

Labor Market Economics

Middle East Technical University, Department of Economics, Spring 2010

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Summary: This course focuses on selected micro and macro topics in modern labor economics with a special emphasis on human capital. We begin with a brief overview of the origins of inequality in wages and human capabilities. We then critically review the existing empirical and theoretical attempts to explain the sources of this inequality. We discuss the relevance of the skill-biased technical change (SBTC) hypothesis. We introduce equilibrium models for pricing, sorting, matching and learning. We also explore the literature on investment in schooling, family economics, intergenerational mobility, on-the-job training, learning-by-doing, and the link between marriage systems and economic growth.

Objectives: The primary objective of this course is to train students in the tools of economic theory and empirical analysis required to analyze major questions in labor economics. Theory and econometrics are covered interconnectedly. Students are expected to “actively read”, understand and start thinking about possible extensions of the breakthrough papers in the literature. Most of the literature on labor economics draws on issues about the US and European labor markets. Students are encouraged to link the models and reported findings in the literature into Turkish labor markets.

Course Material: There is no textbook for this course. Reading the literature with a critical eye is an essential part of the course. 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.

Grading: The grade in this course will be based on: (1) class participation, (2) two referee reports for papers of relevant content published at the *Journal of Political Economy* or *Econometrica* (papers published after 2005), and (3) a final exam (or a research paper with publishable content).

Course Outline and Reading List

(1) Inequality: An Overview of the Dimensions of the Problem

- (*) Autor, David H., Katz, Lawrence F. and Kearney, Melissa S. (2006). “The Polarization of the US Labor Market.” *American Economic Review*, 96(2):189-194.
- (*) Autor, David H., Katz, Lawrence F. and Kearney, Melissa S. (2008). “Trends in US Wage Inequality: Revising the Revisionists.” *Review of Economics and Statistics*, 90(2):300-323.
- (*) Card, David and Thomas Lemieux. (2001). “Can Falling Supply Explain the Rising Return to College for Younger Men? A Cohort-Based Analysis,” *Quarterly Journal of Economics*, 116(2):705-746.
- (*) Heckman, James J. and Paul LaFontaine. (2009). “Some Facts and Open Issues in the Study of Wage and Income Inequality and Educational Attainment.” Unpublished manuscript. University of Chicago.
- (*) Eckstein, Zvi and Nagypal, Eva. (2004). “The Evolution of US Earnings Inequality: 1961-2002.” *Federal Reserve Bank of Minneapolis Quarterly Review*, 28(2):10-29.
- (*) Juhn, Chinhui, Murphy, Kevin M. and Pierce, Brooks. (1993). “Wage Inequality and the Rise in Returns to Skill.” *Journal of Political Economy*, 101:410-442.
- MaCurdy, Thomas and Thomas Mroz. (1995). “Measuring Macroeconomic Shifts in Wages from Cohort Specifications,” Presented at “Labor Markets,” NBER, August 1989. Unpublished manuscript, Clemson University, Department of Economics.
- Lemieux, Thomas. (2006). “Increasing Residual Wage Inequality: Composition Effects, Noisy Data, or Rising Demand for Skill?” *American Economic Review*, 96(3):461-498.
- Bowlus, Audra J. and Jean-Marc Robin. (2004). “Twenty Years of Rising Inequality in US Lifetime Labour Income Values,” *Review of Economic Studies*, 71(3): 709-742.
- Piketty, Thomas and Saez, Emmanuel. (2004). “Income Inequality in the United States, 1913-2002,” *Quarterly Journal of Economics*, 118(1): 1-39.
- Cunha, Flavio and James J. Heckman. (2009). “The Economics and Psychology of Inequality and Human Development,” *Journal of the European Economic Association*, 7: 320-364.

(2) Pricing Equations and Models for Wages

(a) Mincer Models for Earnings and the Rates of Return to Schooling

- (*) Heckman, James J., Lochner, Lance J. and Todd, Petra E. (2006). "Earnings Equations and Rates of Return: The Mincer Equation and Beyond." *Handbook of the Economics of Education*, E. A. Hanushek, and F. Welch, eds. Amsterdam: North-Holland. pp. 307-458.
- (*) Card, David. (2001). "Estimating the Return of Schooling: Progress on Some Persistent Econometric Problems." *Econometrica*, 69(5):1127-1160.
- Mincer, J. (1958). "Investment in Human Capital and Personal Income Distribution," *Journal of Political Economy*, 281-302.
- Mincer, J. (1974). *Schooling, Experience, and Earnings*. New York: NBER.
- Becker, G. (1993). *Human Capital*. 3rd ed. Chicago: University of Chicago Press.
- Griliches, Z. (1977). "Estimating the Returns to Schooling: Some Econometric Problems," *Econometrica*, 45(1), 1-22.
- R. Willis. (1986). "Wage Determinants: A Survey and Reinterpretation of Human Capital Earnings Functions," *Handbook of Labor Economics*, O. Ashenfelter and R. Layard, eds., Elsevier Science, 1986, pp. 525-602.

