

Economics 1082: Households, Firms, and Communities in Developing Countries

Syllabus Spring 2018

Administration:

- Instructor: Emily Breza ebreza@fas.harvard.edu
- Teaching fellow: Patricia Sun zsun@g.harvard.edu
- Lecture: Tuesday, Thursday 10:00-11:30 am, Sever 103
- Friday Review Section: TBA
- Instructor and TF office hours: TBA

Course Description:

This course studies the problem of global poverty with a microeconomic approach and a focus on households, firms, and communities. We will explore common themes across developing countries ranging from intra-household bargaining and gender, to microfinance and entrepreneurship, to social learning in village networks. We will investigate the functioning of labor markets, credit markets, and government institutions along with strategies households and firms adopt for coping with limited resources and inefficient institutions. The course will rely heavily on microeconomic principals and econometric techniques and will cover applications from around the world. We will also cover rigorous methods to evaluate the effectiveness of policy interventions.

Prerequisites:

The course will be a mix of theory and empirics. Intermediate microeconomics is required for success in the course. We will use algebra in the theory portions of the lectures, problem sets and exams. For each topic, we will study several concrete examples chosen from around the world and use statistics to understand these examples quantitatively. A statistics or econometrics course is highly recommended. Econometrics is not a prerequisite for this class, but you will be expected to familiarize yourself with basic econometric methods on your own, and it would be helpful to be taking econometrics concurrently (if you have not taken it before). We will cover the relevant econometrics material in class and in the TF sections, but this coverage is often too quick for a first exposure to the material.

Requirements:

- **Problem sets:** There will be about one problem set every 3 or 4 lectures (for a total of 6 problem sets), with each one due at least one week after it is handed out. Problem sets will contain empirical exercises, theory exercises, and written assignments developing a policy idea. In the first few Friday sections, you will learn how to use the statistical software, Stata, to complete these exercises. Problem sets for this class are very important, and somewhat time-consuming. You are allowed to discuss the problem sets with your peers, but each student is required to prepare and submit independently the write-up of the solutions.
- **Presentations/workgroup:** Students will work in small groups to develop a program proposal that addresses a need or problem in a developing country.

Students must identify a problem, research the underlying causes, and come up with a program that may help address the problem. A plan for evaluating the impacts of that program is also required. Each group of students will give a presentation on **Friday, April 13**. This extra session of presentations will be in place of the regularly scheduled class on Thursday, March 8. If your group absolutely cannot attend the makeup session, you will be able to schedule your presentation for an alternate time in my office Littauer M28.

- **Exams:** This class has two equally weighted exams. **There will be a final exam during exam week, and a mid-term exam on March 1st.**
- **Grading Policy:** Problem sets will count toward 40% of the final grade for the course. The mid-term will count for 25%. The presentation will count toward 10% of your final grade. The final exam will count for the remaining 25%. Class participation is expected, and will be taken into account in marginal cases (i.e. in the difficult decision between a B+ and an A-).

Late Policy:

Assignments will be graded down by 1/3 of a letter grade for every 24 hours they are late. Exceptions will be made only for medical or personal emergencies, which must be certified by a doctor or a resident dean.

Changes to Regularly Scheduled Class Sessions:

We will not have class on **Thursday, March 8**. Instead, we will schedule a make-up class for **Friday, April 13** during the regularly scheduled Friday TF section.

Text and readings:

The textbook for this class is Abhijit Banerjee's and Esther Duflo's *Poor Economics: A Radical Rethinking of the fight against global Poverty*. We will also refer to Debraj Ray's *Development Economics* for some material, although you are not required to buy it. Students find the Ray book to be a useful resource for understanding some of the theory covered in the first third of the course. However, we will also rely heavily on articles. Two general references for everything we will do, which you should read in the first couple of weeks and refer to regularly are: "Economic Lives of the Poor" (Banerjee and Duflo, 2007) and "What is Middle Class About the Middle Classes?" (Banerjee and Duflo, 2008)

You can access online articles for this class by browsing the links on the course Canvas website. There are many readings for this class. You are not expected to read every single article in detail, but you are expected to understand the methods used by the authors to reach their conclusions. Required readings are starred. Lecture notes will be posted on the Canvas page before each lecture. They are not a substitute for attending the class, but rather a study aide.

