

ECO 500: Senior Seminar, Spring 2022

Department of Economics and Finance
Centre College

*Though I've tried to find the answer to all the questions they ask
Though I know it's impossible to go living through the past
Don't tell no lie*

- Bob Marley, "Natural Mystic" (1977)

Class Time and Location:

M-W-F – 10:20am-11:20pm

Location: SUTC 330

Instructor: Henrique Veras

Email: Henrique.veras@centre.edu

Office: Crouse 417

Office Hours: M-W – 3:00-4:30pm (or by appointment)

COURSE DESCRIPTION:

The main topic of this course is causality. In all aspects of our lives, we face causal questions. Growth economists desire to understand what are the causes of disparities in living standards worldwide. Labor economists want to understand the impact of education on people's wages. Epidemiologists are interested in the importance of vaccination against infectious disease. Businesses want to know the impact of advertising on their revenue. Financial market traders seek to understand how the variability in one asset's price affects the valuation of a given company.

This course will teach students the fundamentals of how to approach causal questions in a scientific way. We will start by discussing the counterfactual framework to understand causal inference. Next, we will dive into the importance of randomization and experiments as the golden rule to infer causality from data. Then, we will introduce a range of methods to uncover causal relationships from non-observational data. In each of these methods, we will focus on the main ideas, assumptions and concepts rather than their operational aspects.

As a guiding benchmark, we will focus our analysis on the literature of the deep roots of comparative economic development. The course is designed to expose students to the issue of causality by making use of this literature as an example of scientific research conducted to explore relevant causal questions. We will cover topics related to the roles of factors such as culture, institutions, geography, and state formation in explaining why some places are rich and some are poor. Most of the readings will devote emphasis to the study of the various micro- and macro-level factors that contribute to the vast disparities in living standards across different regions of the world.

LEARNING GOALS

The general learning objectives of this course are threefold. First, the course is designed to develop students' ability to analyze cause and effect in a systematic and rigorous manner. Second, the course aims to introduce students to modern statistical tools that are necessary for identifying and analyzing *causal* empirical relationships. Third, students should be able to understand and analyze the inequality in the income distribution around the world through the lens of the theories of long-run economic growth and development and develop a critical sense on the historical patterns and persistence in income levels by developing countries.

PREREQUISITES

Although not formally required, there are basically three important prerequisites for this course: ECO 220 (Microeconomic Analysis), ECO 210 (Macroeconomic Analysis) and MAT 130 (Introduction to Statistics) or related, with a slightly more emphasis on the latter.

COURSE MATERIALS:

- Most of the readings will come from relevant and influential scientific articles by some of the leading scholars in the field of long-run economic development and comparative economic development. These papers will be posted on Moodle, and we will discuss (at least) one of them each week.
- **Mastering 'Metrics by Angrist and Pishke:** Although not required reading, students might find this book a valuable resource to better understand the empirical techniques applied in some of the papers discussed in class. This is an interesting resource to senior undergraduate students who are proficient in econometric analysis.
- **The Effect by Nick Huntington-Klein:** Useful additional resource with the most up-to-date material covering causal methods. Available at: <https://theeffectbook.net/>

Moodle

Papers to be discussed in class, course announcements, lecture notes, as well as your grades will be posted on the Moodle page for this course. It is your responsibility to check Moodle frequently for relevant course information.

GRADING:

Students are expected to attend class, read all assigned readings, and participate in class discussions. In addition to developing skills in reading and evaluating empirical papers, students will complete a series of assignments to grasp the main concepts of this course. Your grade will be based on the following four components:

Class participation/Discussion (10%)

This class revolves around discussion. It is important that students do the reading before paper presentations and engage in class debate actively. Critical thinking is best developed with active learning. Students are encouraged to ask and answer questions, make comments and suggestions to their peers.

Classroom Programming Activities (15%)

In addition to the theoretical description of the statistical methods and tools to uncover causal relationship from experimental and non-experimental data, this class also focuses on hands-on practical implementation of these methods, employing programming techniques to real data. We will use the open-source software R to perform these activities.

Newspapers Activities (5%)

On some weeks, usually on Mondays, students will bring to class one piece of news or article that makes a causal claim about some correlation. Students will also be assigned to evaluate the claim brought by a classmate and provide an alternative sound explanation for the observed correlation. These activities will be extremely valuable to foster students' critical thinking.

