Syllabus Corso

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1 Day 1: 26th May 2022 (afternoon)

1.1 Introduction trough examples

In this part, we try to introduce the general idea of Regression Discontinuity Design trough benchmark examples.

Possible examples (to be discussed - manca un esempio di Spatial RDD)

[1] Jinyong Hahn, Petra Todd, and Wilbert Van der Klaauw. "Identification and estimation of treatment effects with a regression-discontinuity design". In: *Econometrica* 69.1 (2001), pp. 201–209.

[2] Rafael Lalive. "How do extended benefits affect unemployment duration? A regression discontinuity approach". In: *Journal of econometrics* 142.2 (2008), pp. 785–806.

[3] David S Lee. "Randomized experiments from non-random selection in US House elections". In: *Journal of Econometrics* 142.2 (2008), pp. 675–697.

[4] David S Lee and David Card. "Regression discontinuity inference with specification error". In: *Journal of Econometrics* 142.2 (2008), pp. 655–674.

[5] Philip Oreopoulos. "Estimating average and local average treatment effects of education when compulsory schooling laws really matter". In: *American Economic Review* 96.1 (2006), pp. 152–175.

[6] Donald L Thistlethwaite and Donald T Campbell. "Regression-discontinuity analysis: An alternative to the ex post facto experiment." In: *Journal of Educational psychology* 51.6 (1960), p. 309.

1.2 How to estimate a RDD – Local bandwidth & Polynomial Order

[1] Sebastian Calonico, Matias D. Cattaneo, and Rocio Titiunik. "Robust Nonparametric Confidence Intervals for Regression-Discontinuity Designs". In: *Econometrica* 82.6 (2014), pp. 2295–2326. DOI: https://doi.org/10.3982/ECTA11757. eprint: https://onlinelibrary.wiley.com/doi/pdf/10.3982/ECTA11757. URL: https://onlinelibrary.wiley.com/doi/abs/10.3982/ECTA11757.

[2]   Ming-Yen Cheng, Jianqing Fan, and J. S. Marron. "On automatic boundary corrections". In: *The Annals of Statistics* 25.4 (1997), pp. 1691–1708. DOI: `10.1214/aos/1031594737`. URL: `https://doi.org/10.1214/aos/1031594737`.

[3]   Andrew Gelman and Guido Imbens. "Why High-Order Polynomials Should Not Be Used in Regression Discontinuity Designs". In: *Journal of Business & Economic Statistics* 37.3 (2019), pp. 447–456. DOI: `10.1080/07350015.2017.1366909`. eprint: `https://doi.org/10.1080/07350015.2017.1366909`. URL: `https://doi.org/10.1080/07350015.2017.1366909`.

[4]   Zhuan Pei, David S. Lee, David Card, and Andrea Weber. "Local Polynomial Order in Regression Discontinuity Designs". In: *Journal of Business & Economic Statistics* 0.0 (2021), pp. 1–9. DOI: `10.1080/07350015.2021.1920961`. eprint: `https://doi.org/10.1080/07350015.2021.1920961`. URL: `https://doi.org/10.1080/07350015.2021.1920961`.

1.3   RDD in Stata

In this part, starting from an example, we will show how to implement the different methods in Stata.

2 Day 2: 27th May 2022 (all day) – advancements in RDD trough examples

In the second day, we will try to explain some advancements in RDD literature by presenting some papers.

2.1 RDD with time variation

Presented paper

[1] Veronica Grembi, Tommaso Nannicini, and Ugo Troiano. "Do fiscal rules matter?" In: *American Economic Journal: Applied Economics* (2016), pp. 1–30.

2.2 Far away

Presented paper

[1] Erich Battistin and Enrico Rettore. "Ineligibles and eligible non-participants as a double comparison group in regression-discontinuity designs". In: *Journal of Econometrics* 142.2 (2008). The regression discontinuity design: Theory and applications, pp. 715–730. ISSN: 0304-4076. DOI: https://doi.org/10.1016/j.jeconom.2007.05.006. URL: https://www.sciencedirect.com/science/article/pii/S0304407607001145.

