu, D., Autor, D., Dorn, D., Hanson, G. H., and Price, B. (2014). Return of the Solow Paradox? IT, Productivity, and Employment in US Manufacturing. *American Economic Review Papers and Proceedings*, 104(5):394–399.

Brynjolfsson, E. and McAfee, A. (2014). *The Second Machine Age*. W.W. Norton and Company, Inc., New York.

Acemoglu, D. and Restrepo, P. (2017). Robots and Jobs: Evidence from US Labor Markets. NBER working paper 23285.

➤ LECTURE 5: TASKS, POLARIZATION, AND THE FUTURE OF WORK

REQUIRED READING:

Autor, D. H., Levy, F., and Murnane, R. J. (2003). The Skill Content of Recent Technological Change: An Empirical Exploration. *Quarterly Journal of Economics*, 118(4):1279–1333.

Autor, D. H. (2013). The "Task Approach" to Labor Markets: An Overview. *Journal for Labour Market Research*, 46(3):185–199.

ADDITIONAL REFERENCES:

Autor, D. H., Katz, L. F., and Kearney, M. S. (2006). The Polarization of the US Labor Market. *American Economic Review Papers and Proceedings*, 96(2):189–194.

Spitz-Oener, A. (2006). Technical Change, Job Tasks, and Rising Educational Demands: Looking Outside the Wage Structure. *Journal of Labor Economics*, 24(2):235–270.

Goos, M. and Manning, A. (2007). Lousy and Lovely Jobs: The Rising Polarization of Work in Britain. *Review of Economics and Statistics*, 89(1):118–133.

Autor, D. H., Katz, L. F., and Kearney, M. S. (2008). Trends in US Wage Inequality: Revising the Revisionists. *Review of Economics and Statistics*, 90(2):300–323.

Goos, M., Manning, A., and Salomons, A. (2009). Job Polarization in Europe. *American Economic Review Papers and Proceedings*, 99(2):58–63.

Lin, J. (2011). Technological Adaptation, Cities, and New Work. *Review of Economics and Statistics*, 93(2):554–574.

Autor, D. H. and Dorn, D. (2013). The Growth of Low-Skill Service Jobs and the Polarization of the US Labor Market. *American Economic Review*, 103(5):1553–1597.

Goos, M., Manning, A., and Salomons, A. (2014). Explaining Job Polarization: Routine-Biased Technological Change and Offshoring. *American Economic Review*, 104(8):2509–2526.

Autor, D. H. (2015). Why Are There Still So Many Jobs? The History and Future of Workplace Automation. *Journal of Economic Perspectives*, 29(3):1–29.

Bessen, J. (2015). Toil and Technology. *Finance and Development*, 52(1):16–19.

Beaudry, P., Green, D. A., and Sand, B. M. (2016). The Great Reversal in the Demand for Skill and Cognitive Tasks. *Journal of Labor Economics*, 34(S1):S199–S247.

Frey, C. B. and Osborne, M. A. (2017). The Future of Employment: How Susceptible Are Jobs to Computerisation?. *Technological Forecasting and Social Change*, 114:254–280.

Deming, D. J. (2017). The Growing Importance of Social Skills in the Labor Market. *Quarterly Journal of Economics*, 132(4):1593–1640.

Hunt, J. and Nunn, R. (2019). Is Employment Polarization Informative About Wage Inequality and Is Employment Really Polarizing? NBER working paper 26064.

➤ LECTURE 6: AMENITIES, SORTING, AND COMPENSATING DIFFERENTIALS

REQUIRED READING:

Rosen, S. (1986). The Theory of Equalizing Differences. In *Handbook of Labor Economics*, volume 1, pages 641–692.

Mas, A. and Pallais, A. (2017). Valuing Alternative Work Arrangements. *American Economic Review*, 107(12):3722–3759.

