Empirical Methods for Policy Evaluation

Course title – Intitulé du cours	Empirical Methods for Policy Evaluation
Level / Semester – Niveau /semestre	MRes/S1
School – Composante	Toulouse School of Economics
Teacher – Enseignant responsable	Matteo Bobba
Other teacher(s) – Autre(s) enseignant(s)	
Other teacher(s) – Autre(s) enseignant(s)	
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Other teacher(s) – Autre(s) enseignant(s)	
Lecture Hours – Volume Horaire CM	30
TA Hours – Volume horaire TD	
TP Hours – Volume horaire TP	
Course Language – Langue du cours	English
TA and/or TP Language – Langue des TD et/ou TP	

Teaching staff contacts:

- matteo.bobba@tse-fr.eu - T362
- Office hours: after the classes, or send an email for appointment

Course Objectives: newly acquired knowledge once the course completed should be well identified

This course explores the rich interplay between design-based and model-based approaches to policy evaluation. We will illustrate how these methods can be combined to gain a comprehensive understanding of a wide range of public policies. By the end of the course, students will be equipped to critically evaluate the strengths and limitations of each approach and effectively integrate them in their own research.

Prerequisites :

Students should be familiar with the content of the compulsory M2 ETE courses. Familiarity with econometric packages such as R, Stata, or Matlab is encouraged, although students will have the opportunity to enhance their programming skills with the take home exercises.

Practical information about the sessions:

Student should participate actively to each session. Laptops and tablets are tolerated if used for the sole purpose of following the course.

Grading system :

- Problem sets with datasets provided by the instructor [55% of the grade]
- Other take-home assignments such as referee reports [30% of the grade]
- Class participation [15% of the grade]

Bibliography/references :

See references in next section. Papers denoted with * are required readings and will be covered during the lectures. Students are strongly encouraged to take a look at them before the corresponding lecture.

Session planning :

1. Causal Inference Meets Structural Models (and viceversa)

Attanasio, Orazio, Meghir, Costas and Santiago, Ana, (2012). "Education Choices in Mexico: Using a Structural Model and a Randomized Experiment to Evaluate PROGRESA," The *Review of Economic Studies*, 79, issue 1, p. 37-66.

Heckman, James and Rodrigo Pinto (2022). "The Econometric Model for Causal Policy Analysis". *Annual Review of Economics*, 14:893–923

*Mahoney, Neal (2022). "Principles for Combining Descriptive and Model-Based Analysis in Applied Microeconomics Research." *Journal of Economic Perspectives,* Vol. 36. No. 3. 211-22.

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." *American Economic Review*, 96 (5): 1384–1417**.**

Todd Petra E. and Kenneth I. Wolpin (2023). « The Best of Both Worlds: Combining RCTs with Structural Modeling," Journal of Economic Literature, 61 (1), 41–85.

*Wolpin, Kenneth (2013), "The limits of inference without theory," MIT Press, Cambridge.

2. Randomized Experiments

Methods:

Athey and Imbens (2017), "The Econometrics of Randomized Experiments," *Handbook of Economic Field Experiments*, 1: 73-140.

Imbens and Rubin (2015), "Causal Inference for Statistics, Social, and Biomedical Sciences: An Introduction," Cambridge University Press.

Applications:

*Attanasio, Cattan, Fitzmons, Meghir, Rubio-Codina (2020), "Estimating the Production Function for Human Capital: Results from a Randomized Controlled Trial in Colombia," *American Economic Review*, vol. 110, no. 1 48–85.

*Meghir & Mobarak & Mommaerts & Morten (2022), "Migration and Informal Risk Sharing: Evidence form a Randomized Control Trial and a Structural Model", *Review of Economic Studies*, 89(1), 452-480.

3. Regression Discontinuity Designs

Methods:

Calonico, Cattaneo and Titiunik (2014), "Robust Nonparametric Confidence Intervals for Regression-Discontinuity Designs," Econometrica, 82(6), 2295–2326.

Cattaneo, Matias and Rocío Titiunik (2022), "Regression Discontinuity Designs," *Annual Review of Economics* 14: 821-851, August 2022.

Hahn, J., P. Todd, and W. van der Klaauw (2001), "Identification and Estimation of Treatment Effects with a Regression-Discontinuity Design," *Econometrica*, 69(1), 201–209.

Applications:

*Bobba, Matteo, Tim Ederer, Gianmarco Leon, Chris Neilson, and Marco Nieddu (2024), "Teacher Compensation and Structural Inequality: Evidence from Centralized Teacher School Choice in Peru", *NBER working paper 29068*.

*Khanna, Gaurav (2023), « Large-scale Education Reform in General Equilibrium: Regression Discontinuity Evidence from India." *Journal of Political Economy*, vol 131(2).

4. Difference-in-Differences and Event Studies

Methods:

Borusyak, Jaravel, and Spiess (2024), "Revisiting Event Study Designs: Robust and Efficient Estimation," *Review of Economic Studies,* 91, 3253–3285.

de Chaisemartin, Clément and d'Haultfoeuille, Xavier (2023), "Two-way fixed effects estimators with heterogeneous treatment effects," *American Economic Review*, 2020, 110 (9), 2964–2996.

Roth, Sant'Anna, Bilinski, and Poe (2023), "What's trending in difference-in-differences? A

synthesis of the recent econometrics literature," *Journal of Econometrics*, 235, 2, 2218-2244.

Applications:
*Bobba, M., L. Flabbi, and S. Levy (2022), "Labor Market Search, Informality, and Schooling Investments," *International Economic Review*, 63: 211-259.

5. Shift-Share Instrumental Variables

Methods:
Adao, Rodrigo, Michal Kolesar, and Eduardo Morales (2019), "Shift-Share Designs: Theory and Inference," *Quarterly Journal of Economics*, 134 (4), 1949–2010.

Boryusak Hull and Jaravel (2025), "A Practical Guide to Shift-Share Instruments," *Journal of Economic Perspectives,* vol. 39, 1, 181-204.

Boryusak, Hull, and Jaravel (2022), "Quasi-Experimental Shift-Share Research Designs," *Review of Economic Studies*, 89 (1), 181–213.

Goldsmith-Pinkham, Paul , Isaac Sorkin, and Henry Swift (2020), "Bartik Instruments: What, When, Why, and How," *American Economic Review*, 110 (8), 2586–2624.

Applications:
*Franklin, Imbert, Abebe, and Mejia-Mantilla (2024), "Urban Public Works in Spatial Equilibrium: Experimental Evidence from Ethiopia," *American Economic Review,* 113, 1382-1414.

*Imbert and Ulyssea (2025), "Rural Migrants and Urban Informality: Evidence from Brazil", *Econometrica*, Forthcoming.