Additional papers

[1] Joshua D. Angrist and Miikka Rokkanen. "Wanna Get Away? Regression Discontinuity Estimation of Exam School Effects Away From the Cutoff". In: *Journal of the American Statistical Association* 110.512 (2015), pp. 1331–1344. DOI: 10.1080/01621459.2015.1012259. eprint: https://doi.org/10.1080/01621459.2015.1012259. URL: https://doi.org/10.1080/01621459.2015.1012259.

[2] Matias D. Cattaneo, Luke Keele, Rocío Titiunik, and Gonzalo Vazquez-Bare. "Extrapolating Treatment Effects in Multi-Cutoff Regression Discontinuity Designs". In: *Journal of the American Statistical Association* 116.536 (2021), pp. 1941–1952. DOI: 10.1080/01621459.2020.1751646. eprint: https://doi.org/10.1080/01621459.2020.1751646. URL: https://doi.org/10.1080/01621459.2020.1751646.

[3] Yingying Dong and Arthur Lewbel. "Identifying the Effect of Changing the Policy Threshold in Regression Discontinuity Models". In: *The Review of Economics and Statistics* 97.5 (Dec. 2015), pp. 1081–1092. ISSN: 0034-6535. DOI: 10.1162/REST_a_00510. eprint: https://direct.mit.edu/rest/article-pdf/97/5/1081/1918004/rest_a_00510.pdf. URL: https://doi.org/10.1162/REST%5C_a%5C_00510.

2.3 Centralized Assignment

Presented paper

[1] Silvia Granato, Enkelejda Havari, Gianluca Mazzarella, and Sylke V Schnepf. *Study Abroad Programmes and Students' Academic Performance: Evidence from Erasmus Applications.* Tech. rep. IZA Discussion Papers, 2021.

Additional papers

[1] Atila Abdulkadiroğlu, Joshua D. Angrist, Yusuke Narita, and Pathak Parag. "Breaking Ties: Regression Discontinuity Design Meets Market Design". In: *Econometrica* 90.1 (2022), pp. 117–151. DOI: https://doi.org/10.3982/ECTA17125.

2.4 Margin vote in Proportional System

Possible papers

[1] Felipe Carozzi and Luca Repetto. "Distributive politics inside the city? The political economy of Spain's Plan E". In: *Regional Science and Urban Economics* 75 (2019), pp. 85–106.

[2] Jon H Fiva, Olle Folke, and Rune J Sørensen. "The power of parties: evidence from close municipal elections in Norway". In: *The Scandinavian Journal of Economics* 120.1 (2018), pp. 3–30.

[3] Olle Folke. "Shades of brown and green: party effects in proportional election systems". In: *Journal of the European Economic Association* 12.5 (2014), pp. 1361–1395.

[4] Kaisa Kotakorpi, Panu Poutvaara, and Marko Terviö. "Returns to office in national and local politics: A bootstrap method and evidence from Finland". In: *The Journal of Law, Economics, and Organization* 33.3 (2017), pp. 413–442.

2.5 Continuous treatment & Kink

Presented paper

[1] Claudio Deiana, Andrea Geraci, Gianluca Mazzarella, and Fabio Sabatini. "COVID-19 relief programs and compliance with confinement measures". In: (2021).

Additional papers

[1] David Card, David S Lee, Zhuan Pei, and Andrea Weber. "Inference on causal effects in a generalized regression kink design". In: *Econometrica* 83.6 (2015), pp. 2453–2483.

[2] Yingying Dong, Ying-Ying Lee, and Michael Gou. "Regression Discontinuity Designs With a Continuous Treatment". In: *Journal of the American Statistical Association* 0.0 (2021), pp. 1–14. DOI: 10.1080/01621459.2021.1923509. eprint: https://doi.org/10.1080/01621459.2021.1923509. URL: https://doi.org/10.1080/01621459.2021.1923509.

[3] Peter Ganong and Simon Jäger. "A permutation test for the regression kink design". In: *Journal of the American Statistical Association* 113.522 (2018), pp. 494–504.

[4] Marianne Simonsen, Lars Skipper, and Niels Skipper. "Price sensitivity of demand for prescription drugs: exploiting a regression kink design". In: *Journal of Applied Econometrics* 31.2 (2016), pp. 320–337.