

1. Caracterização da Unidade Curricular

1.1. Designação da unidade curricular

Title of curricular unit:

Policy Evaluation

MASTERS IN ECONOMICS/ Ph.D. in ECONOMICS

This course will be lectured in English

1.2. Sigla da área científica em que se insere

Acronym of scientific area:

Economia Pública e do Bem-Estar

1.3. Duração

Duration:

1 semestre

1.4. Horas de trabalho

Work hours:

160

1.5. Horas de contacto

Contact hours:

3h /week

1.6. ECTS

ECTS

6

1.7. Observações

Observations:

NA

2. Docente responsável e respectiva carga letiva na Unidade Curricular (preencher o nome completo).

Responsible teaching staff member and lecturing load in the curricular unit (fill in the fullname):

João Pereira dos Santos

3.Outros docentes e respectivas cargas letivas na unidade curricular.

Other teaching staff and lecturing load in the curricular unit:

NA

4. Objetivos de aprendizagem (conhecimentos, aptidões e competências a desenvolver pelos estudantes).

Learning outcomes of the curricular unit:

Policy Evaluation introduces students to the foundations of public policy design. Students will learn methods that allow establishing causal inference between exposure to programs and public policies with their outcomes, as well as the importance of behavioural science in the promotion and design of public policies in different areas such as health, education, social security, taxation, and the environment. This discipline has two main objectives: 1) a broad understanding of various social and economic issues that policymakers face, and 2) obtaining essential tools for future public policy researchers, as well as for policymakers, program managers, consultants, and advisors so that public policies are designed, implemented, and evaluated efficiently and effectively.

This course is designed to give students the opportunity to choose, according to their own academic and professional interests, the topics they want to delve into. For each topic/lecture, a more specialized complementary bibliography will be indicated. This bibliography can be read individually or in groups through the creation of "reading and discussion groups" that enhance understanding and discussion of the topics.

This discipline uses recent empirical examples from studies published in the most prestigious international scientific journals to motivate the use of (quasi-) experimental frontier scientific methods in the evaluation of public policies. These real-world policy applications will be presented in a non-technical and analytical manner. In this context, the course will provide an introduction to basic methods in data science, including regression, causal inference, and machine learning.

Without neglecting economic theory and in-depth knowledge of institutional details, the goal is to estimate the causal impact of events and choices on a specific outcome of interest. The increase in computing power, the advent of big data, and new statistical and econometric techniques have given a new impetus to our better understanding of the effects of public policies.

This discipline will take into account the importance of behavioural science in the design, implementation, and evaluation of public policies. We will also familiarize ourselves with concepts such as nudges. Finally, we will address recent methods for calculating the cost-benefit of different policies.

The course will use Stata software to showcase the main methods, but R and Python are also accepted in the evaluation components.

5. Conteúdos programáticos.

Syllabus:

1. Why are Big Data and administrative micro-data (from both the public and private sectors) transforming the evaluation of public policies?
 - *Main applied paper*: Chetty, R., Grusky, D., Hell, M., Hendren, N., Manduca, R., & Narang, J. (2017). The fading American dream: Trends in absolute income mobility since 1940. *Science*, 356(6336), 398-406.
 - Course book Chapters 1-2.
2. Introduction to the Experimental Methodology. Basic concepts in experimental design. Procedures to consider in the implementation of experiments. Potential outcomes model.
 - *Main applied paper*: Bertrand, M., & Mullainathan, S. (2004). Are Emily and Greg more employable than Lakisha and Jamal? A field experiment on labor market discrimination. *American Economic Review*, 94(4), 991-1013.
 - *Method*: Randomized Control Trials. Surveys to measure feelings, perceptions, convictions (see Stantcheva, S. (2023). How to run surveys: A guide to creating your own identifying variation and revealing the invisible. *Annual Review of Economics*, 15, 205-234).
 - Course book Chapters 3-4.

