

DUKE UNIVERSITY
DEPARTMENT OF ECONOMICS

The Economics of Global Health (ECON 335)
Fall 2015

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Office Hours: Social Sciences Building 319, Mon 1:30-3:00pm and by appointment
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Office Hours: Social Sciences Building 301AD, Friday 3-5pm
Class Time: WF, 1.25p-2.40p in Social Psychology 126
Recitation: (Tentatively) Wed 5-7pm

Overview:

This is an advanced course in applied economics that examines health issues in developing countries from the standpoint of economics, with a focus on applied microeconomic research and econometric methods. Specific topics include: identifying the effect of health on growth and development and the reciprocal relationships between income, poverty, and health. We will discuss structural problems in delivery and provider quality, the challenges of healthcare financing, and the adoption of preventive health care behaviors. Attention will also be given to the issues of global health policy and the promise of foreign-aid, which are at the heart of debates about healthcare in developing countries. We will examine the empirical evidence in support of interventions affecting health including the success and failure of interventions that target infant mortality; diarrhea, worms; AIDS; and malaria. Students in the course are required to complete a 12-16 page empirical research paper.

Prerequisites:

The undergraduate course will have the following prerequisites: Econ 201 (Intermediate Micro I) or PPS 303 (the public policy version of Intermediate Micro), Econ 208 (Econometrics) or PPS 604 (a public policy quantitative M course). Doctoral or masters students, or undergraduates without this background can enroll only by permission of the instructor. We will assume fluency with intermediate economic theory and econometrics—including consumer theory, income and substitution effects, producer theory, experimental design, instrumental variables, and difference-in-differences estimation. We will review some of these concepts in class, but this review will not provide sufficient background for someone who has never seen this material before. Graduate or undergraduate students who would like to review this material will have the opportunity to attend 1-3 recitation sessions (depending on student demand) led by the TA at the beginning of the course that will focus on the essential econometrics tools.

Requirements:

For each class, students will be assigned 1-2 articles from academic journals, which we will discuss in detail in class. In addition, there are two books for this class: (1) *Making Aid Work*, by Abhijit Banerjee, and (2) *Strong Medicine* by Rachel Glennerster and Michael Kremer. For each class, bring copies of the assigned readings to class and expect to participate in a

discussion. All readings except for books will be available on the course web site. Students will be expected to complete each assigned reading *prior to class* and contribute to class discussions. To facilitate preparation and discussion, a general reading guide is posted on the class web site. Students are encouraged to jot down answers to the reading guide questions and bring these with them to class.

Grades will be based on a midterm examination, a 14-16 page empirical paper in lieu of a final exam, and 4 written assignments (problem sets). Instructions and due dates for all written assignments are posted on the course web site. Every student must turn in a copy of each assignment by the start of class on the assigned due date. If a student must be absent from class for a legitimate reason, problem sets must be turned in to the TA's mailbox by 1:00PM on the due date. No late assignments will be accepted and students may not miss more than two classes without a medical waiver.

Evaluation:

Six problem sets: 40%
Midterm exam: 25%
Final research paper: 10%
Rough draft of final research paper: 20%
Class participation: 5%.

Deadlines:

Midterm: October 23
Research paper draft due date: December 2 (bring copy to class, and also email copy to professor and TA by 5:00pm, comments will be returned by December 5)
Final paper due date: December 12 (email to professor and TA by 5:00pm)
Problem sets are due at the start of class on September 11, September 23, October 9, November 6, November 20, and December 4.

Guidelines for written assignments:

Research paper

Students will be required to complete an empirical research paper, due at the end of the semester. The paper should be 12-16 double-spaced pages, excluding tables. Specific content guidelines will be posted on the course website. The topic of the paper must relate to the course materials and utilize micro-data on health outcomes or inputs from a developing country. Juniors considering senior thesis topics are encouraged to use this as an exploratory assignment for a potential thesis topic. A description of the research question and setting will be due as part of PS3 on October 9. Appropriate areas of investigation and strategies for selecting a topic will be covered in section early in the semester. In addition, students should schedule individual appointments with the TA and/or instructor before finalizing paper topics.

