

# Topics in Macroeconomics and Labor Economics

## Kobe University

### Syllabus and Reading List

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## 1 Description

This course is designed for second-year master students (or PhD students), who are interested in writing their thesis in empirical macro/labor. In particular, this course focuses on topics on *wage or earnings inequality* over the life-cycle, and its evolution over time.

## 2 Assessment

Students who have enrolled in this course for credits are supposed to finish the following two assignments.

1. (50%) A problem set, which consists of empirical exercises with R language.
2. (50%) Either a *research proposal* on any topic in the macro labor field, or a *referee report* on one of the articles listed below. Your research proposal will be evaluated based on feasibility and innovations in the literature. Your referee report will be evaluated in terms accuracy of your summary and critiques on the article. Your proposal and referee report should be written in clear English and three- to five-page long. All margins should be in one inch and use half line spacing (between single and double space).

- Structure of the Research Proposal

- Summarize the main contribution of the your research project. This should be in 1-3 paragraphs.
- Describe the related literature. Discuss how your research is related/different from previous research. This should be in 1-3 paragraphs.
- Describe the details on how you implement your research. Mention data you plan to use and methodologies you are going to apply.
- Conclude your proposal with possible extension for future research.

- Structure of the Referee Report

- Summarize the main argument of the paper in your own words. Do not copy and paste the text from the paper. This should be in 1-3 paragraphs.
- State your overall assessment of the paper in 1 paragraph. What are the main strength and weakness?
- Describe major issues/concerns about the paper. Raise issues/concerns in the order of importance. This is the most important part of a referee report. Try to convince the reader (= editor).
- List minor issues. This is usually included in a real referee report, but not necessary for this assignment.

### 3 Schedule

\*\*Covered in the lectures. #You may choose for your referee report.

#### Lecture 1. Introduction:

##### 1. Empirical Facts: Where Do We Stand?

- \*\*Acemoglu, D. and Autor, D. (2011). Skills, Tasks and Technologies: Implications for Employment and Earnings. *Handbook of Labor Economics*, 4b:1043–1171
- \*\*Guvenen, F., Kaplan, G., Song, J., and Weidner, J. (2017). Lifetime Incomes in the United States Over Six Decades. *NBER Working Paper*, (23371):76
- \*\*Song, J., Price, D. J., Guvenen, F., Bloom, N., and Von Wachter, T. (2016). Firming Up Inequality. *Quarterly Journal of Economics R&R*

##### 2. Methodology: How to Bring Theories to Data?

- Heathcote, J., Storesletten, K., and Violante, G. (2009). Quantitative Macroeconomics with Heterogeneous Households. *Annual Review of Economics*, 1:319–354
- Guvenen, F. (2011). Macroeconomics with Heterogeneity: A Practical Guide. *Federal Reserve Bank of Richmond Economic Quarterly*, 97(3):255–326
- Low, H. and Meghir, C. (2017). The Use of Structural Models in Econometrics. *Journal of Economic Perspectives*, 31(2):33–58
- Keane, M. P., Todd, P. E., and Wolpin, K. I. (2011). The Structural Estimation of Behavioral Models: Discrete Choice Dynamic Programming Methods and Applications. *Handbook of Labor Economics*, 4(PART A):331–461
- Aguirregabiria, V. and Mira, P. (2010). Dynamic Discrete Choice Structural Models: A Survey. *Journal of Econometrics*, 156(1):38–67
- Angrist, J. D. and Pischke, J.-S. (2008). *Mostly Harmless Econometrics : An Empiricist's Companion*
- Athey, S. and Imbens, G. (2017). The State of Applied Econometrics - Causality and Policy Evaluation. *Journal of Economic Perspectives*, 31(2):3–32

#### Lecture 2. Wages over the Life-Cycle: Ben-Porath

- Becker, G. (1962). Investment in Human Capital: A Theoretical Analysis. *Journal of Political Economy*, 70(5):9–49
- Ben-Porath, Y. (1967). The Production of Human Capital and the Life Cycle of Earnings. *Journal of Political Economy*, 75(4, Part 1):352–365
- Mincer, J. (1974). *Schooling, Experience, and Earnings*. New York: Columbia University Press
- Rosen, S. (1972). Learning and Experience in the Labor Market. *Journal of Human Resources*, 7(3):326–342
- Heckman, J. J. (1976). Earnings and Employment A Life-Cycle Model of Earnings, Learning, and Consumption. *Journal of Political Economy*, 84(4)
- \*\*Huggett, M., Ventura, G., and Yaron, A. (2011). Sources of Lifetime Inequality. *American Economic Review*, 101(7):2923–2954