Course Content

- 1) **1/23, 1/25:** Introduction: the vicious circle of poverty
 - a) **Poor Economics*: Foreword and Chapter 1
 - b) **Theoretical model*: Ray, pp. 272-279; Ray, pp. 489-504
- 2) **1/30, 2/1:** Nutrition and productivity: interrelationships (**Homework #1 assigned 1/30**)
 - a) Empirical evidence
 - (1) *Poor Economics*: Chapter 2
 - ii) From income to nutrition:
 - (1) Income → Nutrition: A study of Maharashtra, India. Subramanian and Deaton (1996)
 - iii) **Evaluation of “Give Directly”*: Haushofer and Shapiro (2013)
 - iv) Children nutrition: Baird, Hicks, Kremer, and Miguel (2011)
- 3) **2/6, 2/8:** Health and health care: (**Homework #2 assigned 2/8**)
 - a) Hyperbolic discounting, information, beliefs, and the demand for health
 - i) **Poor Economics*: Chapter 3
 - ii) Thornton (2008), Cohen, Dupas and Schaner (2015), Schilbach (2015)
 - b) **Health Status in Rajasthan: Banerjee and Duflo (2003)* A case study (and a movie) that looks at various aspects of health delivery and health status
 - i) **Bjorkman et al. (2013)*
 - ii) Miguel and Kremer (2007), Das et al. (2016)
- 4) **2/13, 2/15, 2/20,** Education (**Homework #3 assigned 2/20**)
 - a) **Poor Economics*: Chapter 4
 - b) An overview of the problems: Do parents care about education? Can they afford it? What is education good for?
 - i) What are the benefits of education: the Ghana Secondary School study: **Duflo, Dupas and Kremer (2017)*
 - c) The determinants of education decision: the benefits of education, perceptions, information, etc.
 - i) **Dizon-Ross (2015)*
 - ii) Jensen (2010), Nguyen (2008)
 - d) The supply of education
- 5) **2/22:** Discrimination
 - a) The returns to girls: Jensen (2010)
 - b) Norms and perception: Beaman et al. (2012)
 - c) The possible backlash of economic growth and Development. Jayachandran (2015)
 - d) **Discrimination and the value of girls: Qian (2005)*
- 6) **2/27:** Bargaining within families
 - a) Income is not spent in the same way by women and by men: Evidence from Brazil (Thomas (1990)), the United Kingdom Child Benefit allowance (Lundberg, Pollak, and

- Wales (1996)), a pension program in South Africa (Duflo (2003)).
- b) Competition within the family is not limited to sharing the resources. It leads to lower productivity and lower welfare for all members in the family: *Udry (1996); Duflo and Udry (2004)

*******3/1: Midterm Exam*******

7) **3/6: Households and the Labor Market (Homework #4 assigned 3/6, Group Presentation Assigned)**

- a) *Households both sell and hire labor: Benjamin (1992) and the test for separation
- b) *The effect of productivity shocks on wages: Jayachandran (2006)
- c) Nominal wage rigidities in rural India: Kaur (2017)

******* No Class 3/8, Spring Break 3/13, 3/15 *******

8) **3/20, 3/22: Land Markets**

- a) *Why land reform? Banerjee (1999)
- b) * A successful tenancy reform in India: Banerjee, Gertler, and Ghatak (2002)
- c) The impacts of land reform: the case of El Salvador: Montero (2017)

9) **3/27 and 3/29: Insurance (Homework #5 assigned 3/29)**

Poor Economics, Chapter 6

- a)*Ray, chapter 15.
- b) Insurance is only partial: the consumption of household members in Cote d'Ivoire is linked to their income: Deaton (1997), pp 372-383.
- c)*In West Africa, villagers lend to each other and achieve a certain degree of insurance: Udry (1990)
- d) Mutual insurance in the village does not happen in the void. It depends on the strength of local institutions: Townsend (1995).