Various components of the paper will be due throughout the semester as part of the regular written assignments, including motivation and background, data description, and empirical strategy. These assignments should be used to develop actual sections of the paper in order to receive early feedback from the instructor and TA. On December 2, students are required to hand in a draft of their research paper in class. Drafts should contain all of the components of a

completed paper and be proofread. At the end of class, each draft will be randomly assigned to another student in the class, who will then critique the paper according to the usual criteria and return the “referee report” to the author on the last day of class. Authors will then have a chance to revise their papers to address the critic’s concerns and add a concluding section (described in content guidelines) before handing in a final version on December 12. Referee reports will be graded as standard weekly assignments, and paper grades will be based on the content of both the draft and the final paper.

Problem Sets

Students will be asked to five written assignments during the semester. The assignments have three goals: (1) to familiarize you with data analysis and concepts from class; (2) to help you think through reading assignments; and (3) to keep you on track with respect to your term paper. As such, two of these assignments will be standard problems sets that explore empirical and theoretical topics covered in class. These problem sets will assume familiarity with intermediate econometrics and basic economic theory, and will involve empirical exercises using STATA software. Although basic concepts will be reviewed throughout, students who do not feel comfortable at with technical discussions of basic empirical methods are discouraged from taking the class. Students may work in groups, but answers should be written up individually with sufficient indication of individual input. In addition, problem sets will involve critiquing journal articles on the syllabus. These assignments will help you start to think carefully about research ideas, and also ensure that everyone is well prepared for class discussions. Finally, three of the written assignments will involve turning in different components of the term paper that is due at the end of the semester to ensure that everyone stays on track.

Class Participation

During each class we will discuss one article in detail. Students are expected to attend class regularly and come to lectures having read that article and prepared for discussion. In borderline cases, attendance and the quality of classroom comments may be a factor in assigning grades. To help with readings, a reading guide is posted on the course website. It is recommended that students jot down answers to the reading guide questions before class.

Calendar:

	Health and the Link to Development
<p>August 26</p> <p><i>Course overview/ Introduction</i></p>	<ul style="list-style-type: none"> Daron Acemoglu & Simon Johnson, 2007. "Disease and Development: The Effect of Life Expectancy on Economic Growth." <i>Journal of Political Economy</i>, 115(6): 925-985. http://www.jstor.org/stable/10.1086/529000 Preston, Samuel (1975). "The changing relationship between mortality and level of economic development." <i>Population Studies</i>, 29(2): 231-48. http://www.jstor.org/stable/2173509
	Returns to Health
<p>August 28</p> <p><i>Labor market returns to health</i></p>	<ul style="list-style-type: none"> Thomas, Duncan, et al. (2006). "Causal effect of health on labor market outcomes: Experimental evidence." unpublished manuscript, UCLA. http://www.escholarship.org/uc/item/0g28k77w
<p>September 2</p> <p><i>Effect of Health on Cognition</i></p>	<ul style="list-style-type: none"> Field, Erica, Omar Robles and Maximo Torero (2009). "Iodine deficiency and schooling attainment in Tanzania." <i>American Economic Journal: Applied Economics</i>, 1(4): 140-169. http://www.jstor.org/stable/25760185
<p>September 4</p> <p><i>Effect of Health on Schooling</i></p>	<ul style="list-style-type: none"> Kremer, Michael, and Edward Miguel (2004). "Worms: Identifying Impacts on Education and Health in the Presence of Treatment Externalities." <i>Econometrica</i>, 72(1): 159–217. http://www.jstor.org/stable/3598853
<p>September 9</p> <p><i>Life expectancy and schooling investment</i></p>	<ul style="list-style-type: none"> Jayachandran, Seema and Adriana Lleras-Muney (2009). "Life Expectancy and Human Capital Investments: Evidence from Maternal Mortality Declines." <i>Quarterly Journal of Economics</i>, 124(1) 349-397. http://qje.oxfordjournals.org/content/124/1/349.abstract
<p>September 11</p> <p>[PS 1 Due in Class]</p> <p><i>Do Health Shocks Lead to Poverty Traps?</i></p>	<ul style="list-style-type: none"> Almond, Douglas (2006). "Is the 1918 Flu Pandemic Over? Long-Term Effects of In Utero Influenza Exposure in the Post-1940 U.S. Population." <i>Journal of Political Economy</i>, v114: 672-712. http://www.jstor.org/stable/10.1086/511759
	Demand for Health
<p>September 16</p>	<ul style="list-style-type: none"> Case, Anne (2004). "Does money protect health status? Evidence from

