

# Course Syllabus Economics of Education

PhD in Economics  
European University Institute

## Instructor

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## Prerequisites

This course is intended to both 1<sup>st</sup> and 2<sup>nd</sup> year students in the PhD in Economics.

## Course Information

This is a half-credit course. There will be 5 lessons of 2 hours each. We will meet every Tuesday at 11:00 AM from April 12 to May 10 (see classroom in the departmental weekly schedule).

## Course Overview

The course will give an introduction to the theoretical and empirical work on the demand and supply of education. I will emphasize the empirical implications of theory, and the scope and limitations of the empirical literature. As this is a short course, I will cover a selected sample of the literature, both in terms of topics and the representative work of each topic. I will begin each session with an overview lecture to be followed by students' presentations of papers from the reading list –except for the first session, in which there won't be student presentations.

## Evaluation

The evaluation will be based on the discussion of a paper (presentation) (30%) and a referee report (70%).

You will review a paper as if you were the discussant in an academic conference. The list of papers to be discussed will be distributed in the last lecture. Discussions will be held on the day scheduled for the final exam (see departmental schedule).

Look for the working paper you want to referee in those published from 2014 and on in the NBER Working Papers in the Economics of Education (link [here](#)). Please let me your choice by May 15<sup>th</sup> the latest (you cannot write a report on any paper discussed in class). Referee reports must be handed in on the exam day.

## Course structure

0. Demand and returns to education
1. Early interventions
2. School Inputs
3. Pay for performance and accountability
4. Vouchers and School Choice
5. Information

## Readings

### Session 0 Demand and returns to schooling

- Becker G. S. 1964. "Human Capital: A theoretical and empirical analysis with special reference to education," Columbia University Press, NY.
- Card, D. 1999. "Chapter 30 - The Causal Effect of Education on Earnings," Handbook of Labor Economics, Elsevier, 1999, Volume 3, Part A, Pages 1801-1863
- Spence, M. 1973. "Job Market Signaling" Quarterly Journal of Economics 87(3): 355-74.
- Stiglitz, J. E. 1975. "The theory of 'screening', education, and the distribution of income". American Economic Review 65 (3), 283-300.

### Session 1 Early interventions

#### *Core*

- Almond D. and J. Currie (2011). "Human Capital Development before Age Five" in Ashenfelter O. and D. Card (eds.), Handbook of Labor Economics, vol. 4B, ch. 15, Elsevier, North Holland, 2011.
- Bharadwaj, Prashant, Katrine Vellesen Loken, and Christopher Neilson. 2013. "Early Life Health Interventions and Academic Achievement." American Economic Review, 103(5): 1862-91.
- Dahl, G., and L. Lochner. 2012. "The Impact of Family Income on Child Achievement: Evidence from the Earned Income Tax Credit" American Economic Review, 102(5): 1927-56.
- Heckman J. and S. Mosso, 2014. "The Economics of Human Development and Social Mobility," Annual Review of Economics, Annual Reviews, vol. 6(1), pages 689-733, 08.

#### *Additional readings*

#### *Child care*

- Baker, M., J. Gruber, and K. Milligan. 2008. "Universal Childcare, Maternal Labour Supply, and Family Well-Being" Journal of Political Economy 116(4): 709-745.
- Berlinski, S., Galiani, S. and Gertler, P. 2009. "The effect of pre-primary education on primary school performance", Journal of Public Economics, Volume 93, Issues 1–2, February 2009, Pages 219-234
- Berlinski, S., Galiani, S. and Manacorda, M. 2008. "Giving children a better start: Preschool attendance and school-age profiles", Journal of Public Economics, Volume 92, Issues 5–6, Pages 1416-1440.
- Black, S., Devereux, P., Løken, K. and Kjell G. Salvanes. 2014. "Care or Cash? The Effect of Child Care Subsidies on Student Performance" Review of Economics and Statistics 2014 96:5, 824-837.