3. The importance of geographical context (Place-based policies). Short-term and long-term evaluation. What to do when randomization is not possible or ethically acceptable?
 - *Main applied paper:* Chetty, R., Hendren, N., & Katz, L. F. (2016). The effects of exposure to better neighborhoods on children: New evidence from the moving to opportunity experiment. *American Economic Review*, 106(4), 855-902.
 - *Method:* Matching algorithms and difference-in-differences (Course book Chapters 5, 8-9)

4. Public policies and political support.
 - *Main applied paper:* Manacorda, Marco, Edward Miguel, and Andrea Vigorito. 2011. "Government Transfers and Political Support." *American Economic Journal: Applied Economics* 3 (3): 1–28.
 - *Method:* Regression Discontinuity Designs (Course book Chapter 6)

5. Taxes on the consumption of goods and services: saliency, enforcement, and incidence issues. The invention of VAT. Asymmetry when tax rates decrease or increase.
 - *Main applied papers:* Chetty, R., Looney, A., & Kroft, K. (2009). Salience and taxation: Theory and evidence. *American Economic Review*, 99(4), 1145-1177 and Benzarti, Y., Carloni, D., Harju, J., & Kosonen, T. (2020). What goes up may not come down: asymmetric incidence of value-added taxes. *Journal of Political Economy*, 128(12), 4438-4474.
 - *Method:* more modern difference-in-differences methods (Roth, J., Sant'Anna, P. H., Bilinski, A., & Poe, J. (2023). What's trending in difference-in-differences? A synthesis of the recent econometrics literature. *Journal of Econometrics*, 235(2), 2218-2244).

6. How can taxes (and other public policies) be designed and implemented to discourage socially harmful behaviours and negative externalities such as pollution? Pigouvian taxes and sin taxes.

- *Main applied paper:* Abadie, A., Diamond, A., & Hainmueller, J. (2010). Synthetic control methods for comparative case studies: Estimating the effect of California's tobacco control program. *Journal of the American Statistical Association*, 105(490), 493-505.
- *Method:* Synthetic control (Course book Chapter 10)

7. Taxes on labor and behavioral responses: tax evasion, migration.

- *Main applied papers:* Kleven, H. J., Knudsen, M. B., Kreiner, C. T., Pedersen, S., & Saez, E. (2011). Unwilling or unable to cheat? Evidence from a tax audit experiment in Denmark. *Econometrica*, 79(3), 651-692.; Kleven, H. J., Landais, C., & Saez, E. (2013). Taxation and international migration of superstars: Evidence from the European football market. *American Economic Review*, 103(5), 1892-1924 and Saez, E. (2010). Do taxpayers bunch at kink points?. *American Economic Journal: Economic Policy*, 2(3), 180-212.
- *Method:* Bunching (see Kleven, H. (2016). Bunching. *Annual Review of Economics*, 8, 435-464).

8. Introduction to machine learning using an example: Can computer assistance improve judicial decisions? Will these decisions be fairer, or do they raise technical and ethical issues?

- *Main applied paper:* Kleinberg, J., Lakkaraju, H., Leskovec, J., Ludwig, J., & Mullainathan, S. (2018). Human decisions and machine predictions. *The Quarterly Journal of Economics*, 133(1), 237-293.
- *Method:* Machine learning (see Athey, Susan and Imbens, Guido W (2019). Machine Learning Methods That Economists Should Know About. *Annual Review of Economics*, 11(1), 685-725).

9. Essay presentations (research design) (see evaluation).

6. Demonstração da coerência dos conteúdos programáticos com os objetivos de aprendizagem da unidade curricular.

Demonstration of the syllabus coherence with the curricular unit's learning objectives.

The course follows a theory-practice-policy approach by presenting economic models to students together with existing empirical evidence and policy discussions.

The learning materials include empirical academic papers provided to students throughout the term. In addition to the pre-class readings and in-class discussions, students will carry out a research project using real-world data to study current problems and propose policy recommendations.

The objectives are as follows:

- Understand the reasons for the intervention of the State in the economy;
- Learn the importance of evaluating public policies with rigorous scientific methods, applying basic knowledge of experimental design;
- Distinguish studies with correlations from studies concerned with assessing causal effects;
- Understand the relevance of micro data to evaluate the effects of public policies on different economic agents;
- Perceive the response and incentives of economic agents to government actions in real-world applications;
- Learn about cognitive and emotional biases and how individuals use heuristics in the decision-making process;
- Encourage the consumption and production of specialized literature as an essential tool in the decision-making process.

