

# The Economics and Econometrics of Policy Evaluation

## Course Outline

by Costas Meghir (UCL)

### 1. The Evaluation Problem and Methods of Evaluation

1. Matching
2. Instrumental Variables (LATE)
3. Difference in Differences
4. Local Average Treatment effects and Marginal Treatment effects
5. Randomised experiments (Use and Design)

#### *Suggested Reading*

Heckman, James J. And Robb, Richard (1985), "Alternative methods for Evaluating the Impact of Interventions", in *Longitudinal Analysis of Labor market Data* (New York: Wiley).

The Central Role of the Propensity Score in Observational Studies for Causal Effects Paul R. Rosenbaum, Donald B. Rubin *Biometrika*, Vol. 70, No. 1 (Apr., 1983), pp. 41-55

Ashenfelter, Orley (1978), "Estimating the Effect of Training Programs on Earnings", *Review of Economics and Statistics*, 60, 47-57.

Heckman, James J., Robert LaLonde and Jeff Smith (1999) "The Economics and Econometrics of Active Labor Market Programs" in *Handbook of Labor Economics*, Volume 3 O. Ashenfelter and D. Card eds., 1865-2097

Identification and Estimation of Local Average Treatment Effects

Guido W. Imbens, Joshua D. Angrist *Econometrica*, Vol. 62, No. 2 (Mar., 1994), pp. 467-475

Independence, Monotonicity, and Latent Index Models: An Equivalence Result

Edward Vytlacil *Econometrica*, Vol. 70, No. 1 (Jan., 2002), pp. 331-341

Instruments for Development: Randomisation in the Tropics and the Search for the Elusive keys to Development, Angus Deaton, mimeo Princeton University.

Evaluating the Econometric Evaluations of Training Programs with Experimental Data, Lalonde, R.J. (1986), *The American Economic Review*, 76, 604-620

Estimating Marginal and Average Returns to Education by Pedro Carneiro, James Heckman and Edward Vytlacil, 2006, [http://www.ucl.ac.uk/~uctppca/school\\_all\\_2006-10-30b\\_mms.pdf](http://www.ucl.ac.uk/~uctppca/school_all_2006-10-30b_mms.pdf)

#### *Supplementary reading (more advanced)*

Structural Equations, Treatment Effects, and Econometric Policy Evaluation James J. Heckman, Edward Vytlacil, *Econometrica*, Vol. 73, No. 3 (May, 2005), pp. 669-738

Identification and Inference in Nonlinear Difference-in-Differences Models, *Econometrica* Volume 74, Issue 2, Date: March 2006, Pages: 431-497 Susan Athey, Guido W. Imbens

Identification of Treatment Effects Using Control Functions in Models with Continuous, Endogenous Treatment and Heterogeneous Effects , J.P. Florens, J. J. Heckman Costas Meghir and E. Vytlacil *Econometrica* Volume 76 Issue 5 , Pages 1191-1206 (September 2008)

## 2. Applications: Drawn from the Following

### 1. The Education Maintenance Allowance

- Conditional Cash Transfers and School Dropout Rates Lorraine Dearden, Carl Emmerson, Christine Frayne, and Costas Meghir, forthcoming Journal of Human Resources, 2009 (on course web page)

### 2. PROGRESA

- School Subsidies for the Poor: Evaluating the Mexican Progresa Poverty Program", Schultz, T.P. (2003) Journal of Development Economics

### 3. JTPA – Comparing Matching to Randomisation

- Matching as an Econometric Evaluation Estimator: Evidence from Evaluating a Job Training programme James J. Heckman, Hidehiko Ichimura Petra E. Todd, The Review of Economic Studies, Vol. 64, No. 4, Special Issue: Evaluation of Training and Other Social Programmes (Oct., 1997), pp. 605-654
- Matching as an Econometric Evaluation Estimator James J. Heckman, Hidehiko Ichimura, Petra Todd The Review of Economic Studies, Vol. 65, No. 2 (Apr., 1998), pp. 261-294

## 3. Using Economic Models for Policy Evaluation

### *Background reading:*

- Jacob Marschak and William H. Andrews, *Econometrica*, Vol. 12, No. 3/4 (Jul. - Oct., 1944), pp. 143-205
- Orcutt, G. H., and A. G. Orcutt (1968) Incentive and Disincentive Experimentation for Income Maintenance Policy Purposes," *American Economic Review*, 58, 754-772.

### **Dynamic Models and policy experiments**

- Attanasio, Orazio, Costas Meghir, and Ana Santiago. 2007. "Education Choices in Mexico: Using a Structural Model and a Randomised Experiment to Evaluate Progresa." Working Paper EWP05/01. London: Institute for Fiscal Studies. [http://www.ifs.org.uk/edepo/publications.php?publication\\_id=3360](http://www.ifs.org.uk/edepo/publications.php?publication_id=3360)
- Todd, Petra, and Kenneth Wolpin. 2003. "Using a Social Experiment to Validate a Dynamic Behavioral Model of Child Schooling and Fertility: Assessing the Impact of a School Subsidy Program in Mexico." *American Economic Review*, American Economic Review, Vol 96, issue 5 pp 1384-1417

### **General Equilibrium considerations:**

#### *Equilibrium and Ex-post Evaluations:*

##### *Substitution effects and Spillovers*

- Richard Blundell & Monica Costa Dias & Costas Meghir & John Van Reenen, 2004. "Evaluating the Employment Impact of a Mandatory Job Search Program," *Journal of the European Economic Association*, MIT Press, vol. 2(4), pages 569-606, 06

### *Dynamic General Equilibrium Models*

#### *Background:*

- General-Equilibrium Treatment Effects: A Study of Tuition Policy James J. Heckman, Lance Lochner and Christopher Taber, *The American Economic Review*, Vol. 88, No. 2
- C. Meghir Dynamic models for policy evaluation, *Advances in Econometrics World Congress of the Econometric Society*, London 2005

#### *Specifying and estimating Dynamic GE models for policy analysis*

- "Explaining Rising Wage Inequality: Explanations With A Dynamic General Equilibrium Model of Labor Earnings With Heterogeneous Agents," J.J Heckman, L. Lochner and C. Taber, *Review of Economic Dynamics*, Elsevier for the Society for Economic Dynamics, vol. 1(1), pages 1-58, January.

#### *Further issues in Dynamics: The role of family and transfers*

- Equilibrium Effects of Education Policies: A Quantitative Evaluation, by Giovanni Gallipoli, Costas Meghir and Gianluca Violante, mimeo to be distributed

#### *Further Reading*

Intersectoral Labor Mobility and the Growth of the Service Sector *Econometrica* Volume 74, Issue 1, Date: January 2006, Pages: 1-46 Donghoon Lee, Kenneth I. Wolpin