ECONOMICS 172: Case Studies in Economic Development
Issues in African Economic Development
SPRING 2023 SYLLABUS (16 January 2023)
Prof. Edward Miguel, Department of Economics (emiguel@berkeley.edu)

Description: This course focuses on the process of economic development and growth from both theoretical and empirical perspectives. The aim of the course is to provide an understanding of the patterns of socioeconomic development in a selected geographic region, in this semester Sub-Saharan Africa. The course covers trends in comparative global development, theories of economic growth, and the roles of public health, human capital, climate change, political institutions, and historical factors in shaping contemporary economic outcomes. Special emphasis is given to applying the econometric methods used to evaluate public policies and anti-poverty interventions.

Prerequisites: At least one prior term of intermediate economics (i.e., Economics 100A, Economics 100B, or equivalent). Some prior coursework in statistics or econometrics (i.e., Economics 140/141 or equivalent) is strongly recommended.

Enrollment: All enrollment questions should be sent to the Department of Economics Head GSI, Elena Ojeda, at headgsi@econ.berkeley.edu. Requests to be added to the bCourses page should be directed to the GSI's (Meghana and Michelle).

Course Logistics
Lectures: Tuesday and Thursday 2:00 to 3:30 pm PT in person in 50 Birge Hall. Screencast recordings of lectures will be available on the class bCourses site.

Teaching Assistants / Graduate Student Instructors (GSIs):
Meghana Kumar (meghanak1@berkeley.edu)
Section 101: Mondays 2-3pm, Hearst Gym 245
Section 102: Tuesdays 10-11am, Evans Hall 81
Section 104: Thursdays 9-10am, Evans Hall 4

Michelle Layvant (mlayvant@berkeley.edu)
Section 103: Wednesdays 3-4pm, Cheit Hall C335
Section 105: Thursdays 5-6pm, Evans Hall 75
Section 106: Fridays 9-10am, Social Sciences Building 174

The GSI's will attempt to respond promptly to all student inquiries and aim to always provide responses within three (3) business days.

Office hours: Please make an appointment for Prof. Miguel's office hours online at https://bit.ly/2QQeCAv. Michelle will hold office hours on Mondays from 12-2pm in Giannini Hall 203. Meghana will hold office hours Thursdays from 4-6pm in Evans 542.

Course Grading

Grading: The course grade will be based on four components:
(1) Three individual take-home assignments, each worth 10 percent (30 percent):
-- Problem Set 1 handed out 2/14, due 2/21
-- Problem Set 2 handed out 2/28, due 3/7
-- Problem Set 3 handed out 4/13, due 4/20

The problem sets are designed to teach students how to apply econometric methods using real data. They require the use of an open-source statistical software called R, which is commonly used in economics. We recommend that students access RStudio to write and run R code using a Berkeley cloud computing environment called DataHub to complete their assignments. Using RStudio via DataHub will allow students to work on their assignment from any web browser and will provide ready access to all R packages necessary to complete the assignments. Solutions to the assignments will also be distributed through DataHub. The GSIs, Meghana and Michelle, will provide more details on how to access RStudio using the cloud computing environment in the first few discussion sections. As an alternative, students may choose to install R and RStudio on their computer. Students choosing to do so can download or update to the latest version of R and RStudio (https://www.r-project.org and https://www.rstudio.com/products/rstudio/download/), and may need to install additional packages to complete the assignments. The GSI's will help students gain familiarity with R in section. They will also introduce the dynamic document format RMarkdown (available within RStudio), which allows students to combine the narrative components of the assignment with their statistical code and its output into one document, to be submitted as a PDF. Solutions will also be in this format.

(2) Midterm examination (27 percent)
-- The exam will take place on Tuesday March 14th (during the class period, 2:10 to 3:30pm PT) and cover Lectures 1 to 15.

(3) Final Examination (40 percent)
-- The final will take place on Monday May 8th from 11:30am to 2:30pm PT (location TBD). It will be cumulative, covering Lectures 1 to 27.