7. Metodologias de ensino (avaliação incluída).

Teaching methodologies (including evaluation):

The teaching approach will strive to integrate, whenever possible, the exposition of concepts and theories with methodological analysis based on real cases of implementation and evaluation of public policies. Lecture slides will be made available on the course page on FÉNIX. Attendance and active participation in the majority of classes are expected from students.

FOR MASTERS STUDENTS:

To encourage participation in the assessment, the evaluation during the regular period will consist of:

- ***Written final exam: 50%*** of the grade.

In groups of 2-3 students, depending on class size, students' evaluation will have 2 components:

- At the end of each class, there will be a ***presentation of a recently published research paper from a scientific journal (10min)***, followed by in-class discussion. The paper must be selected from a list provided by the instructor (examples at the end of this syllabus) or proposed by the student in the first weeks of classes and accepted by the instructor: **25%**.
- In-class presentation of a ***research design (10min)***, followed by discussion, in the last weeks of the term: **25%**. This should include:
 - (i) a relevant research question related to the evaluation of a real public policy, explaining why this policy is important and why it should be studied (including a brief review of the literature on other articles and political debates);
 - (ii) an evaluation design, including the method (field, laboratory, natural experiment, etc.) and a description of the measurement (i.e., the necessary data – feasibility will be particularly valued!). It is important to discuss whether the results would constitute correlations or causal parameters;
 - (iii) potential limitations of the proposed approach.

FOR Ph.D. STUDENTS:

To encourage participation in the assessment, the evaluation during the regular period will consist of:

- ***Written final exam: 40%*** of the grade.

In groups of 2-3 students, depending on class size, students' evaluation will have 2 components:

- At the end of each class, there will be a ***presentation of a recently published research paper from a scientific journal (20min)***, followed by in-class discussion. The selected paper should have an on-line replication package, chosen a recently published paper in a top journal (examples of journals that typically include data and code: American Economic Review, AEJ journals, J Pub E, JIE, etc.). ***Students will***

explain both the paper and the code that runs that paper to other students:
30%.

- In-class presentation of a **research project** (20min), followed by discussion, in the last weeks of the term: **30%**. This should include:
 - (i) a relevant research question related to the evaluation of a real public policy, explaining why this policy is important and why it should be studied (including a brief review of the literature);
 - (ii) an evaluation design, with an explanation of the data and method(s)
 - (iii) (preliminary) results
 - (iv) potential limitations of the proposed approach.

8. Demonstração da coerência das metodologias de ensino com os objetivos de aprendizagem da unidade curricular.

Demonstration of the coherence between the teaching methodologies and the learning outcomes.

The teaching approach aims at promoting students' views on the topics and problems covered in the module from an applied, evidence-based and policy-oriented perspective. This allows students to learn about the models presented in a more critical and realistic way by combining active discussion of empirical evidence and urban policies with applied group research focused on current policy problems.

9. Bibliografia de consulta/existência obrigatória.

Bibliography (Mandatory resources):

Course book:

Cunningham, Scott. *Causal inference: The mixtape*. Yale university press, 2021.

Methods – if you need some refreshing:

Angrist, J. D., & Pischke, J. S. (2009). *Mostly harmless econometrics: An empiricist's companion*. Princeton university press.

Methods – More advanced:

Abadie, A. (2021). Using synthetic controls: Feasibility, data requirements, and methodological aspects. *Journal of Economic Literature*, 59(2), 391-425.

Calonico, S., Cattaneo, M. D., & Titiunik, R. (2014). Robust nonparametric confidence intervals for regression-discontinuity designs. *Econometrica*, 82(6), 2295-2326.

Survey papers covering the course material– More advanced:

Allcott, H., Lockwood, B. B., & Taubinsky, D. (2019). Should we tax sugar-sweetened beverages? An overview of theory and evidence. *Journal of Economic Perspectives*, 33(3), 202-27.

Kleven, H., Landais, C., Munoz, M., & Stantcheva, S. (2020). Taxation and migration: Evidence and policy implications. *Journal of Economic Perspectives*, 34(2), 119-142.

Kleven, H. J. (2014). How can Scandinavians tax so much? *Journal of Economic Perspectives*, 28(4), 77-98.