10) **4/3: Savings**

- a) **Poor Economics*: Chapter 8
- b) *Do poor people save in good times in anticipation of bad times? Savings by rice farmers in Thailand: Paxson (1992)
- c) The psychological difficulty to save: Ashraf, Karlan, and Yin (2006) and
- d) *Dupas and Robinson (2013)

11) **4/5, 4/10, 4/12: Credit Markets**

- a)**Poor Economics*: Chapter 7 and Chapter 9
- b)Why do informal money-lenders charge interest rates that are so high? Aleem (1990)
- c)*Watch *Last Week Tonight* episode on payday loans:
<https://www.youtube.com/watch?v=PDylgzybWAw>
- d) Microcredit: magic bullet or disaster: *Banerjee, Duflo, Glennerster, and Kinnan (2015), Banerjee, Breza, Duflo and Kinnan (2016), Breza and Kinnan (2017)
- e) Entrepreneurial Credit: McKenzie (2017),

******* FRIDAY 4/13 PRESENTATIONS *******

12) 4/17, 4/19: Firms (Homework #6 assigned 4/17)

- a) Interfirm Relationships
 - i) Theory of relational contracting: Baker, Gibbons, and Murphy (2002)
 - ii) Can relationships be leveraged to combat constraints?: McMillan and Woodruff (1999)
 - iii) Do firms benefit from ties with one another?: *Cai and Szeidl (2016)
- b) Firms and the Labor Market
 - i) Management frictions and firm performance: *Bloom et al (2013)
 - ii) Financial Literacy and Job Training Programs: Management/Entrepreneur Training: Drexler et al (2014), McKenzie and Puerto (2017)
 - iii) Information frictions, certification and referrals: Bassi and Nansamba (2016), Beaman and Magruder (2012)

13) 4/24: Information

- a) The role of price information: Jensen (2007)
- b) Learning from peers: Conley and Udry (2010) and Foster and Rosenzweig (1995)
- c) *Social networks and information diffusion: Banerjee et al (2013)
- d) Taking advantage of the social network to spread information: Beaman et al (2015)

*******Final Exam date (sometime during exam week 5/3-5/12) and location to be announced*******

Selected References

- Acemoglu, D., S. Johnson, and J. Robinson (2001): "The Colonial Origins of Comparative Development: An Empirical Investigation," *American Economic Review*, 91(5), 1369—1401.
- Aleem, I. (1990): "Imperfect Information, Screening and the Costs of Informal Lending: A Study of a Rural Credit Market in Pakistan," *World Bank Economic Review*, 3, 329—349.
- Aportela, F. (1998): "The Effects of Financial Access on Savings by Low-Income People," Mimeo, MIT.
- Ashraf, Nava, Dean Karlan, and Wesley Yin (2006) "Tying Odysseus to the Mast: Evidence from a Commitment Savings Product in the Philippines," *Quarterly Journal of Economics*, 121(2): 635-672.
- Baird, S., J. H. Hicks, M. Kramer, and E. Miguel (2012): "Worms at Work: Long-Run Impacts of Child Health Gains," working paper.
- Baker, George, Robert Gibbons, and Kevin J. Murphy. "Relational Contracts and the Theory of the Firm." *The Quarterly Journal of Economics* 117.1 (2002): 39-84.
- Banerjee, A. V. (1999): "Land Reforms: Prospects and Strategies," Mimeo, MIT.
- Banerjee, A. V., A. G. Chandrasekhar, E. Duflo, and M. O. Jackson (2013): "The Diffusion of Microfinance." *Science*, 341(6144).
- Banerjee, A. V., and E. Duflo (2000): "Reputation Effects and the Limits of Contracting: A Study of the Indian Software Industry," *Quarterly Journal of Economics*, 115(3), 989—1017.
- Banerjee, A. V., P. Gertler, and M. Ghatak (2002): "Empowerment and Efficiency: Tenancy Reform in West Bengal," *Journal of Political Economy*, 110(2), 239—280.
- Banerjee, A. V., A. Deaton and E. Duflo (2003): "Wealth, health and health services in rural Rajasthan," *American Economic Review*, 94(2), 326-330.
- Banerjee, A. V., and L. Iyer (2005): "History, Institutions and Economic Performance: The Legacy of Colonial Land Tenure Systems in India," *American Economic Review* 95(4), 1190-1213.
- Banerjee A.V. and E. Duflo (2007): "Aging and Death under a Dollar a Day," NBER Working Paper No. 13683.
- Banerjee, A.V. and E. Duflo (2007): "The Economic Lives of the Poor," *Journal of Economic Perspectives*, 21(1), 141-167.