- Chetty, R. John N. Friedman, Nathaniel Hilger, Emmanuel Saez, Diane Whitmore Schanzenbach, and Danny Yagan. 2011. “How Does Your Kindergarten Classroom Affect Your Earnings? Evidence from Project Star” *The Quarterly Journal of Economics*, 126 (4).
- Currie, J. E. Garces and D. Thomas. 2002. “Longer Term Effects of Head Start,” *American Economic Review* 92(4), pp. 999-1012.
- Dustmann, C., A. Raute, A., and U. Schoenberg. 2013. “Does Universal Child Care Matter? Evidence from a Large Expansion in Preschool Education”, Mimeo.
- Fort, Margherita and Ichino, Andrea and Zanella, Giulio. 2016. “Cognitive and Non-Cognitive Costs of Daycare 0–2 for Girls” CEPR Discussion Papers number 11120.
- Havnes, T. and M. Mogstad. 2014. “Is universal child care leveling the playing field?”, *Statistics Norway, Research Department Discussion Papers No. 774*.
- Havnes, T. and M. Mogstad. 2011. “No Child Left Behind: Universal Child Care and Children's Long-Run Outcomes”, *American Economic Journal: Economic Policy*, 3(2): 97-129.
- Havnes, T. and M. Mogstad. 2011. “Money for nothing? Universal child care and maternal employment”, *Journal of Public Economics* 95 (2011) 1455-1465.
- Heckman, J.J., S.H. Moon, R. Pinto, P.A. Savelyev, A. Yavitz. 2009. “The Rate of Return to the High/Scope Perry Preschool Program” *Journal of Public Economics*, 94(1-2), pp.114-128.

### *EPF*

- Attanasio, O., S. Cattan, E. Fitzsimons, C. Meghir, and M. Rubio-Codina. 2015. “Estimating the Production Function for Human Capital: Results from a Randomized Control Trial in Colombia”, NBER Working Paper w20965.
- Cunha, F., James J. Heckman, Lance Lochner, Dimitriy V. Masterov. 2006. “Chapter 12 Interpreting the Evidence on Life Cycle Skill Formation”, *Handbook of the Economics of Education*, Elsevier, Volume 1, Pages 697-812.
- Heckman, J., L. Malofeeva, R. Pinto and P. Savelyev. 2013. “Understanding the Mechanisms Through Which an Influential Early Childhood Program Boosted Adult Outcomes”, *American Economic Review*, 103(6): 2052-86.
- Todd, Petra E., and Kenneth I. 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”. *The American Economic Review* 96.5 (2006): 1384–1417.

## **Session 2**      School Inputs

### *Core*

- Abdulkadiroglu, Atila, Joshua Angrist, and Parag Pathak. 2014. “The Elite Illusion: Achievement Effects at Boston and New York Exam Schools,” *Econometrica*, 01 2014, 82 (1), 137–196.

- Das, Jishnu, Stefan Dercon, James Habyarimana, Pramila Krishnan, Karthik Muralidharan, and Venkatesh Sundararaman. 2013. "School Inputs, Household Substitution, and Test Scores." *American Economic Journal: Applied Economics*, 5(2): 29-57.
- Duflo, E., P. Dupas, and M. Kremer. 2015. "School governance, teacher incentives, and pupil-teacher ratios: Experimental evidence from Kenyan primary schools." *Journal of Public Economics*. 123:92 – 110.
- Pop-Eleches, Cristian and Miguel Urquiola. 2013. "Going to a Better School: Effects and Behavioral Responses," *American Economic Review*. 103 (4), 1289–1324.
- Todd, P. and K. Wolpin. 2003. "On the Specification and Estimation of the Production Function for Cognitive Achievement," *Economic Journal* 113: F3-F33.

### *Additional readings*

- Glewwe, Paul W., Eric A. Hanushek, Sarah D. Humpage, and Renato Ravina. 2011. "School Resources and Educational Outcomes in Developing Countries: A Review of the Literature from 1990 to 2010," NBER Working Papers 17554, National Bureau of Economic Research.
- Hanushek, Eric A. 2006. "School Resources", Vol. 2 of *Handbook of the Economics of Education*, Elsevier.
- Hanushek, E.A. 2003. "The Failure of Input-Based Resource Policies." *The Economic Journal* 113(485). pp. F64-F98.
- Krueger, A. .1999. "Experimental Estimates of Education Production Functions" *Quarterly Journal of Economics* 114(2), pp 497-532.