ADDITIONAL REFERENCES:

Rosen, S. (1974). Hedonic Prices and Implicit Markets: Product Differentiation in Pure Competition. *Journal of Political Economy*, 82(1):34–55.

Brown, C. (1980). Equalizing Differences in the Labor Market. *Quarterly Journal of Economics*, 94(1):113–134.

Hamermesh, D. S. (1999). Changing Inequality in Markets for Workplace Amenities. *Quarterly Journal of Economics*, 114(4):1085–1123.

Pierce, B. (2001). Compensation Inequality. *Quarterly Journal of Economics*, 116(4):1493–1525.

Pierce, B. (2010). Recent Trends in Compensation Inequality. In *Labor in the New Economy*, pages 63–98.

Bloom, N., Liang, J., Roberts, J., and Ying, Z. J. (2015). Does Working from Home Work? Evidence from a Chinese Experiment. *Quarterly Journal of Economics*, 130(1):165–218.

Pan, J. (2015). Gender Segregation in Occupations: The Role of Tipping and Social Interactions. *Journal of Labor Economics*, 33(2):365–408.

Goldin, C. and Katz, L. (2016). A Most Egalitarian Profession: Pharmacy and the Evolution of a Family-Friendly Occupation. *Journal of Labor Economics*, 34(3):705–746.

Wasserman, M. (2018). Hours Constraints, Occupational Choice, and Gender: Evidence from Medical Residents. Working paper.

PART II. FRICTIONS AND INSTITUTIONS

➤ LECTURE 7: MARKET CONCENTRATION AND MONOPSONY POWER

REQUIRED READING:

Matsudaira, J. D. (2014). Monopsony in the Low-Wage Labor Market? Evidence from Minimum Nurse Staffing Regulations. *Review of Economics and Statistics*, 96(March):92–102.

ADDITIONAL REFERENCES:

Boal, W. M. and Ransom, M. R. (1997). Monopsony in the Labor Market. *Journal of Economic Literature*, 35(1):86–112.

Kleiner, M. M. (2000). Occupational Licensing. *Journal of Economic Perspectives*, 14(4):189–202.

Manning, A. (2006). A Generalised Model of Monopsony. *The Economic Journal*, 116(508):84–100.

Falch, T. (2010). The Elasticity of Labor Supply at the Establishment Level. *Journal of Labor Economics*, 28(2):237–266.

Staiger, D., Spetz, J., and Phibbs, C. (2010). Is There Monopsony in the Labor Market? Evidence from a Natural Experiment. *Journal of Labor Economics*, 28(2):211–236.

Manning, A. (2011). Imperfect Competition in the Labor Market. In *Handbook of Labor Economics*, volume 4B, pages 976–1041.

Council of Economic Advisers (2016). Labor Market Monopsony: Trends, Consequences, and Policy Responses. Issue Brief.

Azar, J., Marinescu, I., Steinbaum, M., and Taska, B. (2018). Concentration in US Labor Markets: Evidence from Online Vacancy Data. NBER working paper 24395.

Krueger, A. B. and Posner, E. A. (2018). A Proposal for Protecting Low-Income Workers from Monopsony and Collusion. Hamilton Project.

Jäger, S. and Heining, J. (2019). How Substitutable Are Workers? Evidence from Worker Deaths. Working paper.

➢ LECTURE 8: UNIONS

REQUIRED READING:

DiNardo, J. and Lee, D. S. (2004). Economic Impacts of New Unionization on Private Sector Employers: 1984-2001. *Quarterly Journal of Economics*, 119(4):1383–1441.

Lee, D. S. and Mas, A. (2012). Long-Run Impacts of Unions on Firms: New Evidence from Financial Markets, 1961-1999. *Quarterly Journal of Economics*, 127(1):333–378.

ADDITIONAL REFERENCES:

Freeman, R. B. and Medoff, J. L. (1984). *What Do Unions Do?* Basic Books, New York.