Kahneman, D. (2011). *Thinking, Fast and Slow*. London, Allen Lane

Thaler and C. Sunstein (2008) *Nudge: Improving Decision about Health, Wealth and Happiness*. New Haven: Yale University Press

List of possible paper to be discussed in class:

RCTs

Andre, Peter, Carlo Pizzinelli, Christopher Roth, and Johannes Wohlfart, "Subjective Models of the Macroeconomy: Evidence from Experts and Representative Samples" *Review of Economic Studies*, 2022, 89 (6), 2958–2991.

Bailey, Megan, David Brown, Blake Shaffer, and Frank Wolak. "Show me the money! A field experiment on electric vehicle charge timing." *American Economic Journal: Economic Policy* (forthcoming).

Bursztyn, Leonardo, Alessandra L. González, and David Yanagizawa-Drott, "Misperceived Social Norms: Women Working Outside the Home in Saudi Arabia" *American Economic Review*, 2020, 110 (10), 2997–3029.

Ek, C. and Söderberg, M., 2024. "Norm-based feedback on household waste: Large-scale field experiments in two Swedish municipalities." *Journal of Public Economics*, 238, p.105191.

Haaland, Ingar and Christopher Roth, "Labor market concerns and support for immigration" *Journal of Public Economics*, 2020, 191, 104256.

Haaland, Ingar and Christopher Roth, "Beliefs about Racial Discrimination and Support for Pro-Black Policies" *Review of Economics and Statistics*, 2021.

De Quidt, Jonathan, Johannes Haushofer, and Christopher Roth. "Measuring and bounding experimenter demand." *American Economic Review* 108, 11 (2018): 3266-3302.

Stantcheva, S. (2021). "Understanding tax policy: How do people reason? " *The Quarterly Journal of Economics*, 136(4), 2309-2369.

Paper-based policies

Diamond, Rebecca, Tim McQuade, and Franklin Qian. "The effects of rent control expansion on tenants, landlords, and inequality: Evidence from San Francisco." *American Economic Review* 109.9 (2019): 3365-94.

Donaldson, Dave. 2018. "Railroads of the Raj: Estimating the Impact of Transportation Infrastructure." *American Economic Review*, 108 (4-5): 899-934.

Eugster, Beatrix, and Raphaël Parchet. "Culture and taxes." *Journal of Political Economy* 127.1 (2019): 296-337.

Ku, Hyejin, Uta Schönberg, and Ragnhild C. Schreiner. "Do place-based tax incentives create jobs?." *Journal of Public Economics* 191 (2020): 104105.

Lu, Yi, Jin Wang, and Lianming Zhu. 2019. "Place-Based Policies, Creation, and Agglomeration Economies: Evidence from China's Economic Zone Program." *American Economic Journal: Economic Policy*, 11 (3): 325-60.

Child and family policies

Boserup, Simon Halphen, Wojciech Kopczuk, and Claus Thustrup Kreiner. "Born with a silver spoon? Danish evidence on wealth inequality in childhood." *The Economic Journal* 128.612 (2018): F514-F544

Manoli, Day, and Nicholas Turner. "Cash-on-hand and college enrollment: Evidence from population tax data and the earned income tax credit." *American Economic Journal: Economic Policy* 10.2 (2018): 242-71.

Neumark, David, and Peter Shirley. "The Long-Run Effects of the Earned Income Tax Credit on Women's Labor Market Outcomes." *Labour Economics* 66 (2020): 101878.

Taxation

Almunia, Miguel, and David Lopez-Rodriguez. "Under the radar: The effects of monitoring firms on tax compliance." *American Economic Journal: Economic Policy* 10.1 (2018): 1-38.

Benzarti, Youssef, and Alisa Tazhitdinova. 2021. "Do Value-Added Taxes Affect International Trade Flows? Evidence from 30 Years of Tax Reforms." *American Economic Journal: Economic Policy*, 13 (4): 469-89.

De Neve, Jan-Emmanuel, et al. "How to improve tax compliance? Evidence from population-wide experiments in Belgium." *Journal of Political Economy* 129.5 (2021): 1425-1463.