### Lecture 3. Wages over the Life-Cycle: Learning-by-Doing

- Keane, M. P. and Wolpin, K. I. (1997). The Career Decisions of Young Men. *Journal of Political Economy*, 105(3):473–522
- \*\*Imai, S. and Keane, M. (2004). Intertemporal Labor Supply and Human Capital Accumulation. *International Economic Review*, 45(2):601–642
- Blundell, R., Dias, M. C., Meghir, C., and Shaw, J. (2015). Female Labor Supply, Human Capital, and Welfare Reform. *Econometrica*, 84(5):1705–1753
- Heckman, J. J., Lochner, L., and Cossa, R. (2003). Learning-by-Doing Versus On-the-Job Training: Using Variation Induced by the EITC to Distinguish between Models of Skill Formation. In Phelps, E. S., editor, *Designing Inclusion: Tools to Raise Low-End Pay and Employment in Private Enterprise*, pages 74–130. Columbia University Press, New York
- Wallenius, J. (2011). Human capital accumulation and the intertemporal elasticity of substitution of labor: How large is the bias? *Review of Economic Dynamics*, 14(4):577–591
- #Fan, X., Seshadri, A., and Taber, C. (2015). Estimation of a Life-Cycle Model with Human Capital, Labor Supply and Retirement. *Journal of Political Economy R&R*

### Lecture 4. Return to Employer and Occupational Tenure

- Altonji, J. G. and Shakotko, R. A. (1987). Do Wages Rise with Job Seniority? *The Review of Economic Studies*, 54(3):437–459
- Topel, R. (1991). Specific Capital , Mobility , and Wages : Wages Rise with Job Seniority. *Journal of Political Economy*, 99(1):145–176
- #Buchinsky, M., Fougère, D., and Kramarz, F. (2010). Interfirm Mobility, Wages and the Returns to Seniority in the United States. *The Review of Economic Studies*, 77(3):972–1001
- Kambourov, G. and Manovskii, I. (2009). Occupational Specificity of Human Capital. *International Economic Review*, 50(1):63–115
- \*\*Pavan, R. (2011). Career Choice and Wage Growth. *Journal of Labor Economics*, 29(3):549–587

### Lecture 5. Task Approach and Occupational Choice Model

- Autor, D. H., Levy, F., and Murnane, R. J. (2003). The Skill Content of Recent Technological Change: An Empirical Exploration. *The Quarterly Journal of Economics*, 118(4):1279–1333
- Ingram, B. F. and Neumann, G. R. (2006). The Returns to Skill. *Labour Economics*, 13(1):35–59
- Poletaev, M. and Robinson, C. (2008). Human Capital Specificity: Evidence from the Dictionary of Occupational Titles and Displaced Worker Surveys, 1984 – 2000. *Journal of Labor Economics*, 26(3):387–420
- Gathmann, C., Schönberg, U., and Gathmann, C. (2010). How General Is Human Capital ? A Task-Based Approach. *Journal of Labor Economics*, 28(1):1–49
- \*\*Yamaguchi, S. (2012). Tasks and Heterogeneous Human Capital. *Journal of Labor Economics*, 30:1–53
- #Sanders, C. (2016). Skill Accumulation, Skill Uncertainty, and Occupational Choice. *Working Paper*, pages 1–44

## Lecture 6. Search Frictions

- Burdett, K. and Mortensen, D. T. (1998). Wage Differentials, Employer Size, and Unemployment. *International Economic Review*, 39(2):257
- Postel-Vinay, F. and Robin, J.-M. (2002). Equilibrium Wage Dispersion with Worker and Employer Heterogeneity. *Econometrica*, 70(6):2295–2350
- Cahuc, P., Postel-Vinay, F., and Robin, J. M. (2006). Wage Bargaining with On-the-Job Search: Theory and Evidence. *Econometrica*, 74(2):323–364
- \*\*Bagger, B. J., Fontaine, F., Postel-vinay, F., and Robin, J.-m. (2014). Tenure , Experience , Human Capital , and Wages: A Tractable Equilibrium Search Model of Wage Dynamics. *American Economic Review*, 104(6):1551–1596
- #Lise, J. and Robin, J. M. (2017). The Macrodynamics of Sorting between Workers and Firms. *American Economic Review*, 107(4):1104–1135