### *Class Size*

- Angrist, J. and Lavy, V. 1999. 'Using Maimonides' rule to estimate the effect of class size on student achievement', *Quarterly Journal of Economics* 114 (May), pp. 535-575.
- Hoxby, C. M. 2000. "The effects of Class Size on Student Achievement: New Evidence from Population Variation," *Quarterly Journal of Economics* 115(4), 1239-1285.
- Urquiola, M. and E. Verhoogen. 2009. "Class size caps, sorting, and the regression discontinuity design." *American Economic Review*, 99(1), 179-215

### *Selective Schools / Peers*

- Black., S. 1999. "Do Better Schools Matter? Parental Valuation of Elementary Education." *The Quarterly Journal of Economics* 114(2), pp. 577-99.
- Clark, Damon, "Selective Schools and Academic Achievement," *The B.E. Journal of Economic Analysis and Policy*, 2010, 10 (1), 1–38.

- Estrada, Ricardo and Jérémie Gignoux, “Benefits to elite schools and the formation of expected returns to education: Evidence from Mexico City,” PSE Working Papers halshs- 00951763, HAL February 2014.
- Rao, G. 2013. “Familiarity Does Not Breed Contempt: Diversity, Discrimination and Generosity in Delhi Schools” mimeo.
- Zimmerman, S. 2015 “Making Top Managers: The Role of Elite Universities and Elite Peers,” mimeo

#### *Selective Colleges / Degrees*

- Hoekstr, Mark. 2009. “The Effect of Attending the Flagship State University on Earnings: A Discontinuity-Based Approach”, *Review of Economics and Statistics* 91:4, 717-724
- Kirkebøen, Lars, Edwin Leuven, and Magne Mogstad. (2014) “Field of Study, Earnings, and Self-Selection.” No. w20816. National Bureau of Economic Research.

#### *Teachers*

- Chetty, R., J. Friedman, and J. Rockoff. 2014. “Measuring the Impacts of Teachers II: Teacher Value-Added and Student Outcomes in Adulthood.” *American Economic Review*, 104 (9): 2633-79.
- Clotfelter, Charles T., Helen F. Ladd, and Jacob L. Vigdor. 2006. “Teacher-Student Matching and the Assessment of Teacher Effectiveness,” *Journal of Human Resources*. 41 (4).
- Duflo, E., P. Dupas, and M. Kremer. 2011. “Peer Effects, Teacher Incentives, and the Impact of Tracking: Evidence from a Randomized Evaluation in Kenya,” *American Economic Review*, 101(5), 1739–74, 2011.
- Goldhaber, Dan, “Everyone is Doing It, But What Does Teacher Testing Tell Us About Teacher Effectiveness?,” *Journal of Human Resources*, 2007, XLII (4), 765–794.
- Hanushek, Eric A. and Steven G. Rivkin. 2006. “Teacher Quality,” Vol. 2 of *Handbook of the Economics of Education*, Elsevier.
- Rockoff, J. E. (2004), "The impact of individual teachers on student achievement: Evidence from panel data", *American Economic Review* 94(2), 247-252.
- Rivkin, S. G., E. A. Hanushek, and J. F. Kain, “Teachers, schools, and academic achievement,” *Econometrica*, 73(2), 417–458, 2005.

#### *Others*

- Muralidharan, K. and Nishith Prakash. 2013. “Cycling to School: Increasing Secondary School Enrollment for Girls in India”, NBER Working Paper No. 19305

### Session 3 Pay for performance and accountability

#### *Core*

- Neal, Derek. 2011. "Chapter 6 - The Design of Performance Pay in Education," In: Eric A. Hanushek, Stephen Machin and Ludger Woessmann, Editor(s), *Handbook of the Economics of Education*, Elsevier, Volume 4, Pages 495-550.
- Figlio, D., Susanna Loeb. 2011. "Chapter 8 - School Accountability," In: Eric A. Hanushek, Stephen Machin and Ludger Woessmann, Editor(s), *Handbook of the Economics of Education*, Elsevier, Volume 3, Pages 383-421.