<p><i>Is health a 'normal good'?</i></p>	<p>South African pensions.” Wise (ed.) <i>Frontiers in Aging</i>, University of Chicago. NBER Working Paper 8495. http://www.nber.org/chapters/c10346.pdf</p>
<p>September 18</p> <p><i>Intra-household inequality and health outcomes</i></p>	<ul style="list-style-type: none"> • Esther Duflo (2003). “Grandmothers and Granddaughters: Old-Age Pensions and Intrahousehold Allocation in South Africa.” <i>World Bank Economic Review</i>, 17(1): 1-25. http://wber.oxfordjournals.org/content/17/1/1.abstract
<p>Monday, September 21</p> <p>[MAKE-UP CLASS]</p> <p><i>Gender discrimination</i></p>	<ul style="list-style-type: none"> • Qian, Nancy. “Missing Women and the Price of Tea in China: The Effect of Sex-Specific Earnings on Sex Imbalance.” <i>Quarterly Journal of Economics</i>, 123(3): 1251-1285. http://qje.oxfordjournals.org/content/123/3/1251.abstract
<p>September 23</p> <p><i>Asymmetric information within the household and health behavior</i></p> <p>[PS 2 Due in Class]</p>	<p>Ashraf, Nava, Erica Field and Jean Lee (2010). “Household Bargaining and Excess Fertility: An Experimental Study in Zambia.” <i>American Economic Review</i>, 104(7): 2210-37. http://people.hbs.edu/nashraf/Excess_Fertility.pdf</p>
<p>September 30</p> <p><i>Maternal education and child health</i></p>	<ul style="list-style-type: none"> • Wolfe BL and JR Behrman (1987). “Women's schooling and children's health: Are the effects robust with adult sibling control for the women's childhood background?” <i>Journal of Health Economics</i>, 6(3):239-54. http://www.sciencedirect.com/science/article/pii/0167629687900117 • Gakidou, Emmanuela, Krycia Cowling, Rafael Lozano, Christopher Murray (2010). “Increased educational attainment and its effect on child mortality in 175 countries between 1970 and 2009: A systematic analysis.” <i>The Lancet</i>, 376(9745): 959–974. http://www.sciencedirect.com/science/article/pii/S0140673610612573
<p>October 2</p> <p><i>Health information & peer effects</i></p>	<ul style="list-style-type: none"> • Kremer, Michael and Edward Miguel (2007). “The Illusion of Sustainability.” <i>Quarterly Journal of Economics</i>, 122(3): 1007-1065. http://qje.oxfordjournals.org/content/122/3/1007.abstract