DiNardo, J., Fortin, N. M., and Lemieux, T. (1996). Labor Market Institutions and the Distribution of Wages, 1973-1992: A Semiparametric Approach. *Econometrica*, 64(5):1001–1044.

Farber, H. S., Herbst, D., Kuziemko, I., and Naidu, S. (2018). Unions and Inequality over the Twentieth Century: New Evidence from Survey Data. NBER working paper 24587.

➢ LECTURES 9 AND 10: THE MINIMUM WAGE

REQUIRED READING:

Dube, A., Lester, T. W., and Reich, M. (2010). Minimum Wage Effects Across State Borders: Estimates Using Contiguous Counties. *Review of Economics and Statistics*, 92(4):945–964.

Neumark, D., Salas, J. I., and Wascher, W. (2014). Revisiting the Minimum Wage-Employment Debate: Throwing Out the Baby with the Bathwater? *Industrial and Labor Relations Review*, 67:608–648.

Jardim, E., Long, M. C., Plotnick, R., van Inwegen, E., Vigdor, J., and Wething, H. (2017). Minimum Wage Increases, Wages, and Low-Wage Employment: Evidence from Seattle. NBER working paper 23532.

ADDITIONAL REFERENCES:

Brown, C. (1988). Minimum Wage Laws: Are They Overrated? *Journal of Economic Perspectives*, 2(3):133–145.

Neumark, D. and Wascher, W. (1992). Employment Effects of Minimum and Subminimum Wages: Panel Data on State Minimum Wage Laws. *Industrial & Labor Relations Review*, 46(1):55–81.

Card, D. and Krueger, A. B. (1994). Minimum Wages and Employment: A Case Study of the Fast-Food Industry in New Jersey and Pennsylvania. *American Economic Review*, 84(4):772–793.

Brown, C. (1999). Minimum Wages, Employment, and the Distribution of Income. *Handbook of Labor Economics*, 3B:2101–2163.

Lee, D. S. (1999). Wage Inequality in the United States during the 1980s: Rising Dispersion or Falling Minimum Wage? *Quarterly Journal of Economics*, 114(3):977–1023.

Giuliano, L. (2013). Minimum Wage Effects on Employment, Substitution, and the Teenage Labor Supply: Evidence from Personnel Data. *Journal of Labor Economics*, 31(1):155–194.

Dube, A., Lester, T. W., and Reich, M. (2016). Minimum Wage Shocks, Employment Flows, and Labor Market Frictions. *Journal of Labor Economics*, 34(3):663–704.

Allegretto, S., Dube, A., Reich, M., and Zipperer, B. (2017). Credible Research Designs for Minimum Wage Studies. *Industrial & Labor Relations Review*, 70(3):559–592.

Dube, A., Giuliano, L., and Leonard, J. (2019). Fairness and Frictions: The Impact of Unequal Raises on Quit Behavior. *American Economic Review*, 109(2):620–663.

Cengiz, D., Dube, A., Lindner, A., and Zipperer, B. (2019). The Effect of Minimum Wages on Low-Wage Jobs: Evidence from the United States Using a Bunching Estimator. NBER working paper 25434.

➢ LECTURE 11: INTER-FIRM WAGE DIFFERENTIALS

REQUIRED READING:

Card, D., Heining, J., and Kline, P. (2013). Workplace Heterogeneity and the Rise of West German Wage Inequality. *Quarterly Journal of Economics*, 128(3):967–1015.

ADDITIONAL REFERENCES:

Krueger, A. B. and Summers, L. H. (1988). Efficiency Wages and the Inter-Industry Wage Structure. *Econometrica*, 56(2):259–293.

Gibbons, R. and Katz, L. (1992). Does Unmeasured Ability Explain Inter-Industry Wage Differentials? *The Review of Economic Studies*, 59(3):515–535.

Abowd, J. M., Kramarz, F., and Margolis, D. N. (1999). High Wage Workers and High Wage Firms. *Econometrica*, 67(2):251–333.