#### *Additional readings*

- Angrist, J., Dynarski, S., Kane, T., and Pathak, P. 2011. "Accountability and flexibility in public schools: evidence from Boston's charters and pilots", *The Quarterly Journal of Economics*, 126(2), 699-748.
- Behrman, Jere R., Susan W. Parker, Petra E. Todd, and Kenneth I. Wolpin. 2015. "Aligning Learning Incentives of Students and Teachers: Results from a Social Experiment in Mexican High Schools," *Journal of Political Economy*, 123 (2), pp. 325–364.
- Estrada, Ricardo, 2015. "Rules Rather than Discretion: Teacher Hiring and Rent Extraction" *Economics Working Papers*, MWP2015/14, European University Institute.
- Garibaldi, P., Francesco Giavazzi, Andrea Ichino, and Enrico Rettore. 2012. "College Cost and Time to Complete a Degree: Evidence from Tuition Discontinuities" *Review of Economics and Statistics*, 94:3, 699-711.
- Hoxby, C. 2000. "Does Competition Among Public Schools Benefit Students and Taxpayers?" *American Economic Review* 90(5), pp. 1209-1238.
- Jacob, Brian and Steven D. Levitt. 2003. "Rotten Apples: An Investigation Of The Prevalence And Predictors Of Teacher Cheating," *The Quarterly Journal of Economics*. 118 (3), 843–877.
- Joppe de Ree, Karthik Muralidharan, Menno Pradhan, and Halsey Rogers. 2015. "Double for Nothing? Experimental Evidence on the Impact of an Unconditional Teacher Salary Increase on Student Performance in Indonesia". NBER Working Paper No. 21806
- Kane, T. and D. Staiger. 2002. "Volatility in school test scores: Implications for test-based accountability systems." *Brookings Papers on Education Policy*, pp. 235-283.
- Muralidharan, K. and Venkatesh Sundararaman. 2011. "Teacher Performance Pay: Experimental Evidence from India". *Journal of Political Economy*. Vol. 119, No. 1 (February 2011), pp. 39-77
- Podgursky, M.J. and M.G. Springer (2007) "Teacher performance pay: A review" *Journal of Policy Analysis and Management* 26(4), 909-949.
- Reback R., Rockoff J. and Schwartz H. 2014. "Under pressure: job security, resource allocation and productivity in schools under NCLB" *American Economic Journal: Economic Policy*, 6(3), 207-241.

## Session 4 Vouchers and School Choice

### *Core*

- Abdulkadiroglu, A., and Sonmnez, T. 2003. "School Choice: A Mechanism Design Approach," *American Economic Review*, Vol. 92, No. 3, pp 729-747
- Bettinger, Eric. 2011. "Chapter 7 - Educational Vouchers in International Contexts," In: Eric A. Hanushek, Stephen Machin and Ludger Woessmann, Editor(s), *Handbook of the Economics of Education*, Elsevier, Volume 4, Pages 551-572.
- Epple D. and Romano R. (1998) "Competition between private and public schools, vouchers and peer group effects" *American Economic Review*, vol. 88, p. 33-62.

### *Additional readings*

#### *Vouchers*

- Abdulkadiroglu, A., Parag A. Pathak and Christopher R. Walters, 2015. "School Vouchers and Student Achievement: Evidence from the Louisiana Scholarship Program," NBER Working Papers 21839, National Bureau of Economic Research, Inc.
- Angrist J., Bettinger E., Bloom E., King E. and Kremer M. (2002) "Vouchers for Private Schooling in Columbia: Evidence from a Randomized Natural Experiment." *American Economic Review* 92, pp. 1535-58.
- Angrist J., Bettinger E. and Kremer M. .2006. "Long-Term Educational Consequences of Secondary School Vouchers: Evidence from Administrative Records in Colombia", *American Economic Review*, 96(3), pp.847-862.
- Figlio D. and Hart C. 2014. "Competitive Effects of Means-Tested School Vouchers", *American Economic Journals: Applied Economics*, 6(1), 133-156.
- Figlio D. and Rouse C. (2006) "Do Accountability and Voucher Threats Improve Low-Performing Schools?", *Journal of Public Economics* vol 90(1-2), pp. 239-255.
- Hsieh C. and Urquiola M. (2006) "The effects of generalized school choice on achievement and stratification: Evidence from Chile's school voucher program", *Journal of Public Economics* vol 90, pp. 1477-1503.
- Neilson, C. 2013. "Targeted Vouchers, Competition Among Schools, and the Academic Achievement of Poor Students" mimeo.
- Rouse C., Hannaway J., Goldhaber D. and Figlio, D. (2013) "Feeling the Florida heat? How low-performing schools respond to voucher and accountability pressure" *American Economic Journal: Economic Policy* 5(2), pp. 251-81.