## Lecture 7. Multidimensional Skills and Mismatch

- \*\*Lise, J. and Postel-Vinay, F. (2016). Multidimensional Skills, Sorting, and Human Capital Accumulation. *American Economic Review R&R*
- Guvenen, F., Kuruscu, B., Tanaka, S., and Wiczer, D. (2015). Multidimensional Skill Mismatch. *American Economic Journal: Macroeconomics R&R*
- #Lindenlaub, I. and Postel-vinay, F. (2017). Multidimensional Sorting Under Random Search. (May):0–67
- Baley, I. and Figueiredo, A. (2017). Mismatch Cycles. *Working Paper*

## Lecture 8. Statistical Model of Earnings Process

- Meghir, C. and Pistaferri, L. (2011). Earnings, Consumption and Life Cycle Choices. *Handbook of Labor Economics*, 4(PART B):773–854
- Geweke, J. and Keane, M. (2000). An Empirical Analysis of Earnings Dynamics Among Men in the PSID: 1968–1989. *Journal of Econometrics*, 96:293–356
- Bonhomme, S. and Robin, J.-m. (2010). Generalized Deconvolution with an to Earnings Application Dynamics. *The Review of Economic Studies*, 77(2):491–533
- \*\*Guvenen, F. and Song, J. (2016). What Do Data on Millions of U . S . Workers Reveal about Life-Cycle Earnings Dynamics? *Journal of Political Economy R&R*
- #Arellano, M., Blundell, R., and Bonhomme, S. (2017). Earnings and Consumption Dynamics: A Nonlinear Panel Data Framework. *Econometrica*, 85(3):693–734
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## Lecture 9. Skill-Biased Technological Change I

- \*\*Katz, L. F. and Murphy, K. M. (1992). Changes in Relative Wages , 1963–1987 : Supply and Demand Factors. *The Quarterly Journal of Economics*
- \*\*Card, D. and Lemieux, T. (2001). Can Falling Supply Explain the Rising Return to College for Younger Men? A Cohort-Based Analysis. *Quarterly Journal of Economics*

- Heckman, J., Lochner, L., and Taber, C. (1998). Explaining Rising Wage Inequality: Explorations with a Dynamic General Equilibrium Model of Labor Earnings with Heterogeneous Agents. *Review of Economic Dynamics*, 1(1):1–58
- #Jeong, B. H., Kim, Y., and Manovskii, I. (2018). The Price of Experience. *American Economic Review*, 105(2):784–815

#### **Lecture 10. Skill-Biased Technological Change II**

- \*\*Krusell, P., Ohanian, L., Ríos-rull, J.-v., and Violante, G. L. (2000). Capital Skill Complementarity and Inequality: A Macroeconomic Analysis. *Econometrica*, 68(5):1029–1054
- Acemoglu, D. (1998). Why Do New Technologies Complement Skills ? Directed Technical Change and Wage Inequality. *The Quarterly Journal of Economics*, 113(4):1055–1089
- Acemoglu, D. (2002). Technical Change , Inequality , and the Labor Market. *Journal of Economic Literature*, 40(1):7–72
- Katz, L. F. and Autor, D. H. (1999). Changes in the Wage Structure and Earnings Inequality. *Handbook of Labor Economics*, 3
- Krueger, A. B. (1993). How Computers Have Changed the Wage Structure: Evidence from Microdata, 1984-1989. *The Quarterly Journal of Economics*, 108(1):33–60
- DiNardo, J. and Pischke, J.-S. (1997). The returns to computer use revisited: have pencils changed the wage structure too? *The Quarterly Journal of Economics*, 112(1):291–303
- Bond, S. and Van Reenen, J. (2007). Chapter 65 Microeconomic Models of Investment and Employment. *Handbook of Econometrics*, 6(SUPPL. PART A):4417–4498
- Berman, E., Bound, J., and Griliches, Z. (1994). Changes in the Demand for Skilled Labor within U. S. Manufacturing: Evidence from the Annual Survey of Manufactures. *The Quarterly Journal of Economics*, 109(2):367–397
- Autor, D. H., Katz, L. F., and Krueger, A. B. (1998). Computing Inequality: Have Computers Changed the Labor Market? *The Quarterly Journal of Economics*, 113(4):1169–1213
- Machin, S. and Van Reenen, J. (1998). Technology and Changes in Skill Structure: Evidence from Seven OECD Countries. *The Quarterly Journal of Economics*, 113(4):1215–1244
- Caroli, E. and Van Reenen, J. (2001). Skill-Biased Organizational Change? Evidence from A Panel of British and French Establishments. *The Quarterly Journal of Economics*, 116(4):1449–1492
- Bresnahan, T. F., Brynjolfsson, E., and Hitt, L. M. (2002). Information Technology, Workplace Organization, and the Demand for Skilled Labor: Firm-Level Evidence. *The Quarterly Journal of Economics*, 117(1):339–376