Black, S. E. and Strahan, P. E. (2001). The Division of Spoils: Rent-Sharing and Discrimination in a Regulated Industry. *American Economic Review*, 91(4):814–831.

Barth, E., Bryson, A., Davis, J. C., and Freeman, R. (2016). It's Where You Work: Increases in Earnings Dispersion across Establishments and Individuals in the U.S. *Journal of Labor Economics*, 34(2).

Song, J., Price, D. J., Guvenen, F., Bloom, N., and von Wachter, T. (2016). Firming Up Inequality.

Card, D., Cardoso, A. R., and Kline, P. (2016). Bargaining, Sorting, and the Gender Wage Gap: Quantifying the Impact of Firms on the Relative Pay of Women. *Quarterly Journal of Economics*, 131(2):687–738.

Kline, P., Petkova, N., Williams, H., and Zidar, O. (2018). Who Profits from Patents? Rent-Sharing at Innovative Firms. NBER working paper 25245.

Card, D., Cardoso, A. R., Heining, J., and Kline, P. (2018). Firms and Labor Market Inequality: Evidence and Some Theory. *Journal of Labor Economics*, 36(S1):S13–S70.

Furman, J. and Orszag, P. (2018). A Firm-Level Perspective on the Role of Rents in the Rise in Inequality. In *Toward a Just Society: Joseph Stiglitz and Twenty-First Century Economics*. Columbia University Press, New York.

PART III. JOB SEARCH, JOB LOSS, AND BAD LUCK

➢ LECTURE 12: JOBLESSNESS AND JOB SEARCH

REQUIRED READING:

Krueger, A. B. and Mueller, A. (2011). Job Search, Emotional Well-Being, and Job Finding in a Period of Mass Unemployment: Evidence from High-Frequency Longitudinal Data. *Brookings Papers on Economic Activity*, pages 1–81.

ADDITIONAL REFERENCES:

Mortensen, D. T. (1977). Unemployment Insurance and Job Search Decisions. *Industrial and Labor Relations Review*, 30(4):505–517.

Krueger, A. B. and Mueller, A. (2010). Job Search and Unemployment Insurance: New Evidence from Time Use Data. *Journal of Public Economics*, 94(3-4):298–307.

Krueger, A. B. and Mueller, A. I. (2012). The Lot of the Unemployed: A Time Use Perspective. *Journal of the European Economic Association*, 10(4):765–794.

Shimer, R. (2012). Reassessing the Ins and Outs of Unemployment. *Review of Economic Dynamics*, 15(2):127–148.

Kroft, K., Lange, F., and Notowidigdo, M. J. (2013). Duration Dependence and Labor Market Conditions: Evidence from a Field Experiment. *Quarterly Journal of Economics*, 128(3):1123–1167.

Kroft, K., Lange, F., Notowidigdo, M. J., and Katz, L. F. (2015). Long-Term Unemployment and the Great Recession: The Role of Composition, Duration Dependence, and Non-Participation. *Journal of Labor Economics*, 34(1):S7–S54.

Baker, S. R. and Fradkin, A. (2017). The Impact of Unemployment Insurance on Job Search: Evidence from Google Search Data. *Review of Economics and Statistics*, 99(5):756–768.

Mueller, A. I. (2017). Separations, Sorting, and Cyclical Unemployment. *American Economic Review*, 107(7):2081–2107.

➢ LECTURE 13: UNEMPLOYMENT INSURANCE

REQUIRED READING:

Kiefer, N. M. (1988). Economic Duration Data and Hazard Functions. *Journal of Economic Literature*, 26(2):646–679.

Price, B. (2019). The Duration and Wage Effects of Long-Term Unemployment Benefits: Evidence from Germany's Hartz IV Reform. Working paper.

ADDITIONAL REFERENCES:

Katz, L. F. and Meyer, B. D. (1990). The Impact of the Potential Duration of Unemployment Benefits on the Duration of Unemployment. *Journal of Public Economics*, 41(1):45–72.