(b) Hedonic Models: Pricing of Fixed Endowments of Skills

- (*) Tinbergen, Jan. (1956). "On the Theory of Income Distribution." originally published in *Weltwirtschaftliches Archiv*, 77(2):155-173. Reprinted in Tinbergen, Jan. (1959). *Selected Papers*, L.H. Klaassen, L.M. Koyck and H.J. Witteveen, eds. Amsterdam: North-Holland.
- (*) Koopmans, Tjalling C. and Martin Beckmann. (1957). "Assignment Problems and the Location of Economic Activities," *Econometrica*, 25(1):53-76.
- (*) Gale, D. and Shapley, L.S. (1962). "College Admissions and the Stability of Marriage," *American Mathematical Monthly*, 69(1):9-15.
- (*) Rosen, Sherwin. (1974). "Hedonic Prices and Implicit Markets: Product Differentiation in Pure Competition," *Journal of Political Economy*, 82(1):34-55.
- (*) Sattinger, Michael. (1979). "Differential Rents and the Distribution of Earnings," *Oxford Economic Papers*, 31(1): 60-71.
- (*) Heckman, James J. and Jose Scheinkman. (1987). "The Importance of Bundling in A Gorman-Lancaster Model of Demand For Characteristics:

A Theoretical Analysis With Evidence From the Labor Market.” *Review of Economic Studies*, 54(2):243-255.

- Shapley, L. S. and M. Shubik (1971). “The Assignment Game I: The Core.” *International Journal of Game Theory*, 1(1): 111-130.
- Kniesner, Thomas J. and John D. Leeth. (1988). “Simulating Hedonic Labor Market Models: Computational Issues and Policy Applications,” *International Economic Review*, 29(4): 755-789.
- Becker, Gary S. (1973). “A Theory of Marriage: Part I,” *Journal of Political Economy*, 81(4): 813-846.
- Becker, G. (1993). *A Treatise on the Family*. Boston: Harvard University Press. University Press.
- Shimer, R. and Lones Smith. (2000). “Assortative Matching and Search.” *Econometrica*, 68(2): 343-369.
- Ekeland, Ivar, James J. Heckman and Lars Nesheim. (2004). “Identification and Estimation of Hedonic Models,” *Journal of Political Economy*, 112:S60-S109.

(c) **Models of Comparative Advantage**

- (*) Heckman, James J. and Guilherme Sedlacek. (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.
- (*) Heckman, James J. and Bo Honore. (1990). “The Empirical Content of The Roy Model,” *Econometrica*, 58(5):1121-1149.
- (*) Willis, Robert and Sherwin Rosen. (1979). “Education and Self Selection,” *Journal of Political Economy*, 87(5, Part 2):S7-S36.
- Sattinger, M. (1975). “Comparative Advantage and the Distribution of Earnings and Abilities,” *Econometrica*, 43: 455-468.
- Heckman, James J. (1974). “Shadow Prices, Market Wages, and Labor Supply,” *Econometrica*, 42(4):679-94.
- Abbring, Jaap and Heckman, James J. (2007). “Econometric Evaluation of Social Programs, Part III: Distributional Treatment Effects, Dynamic Treatment Effects, Dynamic Discrete Choice, and General Equilibrium Policy Evaluation.” *Handbook of Econometrics*, Vol. 6B, J. Heckman and E. Leamer, eds. Amsterdam: Elsevier. pp. 5145-5303.
- Tumen, Semih. (2009). “Comparative Advantage in Child Rearing.” Unpublished manuscript. University of Chicago.

