
SYLLABUS

Program: Mestrado Profissional em Controladoria e Finanças

Course: Causal inference and impact evaluation

Course load: 40 hours

Credits: 8

Instructor: Prof. Dra. Luciana Maia Campos Machado

4th quarter 2024

General goals: The main objective of this course is to develop critical thinking about empirical research in finance and accounting areas, exposing students to commonly used methodologies and their possible critical points when making causal inference and impact evaluation.

Topics: Introduction: causality. The Conditional Expectation Function and OLS regression. Causal inference and random experiments. Non-random experiments: selection on observables.

Course overview: It is common to come across studies that essentially analyze correlations between variables. However, when dealing with applied social sciences as accounting and finance, we are more interested in analyzing causal relationships between variables. For example: it is not the correlation between a particular economic policy and foreign investment that interests us, but rather the effect that some magnitude of incentive will have on the amount of existing foreign investment. In this course we will discuss issues arising from econometrics techniques applied for establishing causal effects; randomized experiments and methods based on selection on observables.

Course structure: The first part of class will consist of a teacher's presentation. Students are expected to have previously read the basic bibliography indicated for discussion.

Also, each session will cover two papers and all students must read them before class. Students will form groups of their own choosing, depending on the number of students enrolled for the course. For each group will be assigned a paper to prepare a 90 minute critical presentation, that will be followed by an in-class discussion.

**The presentation must address:*

- i) *the general idea of the paper;*
- ii) *what the authors found;*
- iii) *what the group identifies as the paper's most critical problem;*
- iv) *suggested improvements.*

Course schedule and readings:

Session	Date	Topic	Readings	Presentations
1		Course presentation and introduction: causality	MHE – Chapter 1	-
2		The Conditional Expectation Function and OLS regression	MHE – Chapter 3.1	Ravallion, M.. 2001. "The Mystery of Vanishing Benefits: An Introduction to Impact Evaluation." World Bank Economic Review, 15(1), 115-140. Mannering, Fred L., Venky Shankar, and Chandra R. Bhat. "Unobserved heterogeneity and the statistical analysis of highway accident data." Analytic methods in accident research 11 (2016): 1-16.
3		Causal inference and random experiments	MHE – Chapter 2	Bertrand, Marianne, and Sendhil Mullainathan, 2003 "Enjoying the quiet life? Corporate governance and managerial preferences." Journal of Political Economy, 111(5), 1043-75. Rajan, Raghuram G., and Luigi Zingales, 1998, "Financial dependence and growth," American Economic Review, 88(3), 559-586.
4			MHE – Chapter 2	Angrist, J., E. Bettinger, E. Bloom, E. King, e M. Kremer. (2002). Vouchers for Private Schooling in Colombia: Evidence from a Randomized Natural Experiment. American Economic Review, December. Hayes, Rachel M., Michael Lemmon, and Mingming Qiu, 2012, "Stock options and managerial incentives for risk taking: evidence from FAS 123R." Journal of Financial Economics, 105, 174-190.
5		Non-random experiments: selection on observables	MHE – Chapters 3.2, 3.3, 3.4	Bae, K-H., J-K Kang, and J. Wang. 2010. Employee treatment and firm leverage: A test of the stakeholder theory of capital structure. Journal of Financial Economics. Forthcoming. Murphy, Kevin J., and Tatiana Sandino. "Executive pay and "independent" compensation consultants." Journal of Accounting and Economics 49.3 (2010): 247-262.

6			MHE – Chapters 3.2, 3.3, 3.4	Campello, Murillo, John R. Graham, and Campbell R. Harvey. "The real effects of financial constraints: Evidence from a financial crisis." <i>Journal of financial Economics</i> 97.3 (2010): 470-487. Chaney, P. K., D. Jeter, and L. Shivakumar. 2004. Self-selection of auditors and audit pricing in private firms. <i>The Accounting Review</i> 79 (1): 51-72.
7		Common mistakes and errors	#EECF	Giroud, Xavier, and Holger Mueller, 2010, "Does corporate governance matter in competitive industries?". <i>Journal of Financial Economics</i>, 95, 312-331. Fazzari, Steven, R. Glenn Hubbard and Bruce C. Petersen, 1988, Financing constraints and corporate investment, <i>Brookings Papers on Economic Activity</i> 19, 141-206.
8		Final Exam		-

Presentation and discussion papers

Angrist, J., E. Bettinger, E. Bloom, E. King, e M. Kremer. (2002). Vouchers for Private Schooling in Colombia: Evidence from a Randomized Natural Experiment. *American Economic Review*, December.

Bae, K-H., J-K Kang, and J. Wang. 2010. Employee treatment and firm leverage: A test of the stakeholder theory of capital structure. *Journal of Financial Economics*. Forthcoming.

Bertrand, Marianne, and Sendhil Mullainathan, 2003 "Enjoying the quiet life? Corporate governance and managerial preferences." *Journal of Political Economy*, 111(5), 1043-75.

Chaney, P. K., D. Jeter, and L. Shivakumar. 2004. "Self-selection of auditors and audit pricing in private firms". *The Accounting Review* 79 (1): 51-72.

Fazzari, Steven, R. Glenn Hubbard and Bruce C. Petersen, 1988, Financing constraints and corporate investment, *Brookings Papers on Economic Activity* 19, 141-206.

Giroud, Xavier, and Holger Mueller, 2010, "Does corporate governance matter in competitive industries?". *Journal of Financial Economics*, 95, 312-331.

Hayes, Rachel M., Michael Lemmon, and Mingming Qiu, 2012, "Stock options and managerial incentives for risk taking: evidence from FAS 123R." *Journal of Financial Economics*, 105, 174-190. [Natural Experiments #2]

Campello, Murillo, John R. Graham, and Campbell R. Harvey. "The real effects of financial constraints: Evidence from a financial crisis." *Journal of financial Economics* 97.3 (2010): 470-487.

Mannering, Fred L., Venky Shankar, and Chandra R. Bhat. "Unobserved heterogeneity and the statistical analysis of highway accident data." *Analytic methods in accident research* 11 (2016): 1-16.

Murphy, Kevin J., and Tatiana Sandino. "Executive pay and "independent" compensation consultants." *Journal of Accounting and Economics* 49.3 (2010): 247-262.

Rajan, Raghuram G., and Luigi Zingales, 1998, "Financial dependence and growth." *American Economic Review*, 88(3), 559-586.

Bibliography (*book and methodological papers*):

Angrist, Joshua D. and Jörn-Steffen Pischke. 2009. *Mostly Harmless Econometrics*. Princeton University Press. [**referenced as #MHE*]

Cox, D. R. (1992), "Causality: Some Statistical Aspects." *Journal of the Royal Statistical Society, Series A*, 155, part 2, 291-301.

Gormley, Todd A., and David A. Matsa. "Common errors: How to (and not to) control for unobserved heterogeneity." *The Review of Financial Studies* 27.2 (2013): 617-661.

Holland, Paul, 1986, *Statistics and causal inference*, *Journal of the American Statistical Association* 81, 945-971.

Ravallion, M.. 2001. "The Mystery of Vanishing Benefits: An Introduction to Impact Evaluation." *World Bank Economic Review*, 15(1), 115-140.

Roberts, Michael R.; Whited, Toni M. *Endogeneity in Empirical Corporate Finance*. In: *Handbook of the Economics of Finance*. Elsevier, 2013. p. 493-572. [**referenced as #EECF*]

Grading:

Written final exam: 30%

Participation in class discussions: 30%

Presentations: 40%