Meyer, B. D. (1990). Unemployment Insurance and Unemployment Spells. *Econometrica*, 58(4):757–782.

Gruber, J. (1997). The Consumption Smoothing Benefits of Unemployment Insurance. *American Economic Review*, 87(1):192–205.

Browning, M. and Crossley, T. F. (2001). Unemployment Insurance Benefit Levels and Consumption Changes. *Journal of Public Economics*, 80:1–23.

Chetty, R. (2008). Moral Hazard versus Liquidity and Optimal Unemployment Insurance. *Journal of Political Economy*, 116(2):173–234.

Rothstein, J. (2011). Unemployment Insurance and Job Search in the Great Recession. *Brookings Papers on Economic Activity*, pages 143–213.

Schmieder, J. F., von Wachter, T., and Bender, S. (2016). The Effect of Unemployment Benefits and Nonemployment Durations on Wages. *American Economic Review*, 106(3):739–777.

Kroft, K. and Notowidigdo, M. (2016). Should Unemployment Insurance Vary with the Unemployment Rate? Theory and Evidence. *Review of Economic Studies*, 83:1092–1142.

Nekoei, A. and Weber, A. (2017). Does Extending Unemployment Benefits Improve Job Quality? *American Economic Review*, 107(2):527–561.

DellaVigna, S., Lindner, A., Reizer, B., and Schmieder, J. F. (2017). Reference-Dependent Job Search: Evidence from Hungary. *Quarterly Journal of Economics*, (October):1–50.

Kolsrud, J., Landais, C., Nilsson, P., and Spinnewijn, J. (2018). The Optimal Timing of Unemployment Benefits: Theory and Evidence from Sweden. *American Economic Review*, 108(4–5):985–1033.

Le Barbanchon, T., Rathelot, R., and Roulet, A. (2019). Unemployment Insurance and Reservation Wages: Evidence from Administrative Data. *Journal of Public Economics*. Forthcoming.

Ganong, P. and Noel, P. (2019). Consumer Spending During Unemployment: Positive and Normative Implications. *American Economic Review*. Forthcoming.

Gerard, F. and Naritomi, J. (2019). Job Displacement Insurance and (the Lack of) Consumption Smoothing. NBER working paper 25749.

➤ LECTURE 14: DISPLACED WORKERS

REQUIRED READING:

Jacobson, L. S., Lalonde, R. J., and Sullivan, D. G. (1993). Earnings Losses of Displaced Workers. *American Economic Review*, 83(4):685–709.

Lachowska, M., Mas, A., and Woodbury, S. A. (2018). Sources of Displaced Workers' Long-Term Earnings Losses. NBER working paper 24217.

ADDITIONAL REFERENCES:

Ruhm, C. J. (1991). Are Workers Permanently Scarred by Job Displacements? *American Economic Review*, 81(1):319–324.

Davis, S. J. and Haltiwanger, J. (1992). Gross Job Creation, Gross Job Destruction, and Employment Reallocation. *Quarterly Journal of Economics*, 107(3):819–863.

Stevens, A. H. (1997). Persistent Effects of Job Displacement: The Importance of Multiple Job Losses. *Journal of Labor Economics*, 15(1):165–188.

Oreopoulos, P., Page, M., and Stevens, A. H. (2008). The Intergenerational Effects of Worker Displacement. *Journal of Labor Economics*, 26(3):455–483.

Sullivan, D. and von Wachter, T. (2009). Job Displacement and Mortality: An Analysis Using Administrative Data. *Quarterly Journal of Economics*, 124(3):1265–1306.

Couch, K. A. and Placzek, D. W. (2010). Earnings Losses of Displaced Workers Revisited. *American Economic Review*, 100(1):572–589.

Davis, S. J. and von Wachter, T. (2011). Recessions and the Costs of Job Loss. *Brookings Papers on Economic Activity*, pages 1–72.