<p>October 7</p> <p><i>Spillovers: Case of Bednets in India</i></p>	<ul style="list-style-type: none"> Tarozzi, Alessandro, Aprajit Mahajan, Brian Blackburn, Dan Kopf, Lakshmi Krishnan, and Joanne Yoong, “Micro-loans, bednets and malaria: Evidence from a randomized controlled trial in Orissa (India).” <i>American Economic Review</i> 104(7), 1909-1941. http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1881075 Lengeler C (2004). “Insecticide-treated bed nets and curtains for preventing malaria.” Cochrane Database of Systematic Reviews 2004. http://onlinelibrary.wiley.com/doi/10.1002/14651858.CD000363.pub2/pdf/standa rd
<p>October 9</p> <p><i>Effect of information on health behavior</i></p> <p>[PS 3 Due in Class]</p>	<ul style="list-style-type: none"> Dupas, Pascaline (2011). “Do Teenagers Respond to HIV Risk Information? Evidence from a Field Experiment in Kenya.” <i>American Economic Journal: Applied Economics</i>, 3(1): 1-34. http://pubs.aeaweb.org/doi/pdfplus/10.1257/app.3.1.1
<p>October 14</p> <p><i>Psychological influences on demand</i></p>	<ul style="list-style-type: none"> Thornton, Rebecca (2008). “The Demand for, and Impact of, Learning HIV Status.” <i>American Economic Review</i>, 98(5): 1829–1863. http://www.jstor.org/stable/29730154
<p>October 16</p> <p><i>Should we charge money for health goods?</i></p>	<ul style="list-style-type: none"> Ashraf, Nava, James Berry and Jesse Shapiro (2010). “Can Higher Prices Stimulate Product Use? Evidence from a Field Experiment in Zambia.” <i>American Economic Review</i>, 100(5): 2383-2413. http://www.jstor.org/stable/41038767 Cohen, Jessica and Pascaline Dupas (2010). “Free Distribution or Cost-Sharing? Evidence from a Randomized Malaria Prevention Experiment.” <i>Quarterly Journal of Economics</i>, 125(1): 1-45. http://qje.oxfordjournals.org/content/125/1/1.full.pdf
<p>October 21</p> <p><i>The role of uncertainty</i></p>	<ul style="list-style-type: none"> Björkman-Nyqvist, Martina, Jakob Svensson, David Yanagizawa-Drott, “The Market for (Fake) Antimalarial Medicine: Evidence from Uganda.” Unpublished manuscript. http://www.povertyactionlab.org/publication/market-fake-antimalarial-medicine-evidence-uganda Cohen, Jessica, Pascaline Dupas and Simone Schaner, “Price Subsidies, Diagnostic Tests, and Targeting of Malaria Treatment.” <i>American Economic Review</i> 105(2), pp. 609-645, February 2015.

	http://web.stanford.edu/~pdupas/CohenDupasSchaner_ACT.pdf
October 23	MIDTERM EXAMINATION
October 28-30	CLASSES CANCELLED
	Supply of Health Care
November 4 <i>Challenges to Delivery in Developing Countries</i>	<ul style="list-style-type: none"> Duflo, Esther, A. Banerjee and A. Deaton (2004). "Wealth, health, and health services in rural Rajasthan." <i>American Economic Review Papers and Proceedings</i>, 94(2): 326-330. http://www.jstor.org/stable/3592904 Das, Jishnu, Jeffrey Hammer and Kenneth Leonard (2008). "The Quality of Medical Advice in Low-Income Countries." <i>Journal of Economic Perspectives</i>, 22(2): 93-114. http://www.jstor.org/stable/27648243
November 6 <i>Provider Absenteeism</i> [PS 4 Due in Class]	<ul style="list-style-type: none"> Abhijit V. Banerjee, Esther Duflo, Rachel Glennerster (2008). "Putting a Band-Aid on a Corpse: Incentives for Nurses in the Indian Public Health Care System," <i>Journal of the European Economic Association</i>, 6(2-3): 487-500. http://www.jstor.org/stable/40282658 Banerjee, Abhijit, and Esther Duflo. 2006. "Addressing Absence." <i>Journal of Economic Perspectives</i>, 20(1): 117-132. http://www.jstor.org/stable/30033636
Monday, November 9 [MAKE-UP CLASS] <i>Community Monitoring</i>	<ul style="list-style-type: none"> Martina Bjorkman and Jakob Svensson (2009). "Power to the People: Evidence from a Randomized Experiment on Community-Based Monitoring in Uganda." <i>Quarterly Journal of Economics</i>, 124(2): 735-769. http://qje.oxfordjournals.org/content/124/2/735.abstract Priyanka Pandey; Ashwini R. Sehgal; Michelle Riboud; David Levine; Madhav Goyal (2007). "Informing Resource-Poor Populations and the Delivery of Entitled Health and Social Services in Rural India: A Cluster Randomized Controlled Trial." <i>JAMA</i>, 298(16): 1867-1875. http://jama.jamanetwork.com/article.aspx?articleid=209274
November 11 <i>Public health provision</i>	<ul style="list-style-type: none"> Cutler, David M. and Miller (2005). "The Role of public health improvements in health advances: The Twentieth-century United States." <i>Demography</i> 42(1): 1-22. http://www.jstor.org/stable/1515174 Edward Miguel, Michael Kremer, Jessica Leino and Alix Peterson Zwane (2011). "Spring Cleaning: Rural Water Impacts, Valuation, and Property Rights Institutions." <i>Quarterly Journal of Economics</i>, 126(1): 145-205.

