

# IEE – 854 Microeconometria

**Prof. Romero Rocha**  
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## Abstract

Este curso tem como objetivos: (i) apresentar aos estudantes técnicas econométricas recentes, concentrando nas técnicas mais utilizadas em aplicações de microeconomia; (ii) capacitar os estudantes na leitura de artigos que utilizam essas técnicas; (iii) mostrar slides com os comandos mais utilizados no uso dessas técnicas no software econométrico Stata.

Horário:

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## Avaliação

Prova (40% da nota)

Um Parecer (20% da nota)

Projeto de Pesquisa + Apresentação do Projeto (40% da nota)

## Principais Referências Bibliográficas e Softwares

Os livros-texto e artigos a seguir são as principais referências do curso, que serão complementadas com notas de aula, capítulos de outros livros e artigos acadêmicos empíricos. Estes artigos serão disponibilizados aos alunos.

### **BIBLIOGRAFIA (bibliografia obrigatória)**

Angrist, J. & Pischke, J-S. Mostly Harmless Econometrics: An Empiricist's Companion. Princeton University Press, 2008.

Cameron, A. e P. Trivedi. Microeconometrics Using Stata. Stata Press, 2010.

Cunningham, S. Causal Inference: The Mixtape. V.1.7. Tufte-latex.googlecode.com, 2018.

Gertler, P.J., Martinez, S., Premand, P., Rawlings, L.B. & Vermeersch, C.M.J. Impact Evaluation in Practice, 2nd Edition. World Bank, Washington, D.C., 2015.

Rubin, D. Estimating causal effects of treatments in randomized and nonrandomized experiments, Journal of Educational Psychology 66, pp. 688-701, 1974.

Wooldridge, J. M. Econometric Analysis of Cross Section and Panel Data, MIT Press, Cambridge, MA, 2010.

## Conteúdo Previsto

### 1. Identificação, inferência causal e experimentos (com aplicações em participação política e corrupção).

-Angrist & Pischke (2008, Caps 1 e 2)

-Cunningham, S (2018). Causal Inference: The Mixtape. V.1.7

-Gerber, A.; Green, D.; e Larimer, C. (2008). Social Pressure and Voter Turnout: Evidence from a Large Scale Field Experiment. *American Political Science Review*, v.102(1), 33-48.

-Ferraz, C. e Finan, F. (2008). Exposing Corrupt Politicians: The Effect of Brazil's Publicly Released Audits on Electoral Outcomes. *Quarterly Journal of Economics*, May 2008, v.123(2): 703-745.

### 2. Modelos para Dados em Panel, diferenças em diferenças e “event-study” (com aplicações em saúde e crime)

-Wooldridge (2010b) (Caps 13 e 14)

-Angrist & Pischke (2008, Caps 1 e 2)

-Cunningham, S (2018). Causal Inference: The Mixtape. V.1.7

-La Ferrara, Eliana, Alberto Chong, and Suzanne Duryea (2012). Soap Operas and Fertility: Evidence from Brazil. *American Economic Journal: Applied Economics*, 4 (4): 1-31.

-Di Tella, R. and Schargrodsky, E. (2004). Do police reduce crime? estimates using the allocation of police forces after a terrorist attack. *American Economic Review*, 94:115-133.

\*Draca, M., Machin, S., and Witt, R. (2011). Panic on the streets of London: Police, crime, and the July 2005 terror attacks. *American Economic Review*, 101:2157-2181.

\* Galiani, S.; Gertler, P.; e Schargrodsky, E. (2005). Water for Life: The Impact of the Privatization of Water Services on Child Mortality. *Journal of Political Economy*, v.113(1) pp.83-120.

\* Miller, G. (2008), Women's Suffrage, Political Responsiveness, and Child Survival in American History. *Quarterly Journal of Economics*, 123(3), pp. 1287-1327.

\* Rocha, R. e R. Soares (2012). Water Scarcity and Birth Outcomes in the Brazilian Semi-arid. IZA Discussion Paper no. 6773.

\* Assunção, J.; Gandour, C.; Rocha, Rudi; Rocha, Romero (2020). The effect of rural credit on deforestation. Evidence from the Brazilian Amazon. *Economic Journal*, Volume 130, Issue 626, Pages 290-330.

\* Assunção, J.; Rocha, Romero (2019). Getting Greener by Going Black: The Effect of Blacklisting Municipalities on Amazon Deforestation. *Environment and Development Economics*, 24(2), pp. 115-137.

\*Rocha, R. e Soares, R. (2010) Evaluating the Impact of Community-Based Health Interventions: Evidence from Brazil's Family Health Program. *Health Economics*, 19, pp. 126-158.

\*Rocha, R. e Silveira, L. M. (2014). O Impacto das Unidades de Pronto-Atendimento (UPA 24hs) sobre Indicadores de Mortalidade: Evidências para o Rio de Janeiro. Mimeo.

\*Duflo, E. (2001). Schooling and Labor Market Consequences of School Construction in Indonesia: Evidence From an Unusual Policy Experiment, *American Economic Review*, Sept 2001

\*Chay, Ken, McEwan, Patrick and Miguel Urquiola (2005): ?The central role of noise in evaluating interventions that use test scores to rank schools,? *American Economic Review*, 95, pp. 1237-58.

### **3. Variáveis Instrumentais (com aplicações em história econômica, meio ambiente e crime).**

Wooldridge (2010) - Cap 15.