Walker, W. R. (2013). The Transitional Costs of Sectoral Reallocation: Evidence from the Clean Air Act and the Workforce. *Quarterly Journal of Economics*, 128(4):1787–1835.

Decker, R., Haltiwanger, J., Jarmin, R. S., and Miranda, J. (2014). The Secular Decline in Business Dynamism in the US. Working paper.

Gathmann, C., Helm, I., and Schönberg, U. (2019). Spillover Effects of Mass Layoffs. *Journal of the European Economic Association*. Forthcoming.

➢ LECTURE 15: LABOR MARKET SEASONALITY

REQUIRED READING:

Geremew, M. and Gourio, F. (2018). Seasonal and Business Cycles of US Employment. *Economic Perspectives*, 3:1–28.

Coglianese, J. and Price, B. M. (2019). Income in the Off-Season: Household Adaptation to Yearly Work Interruptions. Working paper.

ADDITIONAL REFERENCES:

Feldstein, M. S. (1975). The Importance of Temporary Layoffs: An Empirical Analysis. *Brookings Papers on Economic Activity*, 1975(3):725–745.

Katz, L. F. (1986). Layoffs, Recall and the Duration of Unemployment. NBER working paper 1825.

Barsky, R. B. and Miron, J. A. (1989). The Seasonal Cycle and the Business Cycle. *Journal of Political Economy*, 97(3):503–534.

Beaulieu, J. J., MacKie-Mason, J. K., and Miron, J. A. (1992). Why Do Countries and Industries with Large Seasonal Cycles Also Have Large Business Cycles?. *The Quarterly Journal of Economics*, 107(2):621–656.

Beaulieu, J. J. and Miron, J. A. (1992). A Cross Country Comparison of Seasonal Cycles and Business Cycles. *The Economic Journal*, 102(413):772–788.

Miron, J. A. and Beaulieu, J. J. (1996). What Have Macroeconomists Learned about Business Cycles from the Study of Seasonal Cycles?. *Review of Economics and Statistics*, 78(1):54–66.

Moretti, E. (2000). Do Wages Compensate for Risk of Unemployment? Parametric and Semiparametric Evidence from Seasonal Jobs. *Journal of Risk and Uncertainty*, 20(1):45–66.

Olivei, G. and Tenreyro, S. (2007). The Timing of Monetary Policy Shocks. *American Economic Review*, 97(3):636–663.

Del Bono, E. and Weber, A. (2008). Do Wages Compensate for Anticipated Working Time Restrictions? Evidence from Seasonal Employment in Austria. *Journal of Labor Economics*, 26(1):181–221.

Ngai, L. R. and Tenreyro, S. (2014). Hot and Cold Seasons in the Housing Market. *American Economic Review*, 104(12):3991–4026.

Nekoei, A. and Weber, A. (2015). Recall Expectations and Duration Dependence. *American Economic Review*, 105(5):142–146.

Fujita, S. and Moscarini, G. (2017). Recall and Unemployment. *American Economic Review*, 107(12):3875–3916.

➢ LECTURE 16: UNLUCKY COHORTS

REQUIRED READING:

Oreopoulos, P., von Wachter, T., and Heisz, A. (2012). The Short- and Long-Term Career Effects of Graduating in a Recession. *American Economic Journal: Applied Economics*, 4(1):1–29.

Morin, L.-P. (2015). Cohort Size and Youth Earnings: Evidence from a Quasi-Experiment. *Labour Economics*, 32:99–111.

ADDITIONAL REFERENCES:

Welch, F. (1979). Effects of Cohort Size on Earnings: The Baby Boom Babies' Financial Bust. *Journal of Political Economy*, 87(5):S65–S97.

Topel, R. H. and Ward, M. P. (1992). Job Mobility and the Careers of Young Men. *Quarterly Journal of Economics*, 107(2):439–479.

von Wachter, T. and Bender, S. (2006). In the Right Place at the Wrong Time: The Role of Firms and Luck in Young Workers' Careers. *American Economic Review*, 96(5):1679–1705.

