

ALEXANDER LEHNER

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DOCTORAL STUDIES

2019-2022: Research Fellow in Economics (Assegnista di Ricerca), University of Bologna
2021: Visiting Researcher, University of Chicago (Center for Spatial Data Science, Prof. Anselin)
2015-2019: PhD in Economics, University of Bologna
"Essays in Long-run Development and Spatial Economics"
External Committee: David N. Weil (Brown), Klaus Desmet (SMU)
2018: Visiting Research Fellow, Brown University

PRE-DOCTORAL STUDIES

2012-2015: MSc Economics, Vienna University of Economics and Business (WU Vienna)
2013: Seoul National University, South Korea (visiting student)
2013-2015: BSc Mathematics, University of Vienna (temporarily interrupted at ~50%)
2007-2012: BSc Business Administration (Statistics & Finance), WU Vienna

REFERENCES

Prof. Matteo Cervellati
University of Bologna
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Prof. David N. Weil
Brown University
64 Waterman Street
Providence, RI 02912
david_weil@brown.edu

Prof. Klaus Desmet
SMU Dept of Economics
3300 Dyer, Suite 301
Dallas, TX 75205
kdesmet@smu.edu

DESIRED TEACHING AND RESEARCH

Primary Fields: Long-run Economic Growth & Development,
Spatial Economics / Economic Geography
Secondary Fields: Economic History, Applied (Spatial) Econometrics, Urban & Regional Economics

RELEVANT POSITIONS HELD

2017: Organiser "Reading Group in Spatial Economics"
(Oct.-Dec.) University of Bologna
2015: eDeveloper (20h/week), Institute for Statistics & Mathematics, WU Vienna
Redesigning statistics e-learning structure through R
2015: Student Assistant, International Office, WU Vienna
2014: Student Assistant, International Office, WU Vienna

HONORS, AWARDS (Travel & participation grants, see next page)

2021: Marco Polo scholarship for visiting the University of Chicago (c.USD5.000)
2018: Winner of biennial RSAI Young Researcher Prize (Regional Science Assoc.) (EUR600)

- 2017: Marco Polo scholarship for visiting Brown University (c.USD10.000)
 2015: Full scholarship for doctoral studies, Italian Government
 2013: Grant for overseas studies in South Korea

RESEARCH GRANTS

- 2022: PRIN (Italian Ministry of Education, University and Research)
 [EUR 328.000] Core member of team, PI: Matteo Cervellati.
 Project on long-term development in Europe

TEACHING

- 2021/22: **Spatial Data Analysis & Inference**, 10h graduate course
 (sheduled) Catholic University of Brasilia
- 2020/21: **Comparative Development, Institutions and Demography**, 15h PhD course
 One lecture on struct. estimation (Prof. Cervellati), University of Bologna
- 2020/21: **Senior TA Microeconomics**, (Graduate, International Studies)
 Instructors: Prof. Luppi, Johns Hopkins University - SAIS
- 2018/19: **Advanced GIS Analysis**, 15h PhD course
 Co-taught with Prof. Giovanni Prarolo, University of Bologna
- 2018/19: **GIS Tools Laboratory**, 15h course (Graduate, LMEC)
 Co-taught with Prof. Giovanni Prarolo, University of Bologna
- 2016/17: **TA Growth Theory** (Macro 1 I.C.), 30h course (Graduate, LMEC)
 Instructor: Prof. Carlotta Berti Ceroni, University of Bologna
- 2016/17: **TA Macroeconomics**, 60h course (Undergraduate, CLEF)
 Instructor: Prof. Flavio Delbono, University of Bologna
- 2014/15: **Introductory Statistics**, (development of interactive e-learning)
 PI: Prof. Ronald Hochreiter, Vienna University of Economics and Business

ADDITIONAL EDUCATION

- 2017/7: RSAI-GSSI Summer School of Advanced Economic Geography, L'Aquila
 (full travel & accommodation grant)
- 2017/5: IIPF Doctoral School: Dynamics of Inequality, Ifo Institute Munich
 (full travel & accommodation grant)
- 2017/5: Association for Asian Studies, Emerging Fields workshop:
 "New Frontiers in Asian Economic History", Michigan State University
 (full travel & accommodation grant)
- 2017/2: ASREC workshop: "Introduction to the Economics of Religion", Boston
 (full travel & accommodation grant)
- 2015/2: Training School: Spatial Econometrics, WU Vienna

PRESENTATIONS

- 2021: Warwick (CAGE Summerschool), Chicago (Center for Spatial Data Science), Brown Growth Lab
- 2019: Bologna (internal), NOeG19 (Graz), EEA-ESEM (Manchester) [EUR400 Student Travel Grant],
 EHES (Paris)
- 2018: Brown Macro Lunch, RSAI18 (Goa, India), WEAI18 (Vancouver), Bologna (PhD-Forum)
- 2017: Tübingen (EHES 2017) [EUR300 travel grant], ASREC Europe (Bologna),
 L'Aquila (GSSI Summer School), Bologna (PhD-Forum)
 Michigan State, Munich (CESifo Doctoral School), SMYE (Halle/Saale)
- 2016: Oxford (Nuffield, ESH Graduate Seminar Series), Bologna (PhD-Forum)
- 2015: WU Vienna, University of Bologna (internal)

REFEREE SERVICE

Journal of Economic Behaviour & Organization, Journal of Economic Growth, Spring Meeting of Young Economists

