ECONOMICS 172: Case Studies in Economic Development
FALL 2019 SYLLABUS

Issues in African Economic Development
Prof. Edward Miguel, Department of Economics (emiguel@berkeley.edu)

Description: This course will examine leading issues in development economics, with a focus on Sub-Saharan Africa. This course will also explore the empirical methods used to rigorously assess the impact of international development and anti-poverty programs.

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

Course Logistics
Lectures: Tuesday 2:00 to 5:00 pm, Kroeber 160. Each lecture will be split into two parts: a slot from 2:10-3:30pm, followed by a 10 minute break, and a second slot from 3:40-5pm.

Lectures will also be "webcast" by Berkeley Educational Technology Services and archived for future viewing online. Webcasting means that the presentation slides and lecturer audio are recorded. Lecture webcasts will be posted online with a three day delay. They will be posted to CalCentral on the Class Page for ECON 172, LEC 001; all students and GSIs will have access to this page via the My Academics tab. Recordings will also be available using the Webcasts tool in the class bCourses site.

Teaching Assistants / Graduate Student Instructors (GSIs):
Madeline Duhon (mduhon@berkeley.edu)
Section 103: Tuesdays 5-6pm, Wheeler 106
Section 101: Wednesdays 3-4pm, Dwinelle 105
Section 102: Wednesdays 4-5pm, Dwinelle 205

Dennis Egger (dennistegger@berkeley.edu)
Section 106: Thursdays 9-10am, Dwinelle 79
Section 104: Thursdays 4-5pm, Barrows 104
Section 105: Thursdays 5-6pm, Barrows 175

Office hours: Prof. Miguel's Office hours are typically held on Mondays and Fridays. Please make an appointment online at https://bit.ly/2QQeCAv.

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

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 9/24, due 10/1
-- Problem Set 2 handed out 10/15, due 10/22
-- Problem Set 3 handed out 11/19, due 11/26

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 cloud computing environment called JupyterHub to complete their assignments. Using RStudio via JupyterHub 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 JupyterHub. The GSIs, Dennis and Madeline, will provide more details on how to access RStudio using the cloud computing environment in the first discussion section. 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 R Markdown (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 (25 percent)
-- The exam will take place on Tuesday October 29th (during the first half of the class period, 2:10 to 3:30pm) and will cover Lectures 1 to 15.

(3) Final Examination (40 percent)
-- The final will take place on Tuesday Dec 17th from 8:00 to 11:00 am. It will be cumulative, covering Lectures 1 to 27.

(4) Class participation and attendance (5 percent)
-- The quality of remarks, questions and involvement in both lecture and section will contribute 2.5 percent to the final grade.
-- Lecture attendance and participation will also be evaluated using "clickers", and will contribute a further 2.5 percent. Every student is expected to obtain an "iClicker" from the Cal Bookstore (https://www.ets.berkeley.edu/services-facilities/clickers). Students should bring their clicker to each lecture, and I will use them 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 two class meetings with the lowest clicker "score" will be dropped. Clicker use is required starting September 17. Attendance in each of the 10 class meetings where a student has her/his highest clicker score will

contribute 0.25 percent to the final grade, up to a maximum of 2.5 percent. (Section attendance will not be evaluated with clickers but is highly encouraged.)

Late assignments: Problem sets turned in late will lose 2 points during the first 24 hours after the assignment is due, and 1 additional point for each subsequent 24 hours. Problems sets submitted after solutions are posted will receive zero points.

Grading policy: Grading disputes must be put in writing and given to the GSI in section 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 Readings
Required readings: All syllabus readings are on the bCourses page, other than those from the required books (below). Reading packets of photocopied articles can also be picked up at Copy Central on Bancroft Ave.

Required books: Students should purchase the following books, all of which are 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 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/.

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://darinchristensen.com/publication/yup-book/.

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, having someone take an exam or 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. If the alarm is pulled during an exam, the class will move outside and finish the exam in the allotted time; in this event, follow the instructions of the GSIs.

Special Accommodations: If you require disability-related accommodations for exams or lecture, if you have emergency medical information that you wish to share, or if you need special arrangements in case the building must be evacuated, 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.

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).

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 that there is growing research evidence indicating 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. Please make an informed decision about your own personal electronic device use during lecture and section.

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COURSE SYLLABUS

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Lectures 1-2: Patterns of Global and African economic development (9/3)
Africa's Turn? pp. 1-46.

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

United Nations Development Program (UNDP). (2018). *Human Development Indices and Indicators: 2018 Statistical Update*, Tables 1 and 7-9, pp. 22-25 and 46-57.

Lectures 3-4: Theories of economic growth (9/10)
Guest lectures by Madeline Duhon and Dennis Egger
[Tools: Economic growth theory; Ordinary least squares (OLS) regression]
Roland, Gerard. (2014). "Chapter 4: Economic Growth" in *Development Economics*, pp. 82-112.

Easterly, William (2001). "Chapter 3: Solow's Surprise: Investment is Not the Key to Growth" in *The Elusive Quest for Growth: Economists' Adventures and Misadventures in the Tropics*, pp. 47-69.

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

Lectures 5-9: Geography, health and development (9/17, 9/24, 10/1)
[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.

Lectures 10-12: The economics of HIV/AIDS (10/1, 10/8)
[Tools: Difference-in-differences (DD) analysis; expected utility maximization]
UNAIDS. (2018). *UNAIDS Data 2018*, pp. 4-29 and 68-75.

Fox, Matthew P., Sydney Rosen, William B. MacLeod, Monique Wasunna, Margaret Bii, Ginamarie Foglia, and Jonathan L. Simon. (2004). "The Impact of HIV/AIDS on Labour Productivity in Kenya", *Tropical Medicine and International Health*, 9(3), 318-324.

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

Lectures 13-15: Investing in human capital (10/15, 10/22)
[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 16-19: Climate and economic shocks in rural households (10/22, 10/29, 11/5; Midterm during first half of class meeting on 10/29, Guest lecture by Susanna Berkouwer during second half of 10/29 class meeting)
[Tools: Field data collection; Instrumental variables (IV); spatial data]
Economic Gangsters, chapters 5-6, pp. 111-158.

Berkouwer, Susanna. (2019). "Credit, psychology, and the adoption of profitable energy efficient technologies in Kenya", unpublished working paper, U.C. Berkeley.

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

* Optional for those who want a more technical discussion:
Miguel, Edward, Shanker Satyanath, and Ernest Sergenti. (2004). "Economic Shocks and Civil Conflict: An Instrumental Variables Approach", *Journal of Political Economy*, 112(4), 725-753.

Lectures 20-22: Corruption and public goods (11/12, 11/19)
[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.

Lectures 23-25: Historical Legacies of Slavery and Colonialism (11/19, 11/26)
[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. (2018). "Mistrust in Medicine: The Legacy of Colonial Medical Campaigns in Central Africa", unpublished working paper.

Bates, Robert. (1981). *Markets and States in Tropical Africa*, Chapters 1-2, pp. 1-44.

* Optional for those who want a more detailed discussion:
Asante, Kofi Takyi. (2018). "Chapter 11: National Movements in Colonial Africa", in 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.

Lectures 26-27: Current Successes and Future Challenges (12/3)
[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. (2019). "Experimental Evidence on the Economics of Rural Electrification", forthcoming *Journal of Political Economy*.

Mbate, Michael. (2015). "Can Africa Diversity its Exports? Lessons from Ethiopia", *Development*, 58(4), 614-619.

Africa's Turn?, pp. 49-137

Map of Africa, today