Class presentation (10%)

Each week one paper will be discussed in class in details. Paper discussion will be on Fridays, unless stated otherwise. One group will be assigned to prepare a 30-35-minute presentation of each paper. Assignment of presentation will take place at the beginning of the semester. Notice that presentations should include a critical discussion and student's take on the paper and NOT only a summary or descriptive presentation. Points that should be addressed include:

- Research question and its relevance
- Do the authors employ a credible strategy to answer the proposed causal question? What are the shortcomings of the strategy employed?
- Robustness of the findings: are there any alternative explanations for the obtained results?
- Possible extensions/future research on the topic

It is extremely important that **all** students read the week's assigned papers before class and participate in discussion around the topic.

Class Projects (20%)

There will be around 4 class projects consisting of students elaborating a report conveying the message of the assigned readings to a broader audience. Students will elaborate one report for each topic covered in class. Reports can vary in their format, ranging from a World Bank-like report to a short video presentation or podcast episode. Students' creativity will be an important component of the evaluation.

Mid-Semester Comprehensive Exam (10%)

All Economics seniors are required to complete an end-of-course assessment as a way of evaluating their overall understanding of the core economics principles. The questions asked in this assessment will be similar in the level of difficulty to ECO 110. Students can practice through reviewing Economic Principles textbooks, such as *Issues in Economics Today* by Robert C. Guell. Practice questions will be available on Moodle. The exam will take place on Tuesday, March 8th.

Research Paper (30%)

Over the course of the semester, students will work on a research question of their preference and prepare a research paper providing a thorough discussion, making use of the data available at the Ethnographic Atlas. The Ethnographic Atlas is an important source of data with pre-industrial characteristics of 1,265 ethnic groups around the world.

- Your final paper will be graded based on the following criteria:
 - o Clarity of the research question
 - o Quality of the application of the selected method to answer the research question
 - o Interpretation and discussion of the results obtained
 - o Overall organization of the paper
- The final paper should (roughly) have the following structure:
 - o Introduction (1-1.5 pages)
 - o Literature Review (1-2 pages)
 - o Methodology (2-4 pages)

- Data and Descriptive Statistics (1-3 pages)
- Results (2-4 pages)

Grade Breakdown: I plan to use the following point range for final grades:

		B+	87-89.9	C+	77-79.9		
A	93-100	B	83-86.9	C	73-76.9	D	60-69.9
A-	90-92.9	B-	80-82.9	C-	70-72.9	U	0-59.9

RELIGIOUS HOLIDAYS:

Although classes may be held on religious holidays, students may have excused absences for any conflicting religious practice. Students who will miss class in order to observe a holy day must notify me **well in advance** and arrange to make up any work missed. This general policy applies to all religious holidays observed by students and is not restricted to those observances recognized as major holidays for our community.

ELECTRONICS:

Please silence all phones and plan to keep them put away throughout the duration of class. You are welcome to use your laptop or tablet during class to take notes or refer to online readings. However, as noted above, the success of this class is determined, in part, by your willingness to engage with the material and each other. Your use of your laptop or tablet should not come at the expense of your engagement with the class. At any point, I may ask that all electronic devices be completely put away.

ACADEMIC ACCOMODATIONS

Students with physical impairments and learning disabilities will sometimes need accommodations to help them have an equal opportunity to learn. These can include seating location preferences, permission to tape lectures, and extra time on tests and other assignments [at Centre, time-and-a-half is the norm]. Whatever accommodations are provided, if any, should be the result of a discussion between the student and the College's coordinator for disabilities, Mary Gulley (x5223), who will then prepare a signed Accommodation Notice (a laminated sheet) for the student to show professors when an accommodation is necessary. In any course, the instructor must sign the back of the Accommodation Notice before any accommodation can take effect. It is the student's responsibility to discuss any necessary accommodations with Dr. Gulley and to process completely the Accommodation Notice through her office as directed.

-Centre College

ACADEMIC INTEGRITY:

A high standard of academic honesty is expected of students in all phases of academic work and College life. Academic dishonesty in any form is a fundamental offense against the integrity of the entire academic community and is always a threat to the standards of the College and to the standing of every student. In taking tests and examinations, doing homework and laboratory work, and writing papers, students are expected to perform with honor. In any written exercise for College courses, students will be held responsible for knowing the difference between proper and improper use of source materials. The improper use of source materials is plagiarism, and, along with other breaches of academic integrity, is subject to disciplinary action.