### *School choice*

- Balinski, Michel and Tayfun Sonmez, “A Tale of Two Mechanisms: Student Placement,” *Journal of Economic Theory*, January 1999, 84 (1), 73–94.
- Deming D., Hastings J., Kane T. and Staiger D. 2011. “School Choice and College Attendance: Evidence from Randomized Lotteries” *American Economic Review*, 104(3), 991- 1013.
- Hoxby., C. 2000. “Does Competition Among Public Schools Benefit Students and Tax- payers?” *American Economic Review* 90(5), pp. 1209-1238.
- Muralidharan, K. and Venkatesh Sundararaman. 2015. “The Aggregate Effect of School Choice: Evidence from a Two-Stage Experiment in India” *The Quarterly Journal of Economics*, 130 (3): 1011-1066.
- Urquiola M. 2005. "Does school choice lead to sorting? Evidence from Tiebout variation", *American Economic Review*, September, vol. 95, pp. 1310-1326.

### *Stratification*

- Avery, Christopher and Parag A. Pathak. 2015. “The Distributional Consequences of Public School Choice,” NBER Working Papers 21525, National Bureau of Economic Research, Inc.
- Calsamiglia, Caterina, Francisco Martínez-Mora, and Antonio Miralles. 2015. “School Choice Mechanisms, Peer Effects and Sorting,” *Discussion Papers in Economics* 15/01, Department of Economics, University of Leicester.
- Estrada, Ricardo. 2016. “The Effect of the Increasing Demand for Elite Schools on Stratification” *Economics Working Papers*, MWP2016/02, European University Institute.
- MacLeod, W. Bentley and Miguel Urquiola. 2015. “Reputation and School Competition,” *American Economic Review*, 105 (11), 3471–88.

## **Session 5**      Information

### *Core*

- Goux D., Gurgand M. and Maurin E. forthcoming. "Adjusting Your Dreams? High school Plans and Dropout Behaviour", *Economic Journal*, forthcoming.
- Hastings, Justine S. and Jeffrey M. Weinstein. 2008. “Information, School Choice, and Academic Achievement: Evidence from Two Experiments,” *The Quarterly Journal of Economics*, 123 (4), 1373–1414.
- Hoxby, Caroline M. and Sarah Turner, “What High-Achieving Low-Income Students Know about College,” *American Economic Review*, May 2015, 105 (5), 514–17.
- Jensen, R., “The (perceived) returns to education and the demand for schooling,” *The Quarterly Journal of Economics*, 125(2), 515–548, 2010.



### *Additional readings*

- Ajayi, Kehinde, “School Choice and Educational Mobility: Lessons from Secondary School Applications in Ghana,” Working Paper December 2013
- Arcidiacono, Peter, V. Joseph Hotz, and Songman Kang, “Modeling college major choices using elicited measures of expectations and counterfactuals,” *Journal of Econometrics*, 2012, 166 (1), 3–16.
- Avvisati, F., M. Gurgand, N. Guyon, and E. Maurin. 2014. “Getting Parents Involved: A Field Experiment in Deprived Schools,” *Review of Economic Studies* 81(1), 57-83.
- Bettinger, E., Bridget Terry Long, Philip Oreopoulos, and Lisa Sanbonmatsu. 2012. “The Role of Application Assistance and Information in College Decisions: Results from the H&R Block Fafsa Experiment” *The Quarterly Journal of Economics* (2012) 127 (3): 1205-1242
- Dizon-Ross, Rebecca. 2015. “Parents’ Perceptions and Children’s Education: Experimental Evidence from Malawi”. Mimeo.
- Hastings, Justine S., Christopher A. Neilson, Anely Ramirez, and Seth D. Zimmerman, “(Un)Informed College and Major Choice: Evidence from Linked Survey and Administrative Data,” NBER Working Papers 21330, National Bureau of Economic Research, Inc.
- Hoxby, Caroline M. and Christopher Avery. 2012. “The Missing "One-Offs": The Hidden Supply of High-Achieving, Low Income Students,” NBER Working Papers 18586, National Bureau of Economic Research.
- Ichino, A. and Filippin, A. 2005. “Gender Wage Gap in Expectations and Realizations”, *Labour Economics*, February, 12 (1), 125-145.
- Pallais, Amanda, “Small Differences that Matter: Mistakes in Applying to College,” *Journal of Labor Economics*, 2015, 33 (2), 493–520.
- Stinebrickner, Todd and Ralph Stinebrickner. 2012. “Learning about Academic Ability and the College Dropout Decision,” *Journal of Labor Economics*, 30 (4), 707 – 748.
- Zafar, Basit, “How Do College Students Form Expectations?,” *Journal of Labor Economics*, 2011, 29 (2), 301– 348.