	http://qje.oxfordjournals.org/content/126/1/145.full.pdf
November 13 <i>Competing Risks</i>	<ul style="list-style-type: none"> Field, Erica, Rachel Glennerster and Reshmaan Hussam. "Throwing the Baby out with the Drinking Water: Unintended Consequences of a National Arsenic Mitigation Campaign in Bangladesh." February 2011. Working paper, Harvard University. http://scholar.harvard.edu/files/arsenic_infantmortality_feb10_0.pdf Argos, M., T. Kaira, P. Rathouz, Y. Chen, B. Pierce, F. Parvez, T. Islam, A. Ahmed, M. Rakibuz-Zaman, R. Hasan, G. Sarwar, V. Slavkovich, A. van Geen, J. Graziano, and H. Ahsan (2010). "Arsenic exposure from drinking water, and all-cause and chronic-disease mortalities in Bangladesh (HEALS): A prospective cohort study." <i>The Lancet</i>, 376(9737): 252-258. http://www.sciencedirect.com/science/article/pii/S0140673610604813
November 18	<ul style="list-style-type: none"> David Cutler, Winnie Fung, Michael Kremer, Monica Singhal and Tom Vogl (2010). "Early-Life Malaria Exposure and Adult Outcomes: Evidence from Malaria Eradication in India." <i>American Economic Journal: Applied Economics</i>, 2(2): 72-94. http://www.jstor.org/stable/25760206 Brenda Eskenazi, Jonathan Chevrier, Lisa Goldman Rosas, Henry A. Anderson, Maria S. Bornman, Henk Bouwman, Aimin Chen, Barbara A. Cohn, Christiaan de Jager, Diane S. Henshel, Felicia Leipzig, John S. Leipzig, Edward C. Lorenz, Suzanne M. Snedeker, Darwin Stapleton (2009). The Pine River Statement: Human Health Consequences of DDT Use." <i>Environmental Health Perspectives</i> 2009 September; 117(9): 1359–1367.
November 20 <i>Challenges to Technology Adoption</i> [PS 5 Due in Class]	<p>Esther Duflo, Michael Greenstone and Rema Hanna (2014). "Up in Smoke: The Influence of Household Behavior on the Long-Run Impact of Improved Cooking Stoves." NBER Working Paper #18033, under revision at <i>American Economic Journal: Economic Policy</i>. http://scholar.harvard.edu/files/remahanna/files/1_stoves.pdf</p> <ul style="list-style-type: none"> Janet Currie & Matthew Neidell (2005). "Air Pollution and Infant Health: What Can We Learn from California's Recent Experience?" <i>The Quarterly Journal of Economics</i>, 120(3): 1003-1030. http://qje.oxfordjournals.org/content/120/3/1003.abstract
November 25-27	THANKSGIVING BREAK
	Global Health Policy
December 2	<ul style="list-style-type: none"> Glennerster, Rachel and Michael Kremer. <i>Strong Medicine: Creating Incentives for Pharmaceutical Research on Neglected Diseases</i>, Princeton University Press

<p><i>Private sector incentives for health technologies in developing countries</i></p>	<p>(2004).</p>
<p>December 4</p> <p><i>Foreign Aid</i></p> <p>[PS 6 Due in Class]</p>	<ul style="list-style-type: none"> • Jeffrey Sachs. The End of Poverty. TIME, March 2006. Available at: http://www.time.com/time/magazine/article/0,9171,1034738,00.html • Easterly, William 2009. “Can the West Save Africa?” <i>Journal of Economic Literature</i>, 47(2): 373–447. http://www.aeaweb.org/articles.php?doi=10.1257/jel.47.2.373 • Abhijit Banerjee. <i>Making Aid Work</i>. Boston Review Books. 2007.