If the instructor has a concern about a student's academic honesty, the Associate Dean must be notified. Students should consult the Student Handbook for a full description of breaches of academic integrity subject to disciplinary action.

-Centre College Student Handbook

STATEMENT OF INCLUSION:

All students are protected by law against any discrimination and harassment based on race, color, sex, marital status, religion, creed, national origin, disability, age, military status, sexual orientation, family relationship to an employee of Oberlin College, and gender identity and expression. The classroom should reflect an environment free of any type of discriminatory and exclusive behavior. Please refer to the [Office of Equity, Diversity, and Inclusion](#) for more relevant information.

CLASSROOM CIVILITY:

We pledge continuing efforts to build and strengthen a community enriched by our differences and founded upon our common humanity. Centre respects the right of all members of the community to express their individuality in a manner that is consistent with the dignity and welfare of others. Centre strives to create an environment where differences are celebrated rather than discouraged, where individuals have the opportunity to exchange ideas and share in the richness of mutual experience. By valuing the individual's total character over any single characteristic, Centre will maintain its unique community.

-Centre College Statement of Community

TITLE IX

Centre College is committed to a safe and healthy environment and, as such, will not tolerate sexual misconduct of any kind. In addition to violating school policy, any form of sexual misconduct is also a violation of federal and state laws. Sexual misconduct is a broad category of behaviors that includes but is not limited to sexual harassment, sexual violence, sexual exploitation, dating violence, domestic violence, stalking, cyber-stalking, bullying and cyber-

bullying when based on sex or gender. If you (or someone you know) has experienced or experiences sexual misconduct, you are not alone. It is not your fault. Centre College has resources to support you including help with housing relocation, the imposition of no contact orders, adjustments to course or work schedules to prevent contact, and filing a complaint with law enforcement as well as on- and off-campus confidential resources (including medical assistance and counseling services). Please be aware all Centre faculty members are "responsible employees," which means that, in the interest of your safety and wellbeing, if you tell me about a situation involving sexual misconduct, I must share that information with Kay Drake, our Title IX Coordinator. From there, you are in control of whether you would like to go forward with a formal complaint. What is most important is that you are safe and have access to resources.

Here are some resources available to you. Please note that not all of these resources are confidential (see Step 3 here): Title IX Coordinator Kay Drake (X5467); Sexual Assault Prevention and Education Specialist Sarah Cramer (X5519); Ampersand: 859-253-2511; Department of Public Safety: 859-236-4357 (24/7); CentreNet: "Sexual Misconduct Resources & Support" (You'll find a fuller list of resources and options here, including the SMART anonymous reporting tool.) Centre College Counselors can be accessed during the day by calling 859-238-5530 or emailing counseling@centre.edu. For access to the after-hours Centre Counselor, students should call 859-238-5740.

RECOMMENDED READINGS:

OVERVIEW

*Nunn, N. (2009). The importance of history for economic development. *Annu. Rev. Econ.*, 1(1), 65-92.

Nunn, N. (2020). The historical roots of economic development. *Science*, 367(6485).

Spolaore, E., & Wacziarg, R. (2013). How deep are the roots of economic development?. *Journal of economic literature*, 51(2), 325-69.

PERSISTENCE

*Two thousand years of history (history)
Could not be wiped away so easily.*

- Zion Train ("Uprising", 1980)

*Comin, D., Easterly, W., & Gong, E. (2010). Was the wealth of nations determined in 1000 BC?. *American Economic Journal: Macroeconomics*, 2(3), 65-97.

Maloney, W. F., & Valencia Caicedo, F. (2016). The persistence of (subnational) fortune. *The Economic Journal*, 126(598), 2363-2401.

Putterman, L., & Weil, D. N. (2010). Post-1500 population flows and the long-run determinants of economic growth and inequality. *The Quarterly journal of economics*, 125(4), 1627-1682.

Acemoglu, D., Johnson, S., & Robinson, J. A. (2002). Reversal of fortune: Geography and institutions in the making of the modern world income distribution. *The Quarterly journal of economics*, 117(4), 1231-1294.

Chanda, A., Cook, C. J., & Putterman, L. (2014). Persistence of fortune: Accounting for population movements, there was no post-Columbian reversal. *American Economic Journal: Macroeconomics*, 6(3), 1-28.