#### **Lecture 11. Task Approach and Job Polarization I**

- Autor, D. H., Levy, F., and Murnane, R. J. (2003). The Skill Content of Recent Technological Change: An Empirical Exploration. *The Quarterly Journal of Economics*, 118(4):1279–1333
- 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., Kearney, M. S., and Katz, F. (2006). The Polarization of the U . S . Labor Market. *The American Economic Review*, 96(2):189–194

- \*\*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
- 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
- #Cortes, M. G., Jaimovich, N., and Siu, H. E. (2017). Disappearing Routine Jobs : Who, How, and Why? *Journal of Monetary Economics*, 91:69–87

## **Lecture 12. Task Approach and Job Polarization II**

- Heckman, J. J. and Sedlacek, G. (1985). Heterogeneity, Aggregation, and Market Wage Functions: An Empirical Model of Self-selection in the Labor Market. *Journal of Political Economy*, 93(6):1077–1125
- \*\*Cortes, G. M. (2016). Where Have the Middle-Wage Workers Gone? A Study of Polarization Using Panel Data. *Journal of Labor Economics*, 34(1):63–105
- #Roys, N. and Taber, C. (2016). Skills Prices, Occupations and Changes in the Wage Structure. *Working Paper*, (1):1–38

## **Lecture 13. ICT and Automation**

- Michaels, G., Natraj, A., and Van Reenen, J. (2014). Has ICT Polarized Skill Demand? Evidence from Eleven Countries over Twenty-Five Years. *Review of Economics and Statistics*, 96(1):60–77
- Akerman, A., Gaarder, I., and Mogstad, M. (2015). The Skill Complementarity of Broadband Internet. *Quarterly Journal of Economics*, 130(4):1781–1824
- Gaggl, P. and Wright, G. C. (2017). A short-run view of what computers do: Evidence from a UK tax incentive. *American Economic Journal: Applied Economics*, 9(3):262–294
- Autor, D. H. (2015). Why Are There Still So Many Jobs? The History and Future of Workplace Automation. *Journal of Economic Perspectives*, 29(3):3–30
- \*\*Acemoglu, D. and Restrepo, P. (2017). Robots and Jobs: Evidence from US Labor Markets. *Working Paper*
- #Mann, K. and Putmann, L. (2017). Benign Effects of Automation: New Evidence from Patent Texts. *Working Paper*

## **Lecture 14. Between-Firm Wage Inequality I**

- Abowd, J. M., Kramarz, F., and Margolis, D. N. (1999). High Wage Workers and High Wage Firms. *Econometrica*, 67(2):251–333
- Eeckhout, J. and Kircher, P. (2011). Identifying Sorting: In Theory. *The Review of Economic Studies*, 78(3):872–906
- \*\*Hagedorn, M., Law, T. H., and Manovskii, I. (2017). Identifying Equilibrium Models of Labor Market Sorting. *Econometrica*, 85(1):29–65
- #Bonhomme, S., Lamadon, T., and Manresa, E. (2016). A Distributional Framework for Matched Employer Employee Data. *Working Paper*, pages 1–71

- #Borovičková, K. and Shimer, R. (2017). High Wage Workers Work for High Wage Firms. *Working Paper*

## **Lecture 15. Between-Firm Wage Inequality II**

- 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
- \*\*Song, J., Price, D. J., Guvenen, F., Bloom, N., and Von Wachter, T. (2016). Firming Up Inequality. *Quarterly Journal of Economics R&R*
- Alvarez, J., Benguria, F., Engbom, N., and Moser, C. (2018). Firms and the Decline in Earnings Inequality in Brazil. *American Economic Journal: Macroeconomics*, 10(1):149–89
- Bloom, B. N., Guvenen, F., Smith, B. S., Song, J., and Till, v. W. (2018). Inequality and the Disappearing Large Firm Wage Premium. *American Economic Review P&P*
- #Goldschmidt, D. and Schmieder, J. F. (2017). The Rise of Domestic Outsourcing and the Evolution of the German Wage Structure. *The Quarterly Journal of Economics*, 132(3):1165–1217
- #Jarosch, G., Oberfield, E., and Rossi-hansberg, E. (2018). Learning from Coworkers. *Working Paper*