- Banerjee, A., L. Iyer, and R. Somanathan (2007): "Public Action for Public Goods," in *Handbook of Development Economics*, ed. T. P. Schultz and J. A. Strauss, vol 4., pp. 3117-3154.
- Banerjee, A. V., S. Cole, E. Duflo, and L. Linden (2007): "Remedying Education: Evidence from Two Randomized Experiments in India," *Quarterly Journal of Economics* 122(3): 1235-1264
- Banerjee, A.V. and E. Duflo (2008): "What is Middle Class about the Middle Classes around the World?" *Journal of Economic Perspectives* 22(2), pp. 3-28.
- Banerjee, Abhijit, Esther Duflo, Rachel Glennerster, and Cynthia Kinnan (2015): "The Miracle of Microfinance? Evidence from a Randomized Evaluation," *American Economic Journal: Applied*, 7(1), 22-53.
- Banerjee, A., Breza, E., Duflo, E., & Kinnan, C. (2016). "Do credit constraints limit entrepreneurship? Heterogeneity in the returns to microfinance," Working paper.
- Bassi, Vittorio and Aisha Nansamba (2016): "Information Frictions in the Labor Market: Evidence from a Field Experiment in Uganda," Working Paper.
- Beaman, R. Chattopadhyay, E. Duflo, R. Pande, and P. Topalova (2009): "Powerful Women: Female Politicians and Gender Bias in Indian Villages," *Quarterly Journal of Economics* 124(4): 1497-1540.
- Beaman, Lori, and Jeremy Magruder. "Who gets the job referral? Evidence from a social networks experiment." *The American Economic Review* 102.7 (2012): 3574-3593.
- Beaman, L., BenYishay, A., Magruder, J., & Mobarak, A. M. (2015). "Can network theory based targeting increase technology adoption?" Working Paper.
- Benjamin, D., "Household Composition, Labor Markets, and Labor Demand (1992): Testing for Separation in Agricultural Household Models", *Econometrica* 60: 287–323.
- Bertrand, M., S. Djankov, R. Hanna, and S. Mullainathan (2006): "Does Corruption Produce Unsafe Drivers?," NBER Working Paper #12274.
- Bjorkman-Nyqvist, M., J. Svensson, and D. Yanagizawa-Drott (2013): "The Market for (Fake) Antimalarial Medicine: Evidence from Uganda," Working Paper.
- Bloom, Nicholas, et al. (2013): "Does Management Matter? Evidence from India." *The Quarterly Journal of Economics* 128(1), 1-51.
- Breza, Emily and Cynthia Kinnan (2017): "Measuring the Equilibrium Effects of Credit: Evidence from the Indian Microfinance Crisis," Working Paper.