INSTITUTIONS

*I'm just a Buffalo Soldier in the heart of America
Stolen from Africa, brought to America
Said he was fighting on arrival, fighting for survival
Said he was a Buffalo Soldier win the war for America*

- Buffalo Soldier ("Confrontation", 1983)

*Iyer, L. (2010). Direct versus indirect colonial rule in India: Long-term consequences. *The Review of Economics and Statistics*, 92(4), 693-713.

*Dell, M. (2010). The persistent effects of Peru's mining mita. *Econometrica*, 78(6), 1863-1903.

Michalopoulos, S., & Papaioannou, E. (2013). Pre-colonial ethnic institutions and contemporary African development. *Econometrica*, 81(1), 113-152.

Nunn, N. (2008). The long-term effects of Africa's slave trades. *The Quarterly Journal of Economics*, 123(1), 139-176.

Acemoglu, D., Johnson, S., & Robinson, J. A. (2001). The colonial origins of comparative development: An empirical investigation. *American economic review*, 91(5), 1369-1401.

Albouy, D. Y. (2012). The colonial origins of comparative development: an empirical investigation: comment. *American Economic Review*, 102(6), 3059-76.

Glaeser, E. L., La Porta, R., Lopez-de-Silanes, F., & Shleifer, A. (2004). Do institutions cause growth?. *Journal of economic Growth*, 9(3), 271-303.

Rodrik, D., Subramanian, A., & Trebbi, F. (2004). Institutions rule: the primacy of institutions over geography and integration in economic development. *Journal of economic growth*, 9(2), 131-165.

Sachs, J. D. (2003). *Institutions don't rule: direct effects of geography on per capita income* (No. w9490). National Bureau of Economic Research.

GEOGRAPHY

'Cause just like a tree planted - planted by the rivers of water
That bringeth forth fruits - bringeth forth fruits in due season;
Everything in life got its purpose,
Find its reason in every season,
Forever, yeah!

- Forever loving Jah ("Uprising", 1980)

- *Alsan, M. (2015). The effect of the tsetse fly on African development. *American Economic Review*, 105(1), 382-410.
- *Bugge, J. C. (2020). Growing collectivism: Irrigation, group conformity and technological divergence. *Journal of Economic Growth*, 25, 147-193.
- Nunn, N., & Puga, D. (2012). Ruggedness: The blessing of bad geography in Africa. *Review of Economics and Statistics*, 94(1), 20-36.
- Alesina, A., Giuliano, P., & Nunn, N. (2013). On the origins of gender roles: Women and the plough. *The Quarterly Journal of Economics*, 128(2), 469-530.
- Galor, O., & Özak, Ö. (2016). The agricultural origins of time preference. *American Economic Review*, 106(10), 3064-3103.
- Vollrath, D. (2011). The agricultural basis of comparative development. *Journal of Economic Growth*, 16(4), 343-370.
- Andersen, T. B., Jensen, P. S., & Skovsgaard, C. V. (2016). The heavy plow and the agricultural revolution in Medieval Europe. *Journal of Development Economics*, 118, 133-149.
- Litina, A. (2016). Natural land productivity, cooperation and comparative development. *Journal of Economic Growth*, 21(4), 351-408.

CULTURE

(I heard her praying, praying, praying)
I said, I heard my mother,
She was praying (praying, praying, praying)
And the words that she said (the words that she said),
They still linger in my head (lingers in my head),
She said, "A child is born in this world,
He needs protection,
God, guide and protect us,
When we're wrong, please correct us.
(When we're wrong, correct us).
And stand by me." yeah!

- High tide or low tide ("Catch a fire", 1973¹)

- *Grosjean, P. (2014). A history of violence: The culture of honor and homicide in the US South. *Journal of the European Economic Association*, 12(5), 1285-1316.
- *Schulz, J. (2021). *Kin networks and institutional development*. Working Paper.
- Algan, Y., & Cahuc, P. (2010). Inherited trust and growth. *American Economic Review*, 100(5), 2060-92.
- Schulz, J., Bahrami-Rad, D., Beauchamp, J., & Henrich, J. (2018). The origins of weird psychology. Working Paper.
- Tabellini, G. (2010). Culture and institutions: economic development in the regions of Europe. *Journal of the European Economic Association*, 8(4), 677-716.
- Guiso, L., Sapienza, P., & Zingales, L. (2009). Cultural biases in economic exchange?. *The Quarterly Journal of Economics*, 124(3), 1095-1131.
- Alesina, A., & Giuliano, P. (2010). The power of the family. *Journal of Economic Growth*, 15(2), 93-125.
- Enke, B. (2018). Kinship systems, cooperation, and the evolution of culture. Working Paper 23499. National Bureau of Economic Research.