(4) Class participation and attendance (3 percent)
-- The quality of remarks, questions and involvement in lecture, attendance in lecture (assessed in student polls via iClicker), and participation in section will each contribute 1 point to the final grade up to a total of 3 points. I will use iClickers for polling the class and to assign class attendance credit. I will consider only whether a student responded using the clicker, not right or wrong answers. For each student, the three class meetings with the lowest clicker "score" will be dropped. iClicker use is required starting Thursday January 26. (Section attendance will not be evaluated with clickers but is highly encouraged.) Here is more information to help students get started with iClicker Cloud.

Late assignments: Problem sets turned in late will lose 3 points during the first 24 hours after the assignment is due, and 1 additional point for each subsequent 24 hours. Problem sets submitted after solutions are distributed will receive zero points.

Grading policy: Grading disputes must be sent to your GSI (via Gradescope) within one week from the date the graded problem set or exam was returned to the class. Please be specific in describing why you think there was a grading error, and why you believe you deserve significantly more points. Once they do re-grade a problem set or exam, the GSI's may choose to re-grade the entire assignment (not just the problem in question), which of course may result in a higher or lower overall score.

Course Polices
Berkeley Honor Code: The student community at U.C. Berkeley has adopted the following Honor Code: *"As a member of the U.C. Berkeley community, I act with honesty, integrity, and respect for others."* The hope and expectation is that all students and course instructors will adhere to this code at all times.

Academic Honesty Policy: Cheating will be harshly punished. Any evidence of cheating will result in a score of zero (0) on that assignment. Cheating on the midterm or the final exam results in an "F" for the course. Cheating includes, but is not limited, to bringing written or electronic materials into an exam, using written or electronic materials during an exam, copying off another person's exam or assignment, allowing someone to copy off of your exam or assignment, communicating with other students during an exam, having someone take an exam or complete an assignment for you, changing an exam answer after an exam is graded, and plagiarizing written or other materials. Incidences of cheating are reported to Center for Student Conduct, which administers additional punishment; see also http://sa.berkeley.edu/conduct/students/standards.

Fire Alarm Policy: Pulling of fire alarms under false pretenses is a crime, punishable by a fine and jail time. In addition, anyone caught pulling the alarm during a lecture or exam for this course is subject to expulsion from the University, and will fail this course.

Special Accommodations: If you require disability-related accommodations for exams or lecture or if you have emergency medical information that you wish to share, please email or speak with your GSI as soon as possible. At least two (2) weeks before an exam, you must also obtain a Letter of Accommodation (LOA) from Disabled Students' Program (http://dsp.berkeley.edu, 260 César Chávez Center) which they send electronically to me and the GSI's. DSP's Proctoring Service requires notice of participants at least two weeks in advance of an exam. Accommodations are not offered retroactively.

Use of Electronic Devices: Electronic devices can be used in this course. Some students may find them useful for note-taking or other purposes during lecture or section. However, you should be aware of growing research evidence that average learning outcomes are significantly better in courses that ban electronic devices from lecture; your device use may also unfortunately distract those sitting near you. As an adult, please make an informed decision about your own personal electronic device use during lecture and section.

Limits to Confidentiality: As University of California employees, all course instructors are Responsible Employees and we are required to report incidents of sexual violence, harassment or other conduct prohibited by university policy to the Title IX officer. We

cannot keep reports confidential, but the Title IX officer will consider requests for confidentiality. There are confidential resources available, including the CARE Advocate Office (http://sa.berkeley.edu/dean/confidential-care-advocate).

Course Readings
Required readings: All syllabus readings are posted on the bCourses page, other than those from the required books (below).

Required books: Students should obtain the following three books, all of which are available in paperback:
Angrist, Joshua, and Jorn-Steffen Pischke. (2015). *Mastering 'Metrics: The Path from Cause to Effect.* Princeton University Press.

Fisman, Raymond and Edward Miguel (2008) *Economic Gangsters: Corruption, Violence and the Poverty of Nations.* Princeton University Press.

Miguel, Edward (2009) *Africa's Turn?* MIT Press.