Cunningham, S (2018). Causal Inference: The Mixtape. V.1.7

Acemoglu, D., Johnson, S. e J. Robinson (2001). The Colonial Origins of Comparative Development: An Empirical Investigation. *American Economic Review*, Vol.91(5), 1369-1401.

Glaeser, E., LaPorta, R., Silanes, F., e Shleifer, A. (2004). Do Institutions Cause Growth? *Journal of Economic Growth*, v.9(3): 271-303.

\*Assunção, J.; Gandour, C.; Rocha, Romero (2015). DETERring Deforestation in the Amazon: Environmental Monitoring and Law Enforcement CPI Discussion Paper

\*Levitt, Stephen (1997). Using Electoral Cycles in Police Hiring to Estimate the Effect of Police on Crime. *The American Economic Review*, 87, pp. 270-290

\*Rocha, R., Ferraz, C. e R. Soares (2011). Settlement Colonies Across Plantation Fields: Evidence on the Relationship Between Human Capital and Long Term Development (Mimeo).

### **4. Regressão com Descontinuidade - RDD (com aplicações em economia política).**

Angrist & Pischke (Cap 6)

Cunningham, S (2018). Causal Inference: The Mixtape. V.1.7

Pettersson-Lidbom (JEEA, 2008). Do Parties Matter for Economic Outcomes: A Regression Discontinuity Approach.

Ferreira e Gyourko (QJE, 2009). Do Political Parties Matter - Evidence From US Cities.

Ferraz e Finan (2010). Motivating Politicians: The Impacts of Monetary Incentives on Quality and Performance.

Fujiwara (Ectra, 2015). Voting Tehcnology, Political Responsiveness and Infant Health.

Cook, T. (2008). Waiting for Life to Arrive: A History of the Regression-Discontinuity Design in Psychology, Statistics, and Economics. *Journal of Econometrics* 142, 636-654.

\* Angrist, J. e V. Lavy (1999). Using Maimonides Rule to Estimate the Effect of Class Size on Scholastic Achievement. *Quarterly Journal of Economics* 114(2) 533-575.

\* Pop-Echelles, C. e O. Malamud (2011). Home Computer Use and the Development of Human Capital. *Quarterly Journal of Economics* 126(2) 987-1027.

\*Barbosa, A.L.N.H. e Corseuil, C.H.L. (2014). Bolsa Família, Escolha Ocupacional e Informalidade no Brasil. Texto para discussão do IPEA, N.1948.

\*Camargo,B.;Camelo, R.; Firpo, S. e Ponczek, V. (2014). Information, Market Incentives, and Student Performance. Discussion Paper IZA, N. 7941.

## **5. Propensity Score Matching e Subclassificação - (Com aplicações em mercado de trabalho)**

Cunningham, S (2018). *Causal Inference: The Mixtape*.V.1.7, página 105

Gertler, Paul J., Sebastian Martinez, Patrick Premand, Laura B. Rawlings, e Christel M. J. Vermeersch. 2015. *Impact Evaluation in Practice -2nd Edition*. Banco Mundial, Washington, D.C.

## **6. Synthetic Control (Com aplicações em desenvolvimento)**

Cunningham, S (2018). *Causal Inference: The Mixtape*. V.1.7

## **7. Directed Acyclical Graphs**

Cunningham, S (2018). *Causal Inference: The Mixtape*. V.1.7

## **8. Introdução ao Uso de Machine Learning para Identificação Causal**

Chernozhukov, Victor, Denis Chetverikov, Mert Demirer, Esther Duflo, Christian Hansen, and Whitney Newey. 2017. "Double/Debiased/Neyman Machine Learning of Treatment Effects." *American Economic Review* 107 (5): 261–65. <https://doi.org/10.1257/aer.p20171038>.

Chernozhukov, Victor, Denis Chetverikov, Mert Demirer, Esther Duflo, Christian Hansen, Whitney Newey, and James Robins. 2018. "Double/Debiased Machine Learning for Treatment and Structural Parameters." *The Econometrics Journal* 21 (1): C1–C68. <https://doi.org/10.1111/ectj.12097>.

Chernozhukov, Victor, Mert Demirer, Esther Duflo, and Iván Fernández-Val. 2018. "Generic Machine Learning Inference on Heterogenous Treatment Effects in Randomized Experiments." Working Paper 24678. Working Paper Series. National Bureau of Economic Research. <https://doi.org/10.3386/w24678>.

Chernozhukov, Victor, Matt Goldman, Vira Semenova, and Matt Taddy. 2017. "Orthogonal Machine Learning for Demand Estimation: High Dimensional Causal Inference in Dynamic Panels." <https://arxiv.org/abs/1712.09988v2>.

Chernozhukov, Victor, Chris Hansen, and Martin Spindler. 2016. "hdm: High-Dimensional Metrics." *R Journal* 8 (2): 185–99. <https://journal.r-project.org/archive/2016/RJ-2016-040/index.html>.

Chernozhukov, Victor, Christian Hansen, and Martin Spindler. 2015. "Valid Post-Selection and Post-Regularization Inference: An Elementary, General Approach." *Annual Review of Economics* 7 (1): 649–88. <https://doi.org/10.1146/annurev-economics-012315-015826>.

Chernozhukov, Victor, Whitney Newey, and James Robins. 2018. "Double/de-Biased Machine Learning Using Regularized Riesz Representer." <https://arxiv.org/abs/1802.08667>.