¹ The song was released in the 2001 remastered version of the album as a bonus track.

STATE FORMATION AND PERSISTENCE IN STATE CAPACITY

*Babylon system is the vampire,
Suckin' the children day by day
Me say: de babylon system is the vampire, falling empire,
Suckin' the blood of the sufferers
Building church and university
Deceiving the people continually
Me say them graduatin' thieves and murderers;
Look out now: they suckin' the blood of the sufferers*

- *Babylon system* ("Survival", 1979)

*Gennaioli, N., & Rainer, I. (2007). The modern impact of precolonial centralization in Africa. *Journal of Economic Growth*, 12(3), 185-234.

*Mayshar, J., Moavz, O., & Pascali, L. (2022). The Origin of the State: Land Productivity or Appropriability? *Journal of Political Economy*, forthcoming.

Besley, T., & persson, T. (2009). The origins of state capacity: property rights, taxation, and politics. *American economic review*, 99(4), 1218-44.

Alesina, A., & Spolaore, E. (1997). On the number and size of nations. *The Quarterly Journal of Economics*, 112(4), 1027-1056.

Campante, F. R., & Do, Q. A. (2014). Isolated capital cities, accountability, and corruption: evidence from us states. *American economic review*, 104(8), 2456-81.

* Papers marked with asterisks (*) are mandatory reading. Remaining papers are suggested for further references.

(TENTATIVE) COURSE OUTLINE:

Week	Day	Date	Topic	Paper	Assignments
1	Wed	2/2/2022	Class Introduction		
1	Fri	2/4/2022	Overview		
2	Mon	2/7/2022	Causality		
2	Wed	2/9/2022	Probability/RCT		
2	Fri	2/11/2022	Regression		
3	Mon	2/14/2022	Group discussion		Newspaper activity 1
3	Wed	2/16/2022	Research paper brainstorm		
3	Fri	2/18/2022	Paper discussion	Comin, Easterly, and Gong (2010)	
4	Mon	2/21/2022	R lab		
4	Wed	2/23/2022	Fixed Effects		
4	Fri	2/25/2022	Paper discussion	Alsan (2015)	
5	Mon	2/28/2022	R Lab		
5	Wed	3/2/2022	Instrumental Variables		
5	Fri	3/4/2022	Paper discussion	Buggle (2020)	
6	Mon	3/7/2022	Group discussion		Newspaper activity 2
6	Tues	3/8/2022	Comprehensive Exam		
6	Wed	3/9/2022	Research paper brainstorm		Project 1
6	Fri	3/11/2022	Paper discussion	Grosjean (2014)	
7	Mon	3/14/2022	R Lab		
7	Wed	3/16/2022	Differences-in-Differences		
7	Fri	3/18/2022	Paper discussion	Schulz (2021)	
8	Mon	3/21/2022	NO CLASS	Spring Break	
8	Wed	3/23/2022	NO CLASS	Spring Break	
8	Fri	3/25/2022	NO CLASS	Spring Break	
9	Mon	3/28/2022	Group discussion		Newspaper activity 3
9	Wed	3/30/2022	Research paper brainstorm		Project 2
9	Fri	4/1/2022	Paper discussion	Yier (2010)	
10	Mon	4/4/2022	R Lab		
10	Wed	4/6/2022	Regression Discontinuity		
10	Fri	4/8/2022	Paper discussion	Dell (2010)	
11	Mon	4/11/2022	R Lab		
11	Wed	4/13/2022	Matching		Project 3
11	Fri	4/15/2022	Paper discussion	Gennaioli & Rainer (2007)	
12	Mon	4/18/2022	Group discussion		Newspaper activity 4
12	Wed	4/20/2022	Research paper brainstorm		
12	Fri	4/22/2022	Paper discussion	Mayshar et al (2022)	
13	Mon	4/25/2022	Research Presentations		
13	Wed	4/27/2022	Research presentations		Project 4
13	Fri	4/29/2022	Research presentations		
14	Mon	5/2/2022	Research Presentations		
14	Wed	5/4/2022	Research Presentations		
14	Fri	5/6/2022	Flex day		
15	Mon	5/9/2022	Course conclusion		Newspaper activity 5

Research paper is due Friday, May 13