*Optional materials:
A free online source containing a detailed discussion of African history and societies:
Grosz-Ngate, Maria, John H. Hanson, and Patrick O'Meara. (2014). *Africa, Fourth Edition.* Bloomington: University of Indiana Press, http://muse.jhu.edu/book/29099.

A free online textbook of African economic history:
Frankema, E., Hillbom, E., Kufakurinani, U., Meier zu Selhausen, F., eds. (2018). *The History of African Development. An Online Textbook for a New Generation of African Students and Teachers.* African Economic History Network, https://www.aehnetwork.org/textbook/.

A textbook on the political economy of contemporary African development:
Christensen, Darin, and David D. Laitin. (2019). *African States since Independence: Order, Development, and Democracy*, Yale University Press, https://african-states-book.info/.

The Afrobarometer project contains data and reports on African economies, politics and society: see https://www.afrobarometer.org/ and https://www.afrobarometer.org/pan-africa-profiles.

A good resource on African political economy is the Ufahamu Africa podcast, which is hosted out of U.C. Riverside: https://www.ufahamuafrica.com/.

A free online reference for basic econometrics using R:
Hanck, Christoph, Martin Arnold, Alexander Gerber and Martin Schmelzer. (2018). *Introduction to Econometrics with R*, https://www.econometrics-with-r.org/.

Lectures 1-2: Patterns of global and African economic development (1/17, 1/19)
Africa's Turn? pp. 1-46.

Economic Gangsters, Chapter 1, pp. 1-21.

United Nations Development Program (UNDP). (2022). *Human Development Report 2021-2022*, Tables 1-5, pp. 272-295.

Lectures 3-4: Theories of economic growth (1/24, 1/26)
[Tools: Economic growth theory; Ordinary least squares (OLS) regression]
Taylor, J. Edward, and Travis J. Lybbert. (2020). "Chapter 7: Growth" in *Essentials of Development Economics, Third Edition*, pp. 145-168.

Mastering 'Metrics, Chapter 2, pp. 47-97.

Lectures 5-9: Geography, tropical disease & development (1/31, 2/2, 2/7, 2/9, 2/14)
[Tools: Randomized controlled trials (RCT); externalities]
Bloom, David, and Jeffrey Sachs. (1998). "Geography, Demography, and Economic Growth in Africa," *Brookings Papers on Economic Activity*, 2, 207-295.

Economic Gangsters, chapter 8, pp. 186-206.

Mastering 'Metrics, Chapter 1, pp. 1-46.

* Optional for those who want a more technical discussion:
Miguel, Edward, and Michael Kremer. (2004). "Worms: Identifying Impacts on Education and Health in the Presence of Treatment Externalities", *Econometrica*, 72(1), 159-217.

* Optional for those who want to learn more about RCT's in development economics:
Nobel Committee. (2019). "Scientific Background on the Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel 2019: Understanding Development and Poverty Alleviation", pp. 1-41.

Lectures 10-12: Access to healthcare and epidemics (2/16, 2/21, 2/23)
[Tools: Difference-in-differences (DD) analysis; expected utility maximization]
UNAIDS. (2022) *UNAIDS Global AIDS Update 2022*, pp. 1-25, 258-281.

Mastering 'Metrics, Chapter 5, pp. 178-208.

Okeke, Edward. (2022). "When a Doctor Falls from the Sky: The Impact of Easing Doctor Supply Constraints on Mortality", forthcoming *American Economic Review*.

Lectures 13-15: Investing in human capital (2/28, 3/2, 3/7)
[Tools: Regression discontinuity (RD)]

Kremer, Michael, Edward Miguel, and Rebecca Thornton. (2009). "Incentives to Learn: Merit Scholarships that Pay Kids to Do Well", *Review of Economics and Statistics*, 91(3), 437-456.

Lucas, Adrienne, and Isaac Mbiti. (2014). "Effects of School Quality on Student Achievement: Discontinuity Evidence from Kenya", *American Economic Journal: Applied Economics*, 6(3), 234-263.

Mastering 'Metrics, Chapter 4, pp. 147-177.

* Optional for those who want a more detailed discussion:
Friedman, Willa, Michael Kremer, Edward Miguel, and Rebecca Thornton. (2015). "Education as Liberation?", *Economica*, 83(329), 1-30.

