Political Economy of (Under)Development:

New (GIS) Tools for Applied Research

Spring 2025

Instructor
Andrea Matranga (andrea.matranga@unito.it)

Description and Program:

This course has 2 purposes. First, it provides Ph.D. students with an overview of the thriving literature on the political economy of growth and development with a particular emphasis on geographic factors. Second, it equips students with an increasingly essential research tool in this field: spatial data and GIS. The course will alternate development/econ history and practical GIS classes.

• Political Economy of (Under)Development provides an overview of the dynamic research exploring growth and development at the intersection of development, political economy, and economic history. Simultaneously, the course aims to guide Ph.D. students in identifying frontier research questions within the discipline, and selecting appropriate methodologies. We'll engage in brainstorming sessions to explore innovative current research agenda, selecting promising research questions, data collection strategies, and other essential elements to enhance your research experience during your Ph.D. The course could be intriguing for Ph.D. students working in other fields as well beyond development economics and growth.

We will review some of the major contributions in the literature on the political economy of (under)development, following the guiding thread of questions such as "What constitutes a promising research question?" and "How can one determine if a project is worth the investment of time?".

• GIS for Applied Economic Research aims to provide Ph.D. students with fundamental theoretical and practical knowledge of spatial data and GIS, exploring their applications within economics. While the primary focus will be on literature concerning development and growth, these tools are extensively utilized by applied economists across various domains. Topics covered in class will include:

o   Map projections and their uses
o   Georeferencing paper maps
o   Spatially Relating Different Datasets to Each Other
o   Remote Sensing and AI
o   Computing distances
o   Topography and Hydrology
o   Spatial Statistics

Objectives:

At the end of this course students will get exposure to some of the most important debates in the literature at the border between development economics and political economy of development. Moreover, they will develop familiarity with a spatial data and GIS tools for applied economic researcher.

Assignments and Assessment:

Students' assessment will be based on:

- Political Economy of (Under)Development

o   Assignments: Students are invited to read (at least) the introduction of the papers that will be discussed during each session (an average of 2 papers per session, I will put an asterisk on the ones I expect you to read).

o   Assessment: In-class presentation of a Research Proposal. Students will be required to formulate a research proposal and structure it in a presentation format to be delivered in class. The topic of the proposal can be anything within the broad topics of economic development, economic history and economic geography.

- GIS for Applied Economic Research

o   Take-Home Assignments. Each GIS section will include a take-home exercise to reinforce what was learned in class, due the following week.

TOPICS

Week 1
Research Papers: Data Collections that Open Doors. How can innovative data collection open venues for new research. We will explore various papers, including: Michalopoulos & Xue (2021)*, and Iaria et al. (2022)*.

GIS: Types of GIS data. Projections, Datums, and when to use them. Introduction to QGIS. Making a simple beautiful map.

Week 2
Research Paper New Identification Strategies for Long-standing Ideas and Questions. We will study Bazzi et al. (2020)* and Alsan & Wanamaker (2018)*. To get more informal insights into a paper's story we will also briefly review Saia (2018) and Esposito (2022).
GIS: Georefencing and geocoding a paper map

Week 3
Research Papers: Aid, Climate, and Warfare. We will study McGuirk and Nunn (2024)* McGuirk and Nunn (2025)*.
GIS: Basic geoprocessing, buffering, raster calculator, conditional statements, the model builder.

Week 4
Research Papers: Research Policy Implications. We will study Berman et al. (2017)* and others.
GIS: Advanced geoprocessing I; time cost calculation. PyQGIS

Week 5

Research Papers: The final lecture will be dedicated to students' presentations (see Assessment, below).
GIS: Advanced geoprocessing II: line of sight calculations and hydrology. QGIS-independent python.

References

M. Alsan & M. Wanamaker (2018). `Tuskegee and the health of black men'. The quarterly journal of economics 133(1):407 455.

S. Bazzi, et al. (2020). `Frontier culture: The roots and persistence of rugged individualism in the United States'. Econometrica 88(6):2329 2368.

N. Berman, et al. (2017). `This mine is mine! How minerals fuel conflicts in Africa'. American Economic Review 107(6):1564 1610.

McGuirk, E.F. and Nunn, N., 2024. *Development Mismatch? Evidence from Agricultural Projects in Pastoral Africa* (No. w33191). National Bureau of Economic Research.

Eoin F McGuirk, Nathan Nunn, Transhumant Pastoralism, Climate Change, and Conflict in Africa, *The Review of Economic Studies*, Volume 92, Issue 1, January 2025, Pages 404–441, https://doi.org/10.1093/restud/rdae027

E. Esposito (2022). `The side effects of immunity: Malaria and African slavery in the United States'. American Economic Journal: Applied Economics 14(3):290 328.

A. Iaria, et al. (2022). `Gender gaps in academia: Global evidence over the twentieth century'. Available at SSRN 4150221 .

S. Michalopoulos & M. M. Xue (2021). `Folklore'. The Quarterly Journal of Economics 136(4):1993 2046.

A. Saia (2018). `Random interactions in the Chamber: Legislators' behavior and political distance'. Journal of Public Economics 164:225 240.