

ECON 7711
ADVANCED LABOR ECONOMICS
Theory and Practice
FALL 2015

Instructor: Sergio Urzúa, E-mail: urzua@econ.umd.edu.

Time and Location: MW 2:00pm- 3:15pm, TYD 4118C.

Office Hours and Extra Sessions: TBA

Textbooks: There is a no single textbook for this course. It is assumed that students have some familiarity with econometric techniques for analyzing micro-data. The following is a list of textbooks providing a general reference for empirical methods used in this course.

- A. Cameron and P. Trivedi, *Microeconometrics: Methods and Applications*, Cambridge University Press, 2005.
- T. Amemiya, *Advanced Econometrics*, Harvard University Press, 1985.
- A. Pagan and U. Ullah, *Nonparametric Econometrics*, Cambridge University Press, 1999.

Grading: There will be problem sets, and each student will have to prepare an empirical project. They will count toward the grade as follows.

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|-------------------|--|
| Problem Sets | 50% |
| Empirical Project | 50% (pre-project 20%, final version 30%) |

Additionally, there will be reading assignments and students are expected to come to class having read recommended papers and ready to participate in discussion. Students will also present during lectures.

Problem Sets: Each student will have to submit individual answers which must include the codes. However, I encourage working in groups. This because by sharing ideas you will be able to learn from each other, allowing you to clarify what you get out of the lecture and reading.

Software: You can use your favorite statistical packages as long you make sure it has good optimization routines.

Empirical Project: The purpose of the empirical project is to develop skills in understanding and communicating empirical labor economics. It is not to give you busy work or drill. Think of your project as an exercise in learning and in reporting what you have learned (and consider as a chance to start thinking about your dissertation). There is a lot of truth in the statement *if you can't explain it, you don't understand it*. The ultimate test of what you write is this: can someone learn from your paper? Remember, the reader will see only what you wrote, not what you meant to say. So it must all be there, and be accurate. We will talk some about this in class.

Description of the Course

The purpose of this class is to give students the theoretical background and econometric tools to do labor economic research. The class will highlight the importance of a good balance between theory and solid empirical work.

During the course we will cover core topics in labor economics. As previously mentioned, this course emphasizes the connection between theory and practice. We will focus on the econometric issues of empirical labor models including: selection bias, instrumental variables, structural vs. reduced form estimation, dynamic discrete choice models, unobserved heterogeneity. We will also discuss the most commonly used data sets in the field of labor economics.

1. Selection Models: Economic Theory and Practice

- Amemiya, T. (1984). "Tobit Models: A Survey," *Journal of Econometrics*, Vol. 24, pp.3-61.
- Heckman, J. (1974). "Shadow Prices, Market Wages and Labor Supply", *Econometrica*, 42, 679-694.
- Heckman, J. (1976). "The Common Structure of Statistical Models of Truncation, Sample Selection and Limited Dependent Variables and Simple Estimator for such Models", *Annals of Economic and Social Measurement*, 5, 475-492.
- Heckman, J. (1979). "Sample Selection Bias as a Specification Error," *Econometrica*, 153-161.
- Heckman, J. (1990). "Varieties of Selection Bias," *American Economic Review*, Papers and Proceedings.
- Heckman, J. and B. Honore (1990). "Empirical Content of the Roy Model," *Econometrica*, vol. 58, no. 5, 1121-1149.
- Roy, R. (1951). "Some Thoughts on the Distribution of Earnings," *Oxford Economic Papers*, 3(2).
- MaCurdy, T. (1981) "An Empirical Model of Labor Supply in a Life Cycle Setting," *Journal of Political Economy*, 89(6), 1059-1085.

2. Human Capital Accumulation and Earning Functions

(a) Background

- Becker, G. *Human Capital*, 2nd Edition, New York: NBER, 1975.
- Schultz, T.W. (1961). "Investments in Human Capital," *American Economic Review*, 51, pp-1-17.
- Willis, R. "Wage Determinants: A Survey of Human Capital Earnings", in O. Ashenfelter and R. Layard (eds.), *Handbook of Labor Economics*, vol. 1, North-Holland, 1986.
- Heckman, J., L. Lochner and P. Todd, "Fifty Years of Mincer Earning Regressions," IZA Discussion Paper No. 775.
- Heckman, J. and G. Sedlacek (1985). "Heterogeneity, Aggregation, and Market Wage Functions: An Empirical Model of Self-Selection in the Labor Market," *Journal of Political Economy*, 93, pp. 1077-1125.
- Mincer, J. (1962). "Investment in Human Capital and Personal Distribution of Income," *Journal of Political Economy*, Vol. 66, No. 4, pp. 281-302.
- Mincer, J. *Schooling, Experience and Earnings*. New York: NBER 1974.
- Ben Porath, Y. (1976). "The Production of Human Capital and the Life Cycle of Earnings," *Journal of Political Economy*, Vol. 75, 352-65.
- Heckman, J., L. Lochner, and C. Taber, "Explaining Rising Wage Inequality with a Dynamic General Equilibrium Model with Heterogenous Agents," *Review of Economics and Dynamics* 1:1-58.