Oyer, P. (2006). Initial Labor Market Conditions and Long-Term Outcomes for Economists. *Journal of Economic Perspectives*, 20(3):143–160.

Bound, J. and Turner, S. (2007). Cohort Crowding: How Resources Affect Collegiate Attainment. *Journal of Public Economics*, 91(5):877–899.

Kahn, L. B. (2010). The Long-Term Labor Market Consequences of Graduating from College in a Bad Economy. *Labour Economics*, 17(2):303–316.

Marcus, J. and Zambre, V. (2019). The Effect of Increasing Education Efficiency on University Enrollment: Evidence from Administrative Data and an Unusual Schooling Reform in Germany. *Journal of Human Resources*, 54:468–502.

➢ LECTURE 17: ALTERNATIVE WORK ARRANGEMENTS

REQUIRED READING:

Katz, L. F. and Krueger, A. B. (2019). The Rise and Nature of Alternative Work Arrangements in the United States, 1995-2015. *Industrial and Labor Relations Review*, 72(2):382–416.

Goldschmidt, D. and Schmieder, J. F. (2017). The Rise of Domestic Outsourcing and the Evolution of the German Wage Structure. *Quarterly Journal of Economics*, 132(3):1165–1217.

ADDITIONAL REFERENCES:

Weil, D. (2014). *The Fissured Workplace: Why Work Became So Bad for So Many and What Can Be Done to Improve It*. Harvard University Press, Cambridge, MA.

The Hamilton Project (2015). A Proposal for Modernizing Labor Laws for Twenty-First-Century Work: The "Independent Worker". Policy brief.

Farrell, D. and Greig, F. (2016). Paychecks, Paydays, and the Online Platform Economy: Big Data on Income Volatility. Technical report. JPMorganChase Institute report.

PART IV. LOCAL LABOR MARKETS IN A GLOBALIZED WORLD

➢ LECTURE 18: REGIONAL EVOLUTIONS

REQUIRED READING:

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

Amior, M. and Manning, A. (2018). The Persistence of Local Joblessness. *American Economic Review*, 108(7):1942–1970.

ADDITIONAL REFERENCES:

Blanchard, O. J. and Katz, L. F. (1992). Regional Evolutions. *Brookings Papers on Economic Activity*, 1:1–75.

Black, D., Daniel, K., and Sanders, S. (2002). The Impact of Economic Conditions on Participation in Disability Programs: Evidence from the Coal Boom and Bust. *American Economic Review*, 92(1):27–50.

Glaeser, E. L. and Gyourko, J. (2005). Urban Decline and Durable Housing. *Journal of Political Economy*, 113(2):345–375.

Wozniak, A. (2010). Are College Graduates More Responsive to Distant Labor Market Opportunities? *Journal of Human Resources*, 45(4):944–970.

Moretti, E. (2011). Local Labor Markets. In *Handbook of Labor Economics, Volume 4b*, volume 4, pages 1237–1313. Elsevier B.V.

Cadena, B. C. and Kovak, B. K. (2016). Immigrants Equilibrate Local Labor Markets: Evidence from the Great Recession. *American Economic Journal: Applied Economics*, 8(1):257–290.

Manning, A. and Petrongolo, B. (2017). How Local Are Labor Markets? Evidence from a Spatial Job Search Model. *American Economic Review*, 107(10):2877–2907.

Ganong, P. and Shoag, D. (2017). Why Has Regional Income Convergence in the US Declined? *Journal of Urban Economics*, 102:76–90.

Yagan, D. (2018). Employment Hysteresis from the Great Recession. *Journal of Political Economy*. Forthcoming.

Feyrer, J., Mansur, E. T., and Sacerdote, B. (2017). Geographic Dispersion of Economic Shocks: Evidence from the Fracking Revolution. *American Economic Review*, 107(4):1313–1334.