Nyerere, Julius. (1974), "Chapter 13: Education for Liberation", pp. 121-132 in *Nyerere on Education: Selected Essays and Speeches, 1954-1998*, eds. Elieshi Lema, Marjorie Mbilinyi, and Rakesh Rajani. HakiElimu: Dar es Salaam (2004).

Lectures 16-18: Climate and economic shocks in rural households (3/9, 3/16, 3/21; Midterm during class meeting on 3/14)
[Tools: Field data collection; Instrumental variables (IV); spatial data]
Economic Gangsters, chapters 5-6, pp. 111-158.

Mastering 'Metrics, Chapter 3, pp. 98-146.

* Optional for those who want a more technical discussion:
Miguel, Edward, Shanker Satyanath, & Ernest Sergenti. (2004). "Economic Shocks and Civil Conflict: An Instrumental Variables Approach", *Journal of Political Economy*, 112, 725-753.

* Optional content: 2014 TED talk on climate, conflict & economic development ([here](#)).

Lectures 19-21: Corruption & public goods (3/23, 4/4, 4/6; Spring Break 3/28, 3/30)
[Tools: Forensic data techniques]
Economic Gangsters, chapter 4, pp. 76-110.

Isaksson, Ann-Sofie, and Andreas Kotsadam. (2018). "Chinese aid and local corruption", *Journal of Public Economics*, 159, 146-159.

Miguel, Edward. (2004). "Tribe or Nation? Nation-building and Public Goods in Kenya versus Tanzania", *World Politics*, 56(3), 327-362.

* Optional for those who want a more detailed discussion:
Depetris-Chauvin, Emilio, Ruben Durante, & Filipe Campante. (2020). "Building Nations through Shared Experiences: Evidence from African Football," *American Economic Review*, 110(5), 1572-1602.

* Optional content: The 2019 film "The Boy who Harnessed the Wind" is a dramatic telling of the true story of a Malawi teenager who tries to save his family from drought and famine.

Lectures 22-24: Historical legacies of slavery & colonialism (4/11, 4/13, 4/18)
[Tools: Assembling historical data]
Nunn, Nathan. (2010). "Shackled to the Past: The Causes and Consequences of Africa's Slave Trade", in Jared Diamond and James A. Robinson (eds.) *Natural Experiments of History*, Cambridge University Press, pp. 142-184.

Lowes, Sara, and Eduardo Montero. (2021). "Mistrust in Medicine: The Legacy of Colonial Medical Campaigns in Central Africa", *American Economic Review*, 111(4): 1284-1314.

* Optional for those who want a more detailed discussion:
Asante, Kofi Takyi. (2018). "Chapter 11: National Movements in Colonial Africa", in Frankema, E., et al. eds. (2018). *The History of African Development. An Online Textbook for a New Generation of African Students and Teachers*. African Economic History Network.

* Optional content: BBC The Comb podcast episode "The Promise" (2023): a granddaughter's journey to fulfil her grandfather's wish, to return the sacred *Ngonsso* statue to her people in Cameroon over a century after its theft by German imperialists.