(d) Labor Supply

- (*) Blundell, Richard and Thomas MaCurdy. (1999). “Labor Supply: A Review of Alternative Approaches,” O. Ashenfelter and D. Card, eds. *Handbook of Labor Economics*, Volume 3A. Amsterdam: Elsevier. pp. 1559-1695.
- (*) Heckman, James J. and Thomas E. MaCurdy. (1980). “A Life Cycle Model of Female Labour Supply,” *Review of Economic Studies*, 47(1):47-74.
- (*) MaCurdy, Thomas E. (1981). “An Empirical Model of Labor Supply in a Life-Cycle Setting,” *Journal of Political Economy*, 89(6):1059-1085.
- Aguiar, Mark and Erik Hurst. (2007). “Measuring Trends in Leisure: The Allocation of Time over Five Decades.” *Quarterly Journal of Economics*, 122(3):969-1006.
- Pencavel, John. (1986). “Labor Supply of Men: A Survey,” *Handbook of Labor Economics*, Vol. 1, O. Ashenfelter and R. Layard, eds. Amsterdam: Elsevier. Chapter 1, pp. 3-102.
- Juhn, Chinhui and Kevin Murphy. (1997). “Wage Inequality and Family Labor Supply,” *Journal of Labor Economics*, Part 1, 72-97.
- Heckman, James J. (1993). “What Has Been Learned About Labor Supply in the Past Twenty Years?” *American Economic Review*, 83(2):116-121.

(e) Models of Post-Schooling Investment

- (*) Ben-Porath, Yoram. (1967). “The Production of Human Capital and the Life Cycle of Earnings,” *Journal of Political Economy*, 75(4, Part I):352-365.
- (*) Browning, Martin, Lars Peter Hansen and James J. Heckman. (1999). “Micro Data and General Equilibrium Models,” J. Taylor and M. Woodford, eds. *Handbook of Macroeconomics*. Amsterdam: North-Holland. pp. 543-633. *Section 2 only.*
- (*) Heckman, James J. , Lance J. Lochner and Christopher Taber. (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.
- (*) Heckman, James 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 E. Phelps, ed. *Designing Inclusion: Tools to Raise Low-End Pay and Employment in Private Enterprise*. New York: Cambridge University Press. pp. 74-130.
- Grossman, Michael. (2000). “The Human Capital Model,” *Handbook of*

Health Economics, Vol. 1, eds. Culyer, A. J. and Newhouse, J. P. Elsevier, Amsterdam. pp. 347-408.

(f) **Uncertainty, Dynamics, and Learning**

- (*) Keane, Michael and Kenneth Wolpin. (1997). “The Career Decisions of Young Men,” *Journal of Political Economy*, 105(3):473-522.
- (*) Cameron, S.V. and Heckman, J.J. (1998). “Life Cycle Schooling and Dynamic Selection Bias: Models and Evidence for Five Cohorts of American Males,” *Journal of Political Economy*, 106, 262-333.
- (*) Heckman, James J. and Navarro, S. (2007). “Dynamic Discrete Choice and Dynamic Treatment Effects,” *Journal of Econometrics*, 136(2):341-396.
- Flinn, Christopher and James J. Heckman. (1982). “New Methods For Analyzing Structural Models of Labor Force Dynamics,” *Journal of Econometrics*, 18(1):115-168.
- Cameron, S.V. and Heckman, J.J. (2001). “The Dynamics of Educational Attainment for Black, Hispanic, and White Males,” *Journal of Political Economy*, 109, 455-99.
- Farber, Henry S. and Robert Gibbons. (1996). “Learning and Wage Dynamics,” *Quarterly Journal of Economics*, 111(4):1007-1047.
- Tumen, Semih. (2009). “Identifying a Dynamic Schooling Choice Model with Recurrent States.” Unpublished manuscript. University of Chicago.

(3) **Search, Matching, and Job Turnover**

- (*) Ljungqvist, L. and Sargent, T. (2004). *Recursive Macroeconomic Theory*. Chapters 6 and 26. Boston: MIT Press.
- (*) McCall, J. (1970). “Economics of Information and Job Search,” *Quarterly Journal of Economics*, 84(1): 113-126.
- (*) Johnson, William R. (1978). “A Theory of Job Shopping,” *Quarterly Journal of Economics*, 92(2): 261-278.
- (*) Jovanovic, Boyan. (1979). “Job Matching and the Theory of Turnover,” *Journal of Political Economy*, 87(5, Part 1): 972-990.
- (*) Miller, Robert A. (1984). “Job Matching and Occupational Choice,” *Journal of Political Economy*, 92(6):1086-1120.
- Stigler, G. (1961). “The Economics of Information,” *Journal of Political Economy*, 69(3): 213-225.

