

## **Public Policy and Productivity in Education**

Harvard University Department of Economics  
Short Course: Fall 2009

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Littauer 228

This mini-course is a set of 6 lectures and discussions investigating productivity in education. The course will cover three broad topics that have been the focus of the recent economics literature and public policy. First, we will explore variation in productivity across schools and teachers: how do you measure it, how big is it, and what are the determinants? Second we will look at how accountability and incentives influence productivity. Finally, we will investigate the role of school choice on students and schools.

The course readings are idiosyncratic to my current interests and tastes, and focus on recent contributions. I will talk about the broader literature in class when it is relevant, and the papers on the reading list provide fairly comprehensive reviews of related work. The goal of the classroom time will be to understand the essence of each paper, and to leave sufficient time for discussion. I will not be assigning a grade in the course, but expect that you will keep up with the readings. Office hours are whenever you see my door open (or by appointment).

All the readings are on my Harvard website:  
<http://www.economics.harvard.edu/faculty/staiger>  
I have marked the readings I expect we will focus on with a "\*" below.

The course will meet MW starting Monday, April 5 and ending Wednesday, April 21, 6-7:30 pm in Littauer M16.

1) Education production

a) Class size, peers & other inputs

- i) \* Todd, P.E., Wolpin, K.I. (2003). "On the specification and estimation of the production function for cognitive achievement". *Economic Journal* 113 (485, February), F3–F33.
- ii) \* Lazear, E.P. (2001). "Educational Production". *The Quarterly Journal of Economics*, Vol. 116, No. 3 (Aug.), pp. 777-803.
- iii) Angrist, J. and Lavy, V. (1999). 'Using Maimonides' rule to estimate the effect of class size on scholastic achievement', *Quarterly Journal of Economics*, vol. 114, no. 2, (May), pp. 533–4.
- iv) \* Krueger, A.B. (1999). "Experimental estimates of education production functions". *Quarterly Journal of Economics* 114 (2, May), 497–532.
- v) Krueger, A.B., Whitmore, D.M. (2001). "The Effect of Attending a Small Class in the Early Grades on College-Test Taking and Middle School Test Results: Evidence from Project STAR," *Economic Journal* 111:1-28.
- vi) Hanushek, E.A. (2006). "School Resources". Chapter 14 in *Handbook of the Economics of Education, Volume 2* Edited by E.A. Hanushek and F. Welch, Elsevier B.V.
- vii) \* Hoxby, C. (2000). "Peer Effects in the Classroom: Learning from Gender and Race Variation". NBER working paper #7867.
- viii) Carrell, S.E., Hoekstra, M.L., 2010. "Externalities in the Classroom: How Children Exposed to Domestic Violence Affect Everyone's Kids". *American Economic Journal: Applied Economics* 2010, 2:1, 211–228.

b) Teacher effects

- i) Rivkin, S.G., Hanushek, E.A., Kain, J.F. (2005). "Teachers, schools, and academic achievement". *Econometrica* 73 (2, March), 417–458.
- ii) \* Kane, T.J., Staiger, D.O. (2008). "Estimating teacher impacts on student achievement: An experimental evaluation". NBER working paper #14607.
- iii) \* Rothstein, J. (2010). "Teacher quality in education production: Tracking, decay, and student achievement". *Quarterly Journal of Economics*, 125(1): 175–214.
- iv) \* Carrell, S.E., West, J.E., (2010). "Does Professor Quality Matter? Evidence from Random Assignment of Students to Professors". *Journal of Political Economy*, forthcoming (previous version NBER WP #14081).
- v) Jackson, C.K., Bruegman, E. (2009) "Teaching Students and Teaching Each Other: The Importance of Peer Learning for Teachers." *American Economic Journal: Applied Economics*. 1(4):85–108.

- 2) Accountability & incentives
- a) \* Lavy, V. (2009). "Performance Pay and Teachers' Effort, Productivity, and Grading Ethics". *American Economic Review* 99(5):1979–2011.
  - b) \* Figlio, D.N., Rouse, C.E. (2006). "Do Accountability and Voucher Threats Improve Low-Achieving Schools?" *Journal of Public Economics* 90 239-255.
  - c) Jacob, B. (2005). "Accountability, Incentives and Behavior: the Impact of High-Stakes Testing in the Chicago Public Schools." *Journal of Public Economics* 89(5-6): 761-796.
  - d) Jacob, B., Levitt, S. (2003). "Rotten Apples: An Investigation of the Prevalence and Predictors of Teacher Cheating." *Quarterly Journal of Economics* 118(3): 843-878.
  - e) \* Jacob, B. (2010). "The Effect of Employment Protection on Worker Effort: Evidence from Public Schooling". NBER working paper #15655.
  - f) \* Chay, K.Y., McEwan, P.J., Urquiola, M. (2005). "The Central Role Of Noise In Evaluating Interventions That Use Test Score To Rank Schools," *American Economic Review*, v95(4):1237-1258.
  - g) Barlevy, G., Neal, D. (2009). "Pay for Percentile". Federal Reserve Bank of Chicago Working paper 2009-09.

- 3) Choice
- a) Demand
    - i) \* Hastings, J.S., Kane, T.K., Staiger, D.O. (2009). "Heterogeneous Preferences and the Efficacy of Public School Choice". Unpublished.
    - ii) \* Jacobs, B.A., Lefgren, L. (2007). "What Do Parents Value in Education? An Empirical Investigation of Parents' Revealed Preferences for Teachers". *Quarterly Journal of Economics* 122(4):1603-1637.
    - iii) \* Hastings, J.S., Weinstein, J.M. (2009). "Information, School Choice, and Academic Achievement: Evidence from Two Experiments." *Quarterly Journal of Economics*, 123(4):1373–1414
  - b) Partial equilibrium impact of choice
    - i) \* Cullen, Julie Berry, Brian A. Jacob, and Steven Levitt. (2006). "The Effect of School Choice on Student Outcomes: Evidence from Randomized Lotteries." *Econometrica*, 74(5):1191-1230.
    - ii) \* Abdulkadiroglu, A., Angrist, J., Dynarski, S., Kane, T.J., Pathak, P. (2009). "Accountability and Flexibility in Public Schools: Evidence from Boston's Charters and Pilots". NBER working paper #15549.
    - iii) \* Hoxby, C.M., Murarka, S. (2009). "Charter Schools in New York City: Who Enrolls and How They Affect Their Students' Achievement". NBER working paper #14852.
    - iv) Dobie, W., Freyer, R.G. (2009). "Are High Quality Schools Enough to Close the Achievement Gap? Evidence from a Social Experiment in Harlem". NBER working paper #15473.
    - v) Demming, D. (2009). "Better Schools, Less Crime?" unpublished.
  - c) General equilibrium impact of choice
    - i) \* Andrabi, T., Das, J., Khwaja, A.I. (2008). "Report Cards: The Impact of Providing School and Child Test-Scores on Educational Markets". Unpublished.
    - ii) \* Card, D., Dooley, M., Payne, A. (2008). "School Competition and Efficiency with Publicly Funded Catholic Schools". NBER working paper #14176.
    - iii) \* Jackson, C.K. (2009). "Student Demographics, Teacher Sorting, and Teacher Quality: Evidence from the End of School Desegregation". *Journal of Labor Economics* 27(2):213-256.