(b) Estimating Earning Functions

- Becker, G. *Human Capital*, 2nd Edition, New York: NBER, 1975.
- Card, D. (2001) “Estimating the Return to Schooling: Progress on Some Persistent Econometric Problems,” *Econometrica*, 69(5), 1127-1160.
- Rosen, S. (1977). “Human Capital: A Survey of Empirical Research,” *Research in Labor Economics*, Vol. 1, pp. 2-39.
- Carneiro, P., K. Hansen and J. Heckman (2003). “Estimating Distributions of Treatment Effects With An Application to the Returns to Schooling and Measurement of the Effects of Uncertainty on College Choice,” *International Economic Review* , vol . 44, no. 2, 361 - 422.
- Heckman, J., D. Schemier and S. Urzúa (2008). “Testing the Correlated Random Coefficient Model”, manuscript.
- Heckman, J., S. Urzúa and E. Vytlacil (2006). “Understanding Instrumental Variables in Models with Essential Heterogeneity,” *Review of Economics and Statistics*, 88(3): 389-432.
- Heckman, J. and E. Vytlacil (2005). “Structural Equations, Treatment, Effects and Econometric Policy Evaluation,” *Econometrica*, 73(3): 669-738.
- Imbens, G. and J. Angrist (1994). ”Identification and Estimation of Local Average Treatment Effects” , *Econometrica*, v62, n2 (March): 467-75.
- Angrist, J. and A. Krueger (1991). “Does Compulsory School Attendance Affect Schooling and Earnings?,” *Quarterly Journal of Economics*, 106: 979-1014.
- Ashenfelter, O. and A. Krueger (1994). “Estimates of the Economic Return to Schooling from a New Sample of Twins,” *American Economic Review*, Vol. 84, No. 5, pp 1157-1173.
- Heckman, J., A. Layne-Farrar, and P. Todd (1996). “Human Capital Pricing Equations with an Application to Estimating the Effect of Schooling Quality on Earnings,” *Review of Economics and Statistics*, 78(4).
- Heckman, J. and S. Urzúa (2008). “Estimating the Option Value of Education”, manuscript.
- Rosenzweig, M. and K. Wolpin (2000). “Natural ‘Natural Experiments’ in Economics,” *Journal of Economic Literature*.
- Wills, R. and S. Rosen (1979). ”Education and Self-Selection” , *Journal of Political Economy* , vol. 87, No. 5, pp. 7-36.
- Neal, D. and W. Johnson (1996). “The Role of Premarket Factors in Black-White Wage Differences.” *Journal of Political Economy* 104(5):869–895.
- Rodriguez, J., L. Reyes and S. Urzua (2013) “Heterogenous Economic Returns to Postsecondary Degrees: Evidence from Chile”, forthcoming, *Journal of Human Resources*.
- Rojas, E., T. Rau and S. Urzua (2013) “Loans for Higher Education: Does the dream come true?”, NBER working paper, March 2013.

(c) Dynamic Models, Unobserved Heterogeneity and the General Consequences of Human Capital

- Altug, S. and R. Miller (1998). “The Effect of Work Experience on Female Wages and Labour Supply,” *Review of Economic Studies*, 65(1), 45-85.
- Eckstein, Z. and K. Wolpin (1989) ”Dynamic Labour Participation of Married Women and Endogenous Work Experience”, *The Review of Economic Studies*, Vol. 56, No. 3.
- Keane, M. and K. Wolpin (1997). “Career Decisions of Young Men,” *Journal of Political Economy*, Vol. 105, No. 3.
- Heckman, J., J. Stixrud and S. Urzúa (2006). “The Effects of Cognitive and Noncognitive Abilities on Labor Market Outcomes and Social Behavior,” *Journal of Labor Economics*, 24(3): 411-482, (July).
- Urzúa, S. (2008). “Racial Labor Market Gaps: The Role of Abilities and Schooling Choices”. *Journal of Human Resources*.
- G. Conti, J. Heckman and S. Urzúa (2010) “The Education Health-Gradient ”, *American Economic Review (Papers and Proceedings)*, May 2010.
- Heckman, J., J. Humphries, S. Urzúa and G. Veramendi (2013) “The Effects of Educational Choices on Labor Market, Health, and Social Outcomes ”, NBER working paper 19971.

- Sarzosa, M. and S. Urzua (2014) “Bullying, Cybercrime and Happiness: The Role of Cognitive and Non-cognitive Skills”, manuscript.
- Prada, M. and S. Urzua (2015) “One Size Does Not Fit All: The Role of Vocational Ability on College Attendance and Labor Market Outcomes”, R R, Journal of Labor Economics.
- Sarzosa, M. (2014) “The dynamic consequences of bullying on skill accumulation”, manuscript.
- Sarzosa, M. and S. Urzua (2014) “Implementing Factor Models for Unobserved Heterogeneity in Stata: the heterofactor command”, manuscript.