PERSONAL INFORMATION

Citizenship: Austrian

Languages: German (native), English (fluent), Italian (good, [C1]), French (fading)

Skills: \LaTeX , R (fluent); QGIS, GeoDA, python, MATLAB, Git/SVN, SQL (good)

General Interests: Cycling (qualified for UCI amateur World Championships 2022),
Swimming (sev. podium spots in open-water competitions in the past)

RESEARCH

- **Market Integration and Urban Europe, 1100 - 1800 A.D.** [Job Market Paper]

joint with Matteo Cervellati & Gianandrea Lanzara

[[paper](#)]

[What are the drivers of European development in the pre-industrial era (1100-1800) is a long-standing question in the social sciences. In this paper, we argue that falling trade frictions can provide a unified explanation for several stylized facts of European pre-industrial development: a shift of the center of economic gravity to Northern Europe, increasing inequality in the city-size distribution, and falling importance of a fertile hinterland for urban success. To conceptualize this process, we develop a novel quantitative spatial economic model with two sectors of production and endogenous hinterlands. We then use the model to structurally estimate the trade friction parameters in each period. Our results show that trade frictions were overall falling over time, and most importantly, that the differential timing of the reduction between sectors is crucial to explain the stylized facts. A counterfactual exercise illustrates that the peculiar geography of Europe was a crucial condition for the so-called Little Divergence, the shift of the center of economic gravity to the North.]

- **Culture, Institutions, and the Roots of Gender Inequality:**

450 Years of Portuguese Colonialism in India

[[paper](#)] [Winner of RSAI Young Researcher Prize]

[When are economic phenomena persistent over time, and when are they not? If they are, do inequalities persist forever, or do they converge, and if so, at what speed? By analyzing the Indian state of Goa, this research makes use of a historical quasi-natural experiment to document the persistent effect of Portuguese (catholic) colonialism in a South Asian context. To achieve econometric identification, I apply a spatial regression discontinuity design alongside a border that was abandoned in the 18th century. The same institutions were in place on both sides of this former border for almost 250 years. However, only on one side, the colonizers imposed what I characterize as a "cultural treatment", which mainly pertained to education and societal gender norms. This provides a rare opportunity to isolate and identify the effect of culture, holding constant geography, income, and institutions. I find that historically induced gaps in male education can be closed within roughly one generation. Outcomes pertaining to females, on the other hand, are far more rigid, highlighting the differential degree of persistence. Inequalities in female education do converge, albeit at a much slower speed, while male-biased sex ratios appear not to move at all. I conclude that institutions, combined with the right incentives and equal infrastructural investment, can be able to overcome differences in specific important outcomes. Yet, when it comes to deep-rooted cultural norms such as male son preferences, they appear to be little effective.]

- **A Note on Spatial Regression Discontinuity Designs**

[[slides](#)] [[R-package](#)]

[I briefly review the state-of-the-art spatial regression discontinuity (RDD) framework that is suitable to isolate causal effects when there are sharp spatial breaks. I then propose several improvements. First, I illustrate that some commonly used specifications are prone to type-I errors, especially when there are spatial trends in the data. Second, I propose a way to report heterogeneous treatment effects alongside the RD cutoff. Third, I introduce randomization inference to the spatial RD framework by creating a set of functions that allow to randomly shift borders. These tools might be interesting for other identification strategies that rely on the shift of boundaries. A companion R-package called "SpatialRDD" includes all the tools necessary to carry out spatial RD estimation, including the proposed improvements. Furthermore, I address recent concerns that spatial RDDs might suffer from spurious regression problems due to spatially correlated omitted variables - or spatial autocorrelation more generally. Using spatial Monte Carlo simulations I demonstrate the opposite. In the presence of such phenomena, spatial RDDs are actually a solution when it comes to too small standard errors in frequentist hypothesis testing induced by spatial correlation.]

- **A Time-Varying Index for Agricultural Suitability across Europe from 1500-2000**

joint with Dylan Philippe

[[paper](#)]

[Throughout the last centuries European climate changed substantially, which in turn necessarily affected the potential to plant and grow crops. These changes happened not just over time, but also had a spatial dimension. Yet, quantitative historical studies typically are based on static measures for agricultural suitability due to the non-availability of time-varying indices. Relying on recent advances in palaeoclimatology, we try to overcome this gap by constructing a gridded yearly measure for agricultural suitability across Europe at a 0.5° resolution. We use the methodology by Ramankutty et. al. (2002), thus focussing only on exogenous features, i.e. not relying on largely unreliable historical estimates of population density and cropland cover. Our index is able to not just capture long-term trends such as the so-called little ice age, but also short term climatic shocks.]

IN PROGRESS

- **Note on Kernel Bandwidth Choices for SpatialHAC Standard Errors**

SOFTWARE

- **SpatialRDD: an R-package to conduct multiple types of geographic regression discontinuity designs**
[[github](#)] [[vignette: basics](#)] [[vignette: shifting borders](#)]
- **SpatialInference** [[R-package currently in development](#)]

MISCELLANEOUS

- [Op-Ed on tuition fees and socioeconomic and educational gaps.](#)
(2017, German, derStandard - Austrian national newspaper)
- [Op-Ed on drug liberalisation from a development economic view.](#)
(2016, German, derStandard - Austrian national newspaper)