➢ LECTURE 19: IMPORT COMPETITION

REQUIRED READING:

Autor, D. H., Dorn, D., and Hanson, G. H. (2013). The China Syndrome: Local Labor Market Effects of Import Competition in the United States. *American Economic Review*, 103(6):2121–2168.

ADDITIONAL REFERENCES:

Autor, D. H., Dorn, D., Hanson, G. H., and Song, J. (2014). Trade Adjustment: Worker-Level Evidence. *Quarterly Journal of Economics*, 129(4):1799–1860.

Hummels, D., Jørgensen, R., Munch, J., and Xiang, C. (2014). The Wage Effects of Offshoring: Evidence from Danish Matched Worker-Firm Data. *American Economic Review*, 104(6):1597–1629.

Dauth, W., Findeisen, S., and Suedekum, J. (2014). The Rise of the East and the Far East: German Labor Markets and Trade Integration. *Journal of the European Economic Association*, 12(6):1–33.

Baily, M. N. and Bosworth, B. P. (2014). US Manufacturing: Understanding Its Past and Its Potential Future. *Journal of Economic Perspectives*, 28(1):3–25.

Autor, D. H., Dorn, D., and Hanson, G. H. (2015). Untangling Trade and Technology: Evidence from Local Labour Markets. *Economic Journal*, 125(584):621–646.

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

Acemoglu, D., Autor, D., Dorn, D., Hanson, G. H., and Price, B. (2016). Import Competition and the Great US Employment Sag of the 2000s. *Journal of Labor Economics*, 34(S1):S141–S198.

Pierce, J. R. and Schott, P. K. (2016). The Surprisingly Swift Decline of US Manufacturing Employment. *American Economic Review*, 106(7):1632–1662.

Bloom, N., Draca, M., and Van Reenen, J. (2016). Trade Induced Technical Change? The Impact of Chinese Imports on Innovation, IT, and Productivity. *Review of Economic Studies*, 83(1):87–117.

Dix-Carneiro, R. and Kovak, B. K. (2017). Trade Liberalization and Regional Dynamics. *American Economic Review*, 107(10):2908–2946.

Feenstra, R. C. and Sasahara, A. (2018). The 'China Shock,' Exports and US Employment: A Global Input-Output Analysis. *Review of International Economics*, 26(5):1053–1083.

Feenstra, R. C., Ma, H., and Xu, Y. (2019). US Exports and Employment. *Journal of International Economics*. Accepted.

Eriksson, K., Russ, K., Shambaugh, J., and Xu, M. (2019). Trade Shocks and the Shifting Landscape of U.S. Manufacturing. NBER working paper 25646.

Pierce, J. R. and Schott, P. K. (2019). Trade Liberalization and Mortality: Evidence from U.S. Counties. *American Economic Review: Insights*. Forthcoming.

➤ LECTURE 20: SHIFT-SHARE INSTRUMENTS

REQUIRED READING:

Goldsmith-Pinkham, P., Sorkin, I., and Swift, H. (2018). Bartik Instruments: What, When, Why, and How. NBER working paper 24408.

Borusyak, K., Hull, P., and Jaravel, X. (2018). Quasi-Experimental Shift-Share Research Designs. NBER working paper 24997.

ADDITIONAL REFERENCES:

Bartik, T. J. (1991). *Who Benefits from State and Local Economic Development Policies?* W.E. Upjohn Institute for Employment Research.

Card, D. (2001). Immigrant Inflows, Native Outflows, and the Local Labor Market Impacts of Higher Immigration. *Journal of Labor Economics*, 19(1):22–64.

Adao, R., Kolesar, M., and Morales, E. (2018). Shift-Share Designs: Theory and Inference. NBER working paper 24944.

Jaeger, D. A., Ruist, J., and Stuhler, J. (2018). Shift-Share Instruments and the Impact of Immigration. NBER working paper 24285.