Dwenger, N., Kleven, H., Rasul, I., & Rincke, J. (2016). Extrinsic and intrinsic motivations for tax compliance: Evidence from a field experiment in Germany. *American Economic Journal: Economic Policy*, 8(3), 203-32.

Einav, L., Knoepfle, D., Levin, J., & Sundaresan, N. (2014). Sales taxes and internet commerce. *American Economic Review*, 104(1), 1-26.

Hallsworth, M., List, J. A., Metcalfe, R. D., & Vlaev, I. (2017). The behavioralist as tax collector: Using natural field experiments to enhance tax compliance. *Journal of Public Economics*, 148, 14-31.

Harju, Jarkko, Tuomas Kosonen, and Joel Slemrod. "Missing miles: Evasion responses to car taxes." *Journal of Public Economics* 181 (2020): 104108.

Kopczuk, W., Marion, J., Muehlegger, E., & Slemrod, J. (2016). Does tax-collection invariance hold? Evasion and the pass-through of state diesel taxes. *American Economic Journal: Economic Policy*, 8(2), 251-86.

Okunogbe, Oyebola and Victor Pouliquen. "Technology, taxation, and corruption: evidence from the introduction of electronic tax filing." *American Economic Journal: Economic Policy* (Forthcoming).

Agrawal, David R., and Dirk Foremny. "Relocation of the rich: Migration in response to top tax rate changes from Spanish reforms." *Review of Economics and Statistics* 101.2 (2019): 214-232.

Drucker, Lev, Katya Mazirov, and David Neumark. "Who pays for and who benefits from minimum wage increases? Evidence from Israeli tax data on business owners and workers." *Journal of Public Economics* 199 (2021): 104423.

Kreiner, Claus Thustrup, Daniel Reck, and Peer Ebbesen Skov. "Do lower minimum wages for young workers raise their employment? Evidence from a Danish discontinuity." *Review of Economics and Statistics* 102.2 (2020): 339-354.

Martínez, Isabel Z., Emmanuel Saez, and Michael Siegenthaler. "Intertemporal labor supply substitution? evidence from the swiss income tax holidays." *American Economic Review* 111.2 (2021): 506-46.

Gruber, Jonathan, Amalie Jensen, and Henrik Kleven. 2021. "Do People Respond to the Mortgage Interest Deduction? Quasi-experimental Evidence from Denmark." *American Economic Journal: Economic Policy*, 13 (2): 273-303.

Schmidheiny, Kurt, and Michaela Slotwinski. "Tax-induced mobility: Evidence from a foreigners' tax scheme in Switzerland." *Journal of Public Economics* 167 (2018): 293-324.

Slemrod, Joel, Caroline Weber, and Hui Shan. "The behavioral response to housing transfer taxes: Evidence from a notched change in DC policy." *Journal of Urban Economics* 100 (2017): 137-153.

Agrawal, Ajay, Carlos Rosell, and Timothy Simcoe. "Tax credits and small firm R&D spending." *American Economic Journal: Economic Policy* 12.2 (2020): 1-21.

Al-Karablieh, Yazan, Evangelos Koumanakos, and Stefanie Stantcheva. "Clearing the bar: Improving tax compliance for small firms through target setting." *Journal of International Economics* 130 (2021): 103452.

Alstadsæter, Annette, Martin Jacob, and Roni Michaely. "Do dividend taxes affect corporate investment?." *Journal of Public Economics* 151 (2017): 74-83.

Guceri, Irem, and Li Liu. "Effectiveness of fiscal incentives for R&D: Quasi-experimental evidence." *American Economic Journal: Economic Policy* 11.1 (2019): 266-91.

Liu, Yongzheng, and Jie Mao. "How do tax incentives affect investment and productivity? Firm-level evidence from China." *American Economic Journal: Economic Policy* 11.3 (2019): 261-91.

Maffini, Giorgia, Jing Xing, and Michael P. Devereux. "The impact of investment incentives: evidence from UK corporation tax returns." *American Economic Journal: Economic Policy* 11.3 (2019): 361-89.

Ohrn, Eric. "The effect of tax incentives on US manufacturing: Evidence from state accelerated depreciation policies." *Journal of Public Economics* 180 (2019): 104084.