Lectures 25-27: Current successes & future challenges (4/20, 4/25, 4/27)
[Tools: Pre-analysis plans]
Acemoglu, Daron, Simon Johnson, and James Robinson. (2003). "Chapter 4: An African Success Story: Botswana," in *In Search of Prosperity: Analytic Narratives on Economic Growth*, pp, 80-119.
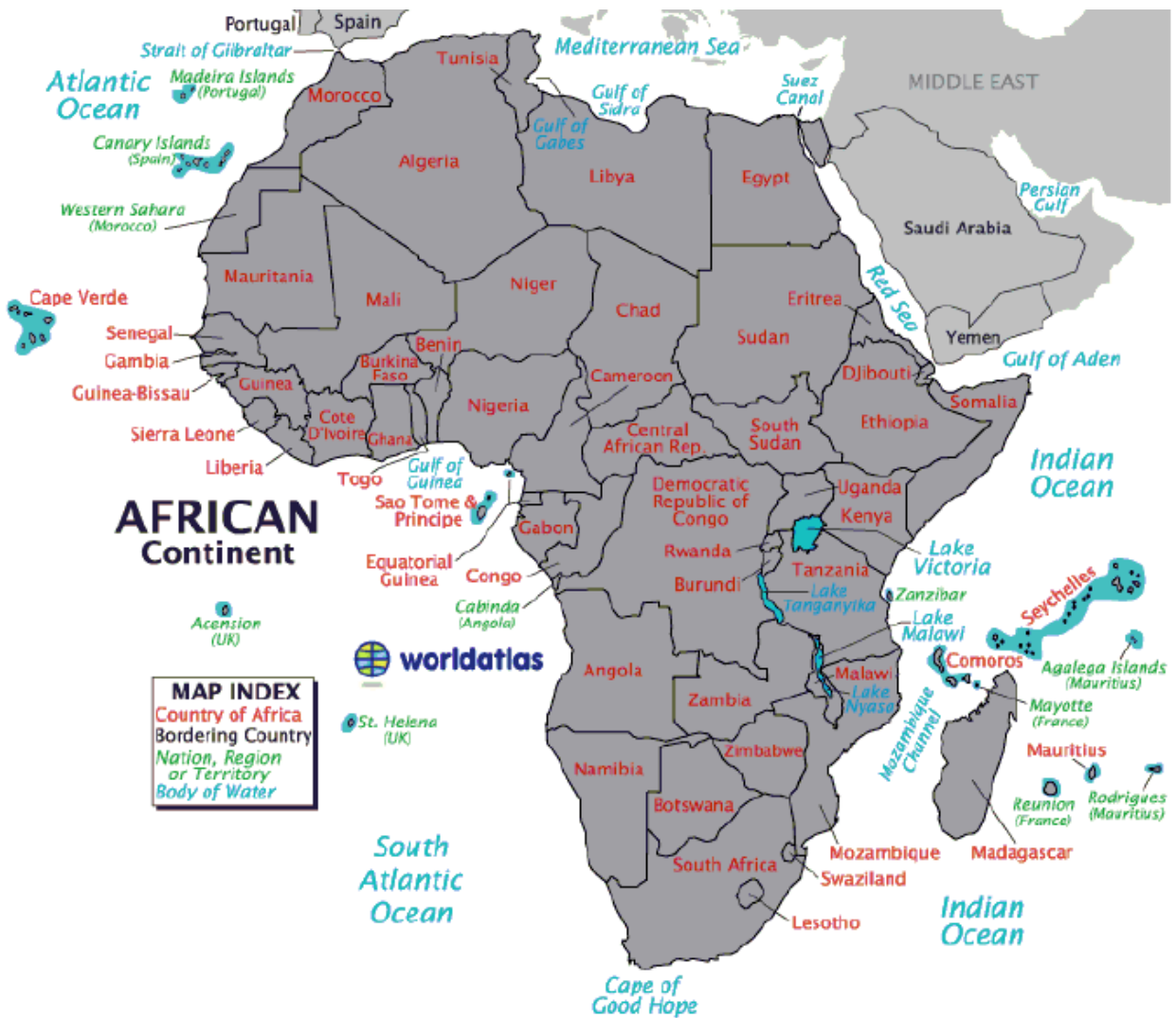
Lee, Kenneth, Edward Miguel, and Catherine Wolfram. (2020). "Experimental Evidence on the Economics of Rural Electrification", *Journal of Political Economy*, 128(4): 1523-1565.

Archibong, Belinda, Brahima Coulibaly, and Ngozi Okonjo-Iweala. (2021). "Washington Consensus Reforms and Lessons for Economic Performance in Sub-Saharan Africa", *Journal of Economic Perspectives*, 35(3): 133-156.

Silva, Claudio. (2022). "Angola (Re)model: How Angola's honeymoon with China came to an end", *The Africa Report*, 10 May 2022.

Africa's Turn?, pp. 49-137

*Optional content: The 2016 film "A United Kingdom" is a popularized telling of the struggle for Botswanan independence.

Map of Africa, today