- Mortensen, Dale T. (1970). “A Theory of wage and employment dynamics,” In Edmund S. Phelps et al. *Microeconomic Foundations of Employment and Inflation Theory*. New York: Norton, pp. 167-211.

(4) Family Economics

(a) Collective Models

- (*) Chiappori, Pierre-Andre. (1992). “Collective Labor Supply and Welfare,” *Journal of Political Economy*, 100(3): 437-467.
- (*) Browning, Martin, Pierre-Andre Chiappori, and Yoram Weiss. *Family Economics*. Forthcoming. Cambridge, UK: Cambridge University Press.
- (*) Blundell, R., Pierre-Andre Chiappori, T. Magnac, and C. Meghir. (2007). “Collective Labor Supply: Heterogeneity and Non-Participation,” *Review of Economic Studies*, 74(2): 417-445.
- Lundberg, Shelly and Robert A. Pollak. (2003). “Efficiency in Marriage,” *Review of Economics of the Household*, 1(3):153-167. NBER Working Paper No: 8642.
- Lundberg, Shelly and Robert A. Pollak. (2008). “Bargaining in Families,” Unpublished manuscript, University of Washington.
- Bergstrom, Theodore C. (1997). “A Survey of Theories of the Family,” *Handbook of Population and Family Economics*, Vol. 1A, M. Rosenzweig and O. Stark, eds. Amsterdam: Elsevier Science. pp. 21-79.
- Weiss, Yoram. (1997). “The Formation and Dissolution of Families: Why Marry? Who Marries Whom? And What Happens upon Divorce?” *Handbook of Population and Family Economics*, Vol. 1A, M. Rosenzweig and O. Stark, eds. Amsterdam: Elsevier Science. pp. 189-238.

(b) Intergenerational Transmission of Earnings and Skills

- (*) Becker, Gary S. and Tomes, Nigel. (1986). “Human Capital and the Rise and Fall of Families,” *Journal of Labor Economics*, 4(3, Part 2): S1-S39.
- (*) Solon, Gary. (1999). “Intergenerational Mobility in the Labor Market,” O. Ashenfelter and David Card (eds.), *Handbook of Labor Economics*, vol. 3A, pp. 1761-1800, Amsterdam: North-Holland.
- (*) Cunha, Flavio and James J. Heckman (2007). “The Technology of Skill Formation,” *American Economic Review*, 97(2):31-47.
- Solon, Gary. “Mobility within and between Generations,” in Finis Welch (ed.), *The Causes and Consequences of Increasing Inequality*, pp. 153-168,

Chicago: University of Chicago Press, 2001.

- Mulligan, C. (1999). “Galton vs the Human Capital Approach to Inheritance,” *Journal of Political Economy*, 107 (Dec, part 2), S184-S224.
- Black, S., P. Devereux, and K. Salvanes. (2005). “Why the Apple Doesn’t Fall Far: Understanding Intergenerational Transmission of Human Capital,” *American Economic Review*, March, p. 437-449.
- Piketty, T. (2000). “Theories of Persistent Inequality and Intergenerational Mobility,” A. Atkinson and F. Bourguignon, eds., *Handbook of Income Distribution*, vol. 1, North Holland, 429-76.
- Bowles, Samuel, Herbert Gintis, and Melissa Osborne-Groves, eds. (2005). *Unequal Chances: Family Background and Economic Success*. Princeton, NJ: Princeton University Press.

(c) **Family Macroeconomics**

- (*) Becker, Gary S. (1974). “A Theory of Marriage: Part II,” *Journal of Political Economy*, 82(2): S11-S26.
- (*) Becker, Gary S. and Barro, Robert J. (1988). “A Reformulation of the Economic Theory of Fertility,” *Quarterly Journal of Economics*, 103(1):1-25.
- (*) Boldrin, Michele and Jones, Larry E. (2002). “Mortality, Fertility and Savings Decisions,” *Review of Economic Dynamics*, 5:775-814.
- (*) Greenwood, J. and Seshadri, Ananth and Yorukoglu, M. (2005). “Engines of Liberation,” *Review of Economic Studies*, 72(1): 109-133.
- (*) Tertilt, M. (2005). “Polygyny, Fertility, and Savings,” *Journal of Political Economy*, 113(6):1341-1371.
- Galor, Oded and Weil, David N. (1996). “The Gender Gap, Fertility, and Growth,” *American Economic Review*, 86(3):374-387.
- Aiyagari, S.R., Greenwood, Jeremy and Guner, N. (2000). “On the State of the Union,” *Journal of Political Economy*, 108(2):213-244.