- Cai, Jing and Adam Szeidl (2016): "Interfirm Relationships and Business Performance," NBER Working Paper.
- Chattopadhyay, R., and E. Duflo (2004): "Women as Policy Makers: Evidence from a Randomized Policy Experiment in India," *Econometrica*, 72(5), 1409—1443.
- Cohen, J., P. Dupas, and S. Schaner (2015): "Price Subsidies, Diagnostic Tests, and Targeting of Malaria Treatment: Evidence from a Randomized Controlled Trial," *American Economic Review* 105(2): 609-645.
- Conley, T. G., & Udry, C. R. (2010). "Learning about a new technology: Pineapple in Ghana." *The American Economic Review*, 35-69.
- Das, Jishnu, A. Holla, A. Mohpal, and K. Muralidharan (2016): "Quality and Accountability in Healthcare Delivery: Audit-Study Evidence from Primary Care in India," Working Paper.
- De Mel, Mckenzie, Woodruff. (2008): "Returns to Capital in Microenterprises: Evidence from a Field Experiment," *Quarterly Journal of Economics*.
- Deaton, A. (1997): *The Analysis of Household Surveys*. World Bank, International Bank for Reconstruction and Development.
- Drexler, Alejandro, Greg Fischer, and Antoinette Schoar. "Keeping it simple: Financial literacy and rules of thumb." *American Economic Journal: Applied Economics* 6.2 (2014): 1-31.
- Dreze, J., and A. Sen (1995): "Gender Inequality and Women's Agency," in *India: Economic Development and Social Opportunity*, chap. 7, pp. 140—178. Oxford University Press, Delhi.
- Duflo, E. (2001): "Schooling and Labor Market Consequences of School Construction in Indonesia: Evidence from an Unusual Policy Experiment," *American Economic Review*, 91(4), 795—813.
- Duflo, E. (2003): "Grandmothers and Granddaughters: Old-Age Pensions and Intrahousehold Allocation in South Africa," *World Bank Economic Review*, 17(1), 1—25.
- Duflo, E., and C. Udry (2004): "Intrahousehold Resource Allocation in Cote D'Ivoire: Social Norms, Separate Accounts and Consumption Choices," *National Bureau of Economic Research, Working Paper 10498*.
- Duflo, Esther, Michael Kremer, and Jonathan Robinson (2010) "Nudging Farmers to Use Fertilizer: Theory and Experimental Evidence from Kenya", *American Economic Review*.
- Duflo, Esther, Pascaline Dupas, and Michael Kremer (2017) "The Impact of Free Secondary Education: Experimental Evidence from Ghana," Working Paper.

- Duflo, Esther, Rema Hanna and Stephen Ryan (2012). "Incentives work: Getting teachers to come to school", *American Economic Review*, 102(4): 1241-1278.
- Dupas, Pascaline, and Jonathan Robinson (2013). "Savings Constraints and Microenterprise Development: Evidence from a Field Experiment in Kenya", *American Economic Journal: Applied Economics* 5(1): 163-192.
- Foster, A. D., and M. R. Rosenzweig (1995). "Learning by doing and learning from others: Human capital and technical change in agriculture." *Journal of Political Economy*, 1176-1209.
- Glewwe, P., N. Ilias, and M. Kremer (2010): "Teacher Incentives," *American Economic Journal: Applied Economics* 2(3): 205-227.
- Greif, A. (1993): "Contract Enforceability and Economic Institution in Early Trade: The Maghribi traders coalition," *American Economic Review*, 83(3), 525—548.
- Greif, A. (1994): "Cultural Beliefs and the Organization of Society: A Historical and Theoretical Reflection on Collectivist and Individualist Societies," *Journal of Political Economy*, 102(5), 912—950.
- Hartmann, B. (1983): "The Trials of a Poor Peasant Family," in *A Quiet Violence: View from a Bangladesh Village*, chap. 12. Zed Press.
- Iyer, L. (2004): "The Long-term Impact of Colonial Rule: Evidence from India," Mimeo, MIT.
- Jayachandran, Seema. 2006. "Selling Labor Low: Wage Responses to Productivity Shocks in Developing Countries," *The Journal of Political Economy* 114(3): 538-575.
- Jayachandran, Seema. 2015. "The roots of gender inequality in developing countries." *Annual Review of Economics* 7(1): 63-88.
- Jayachandran, S. and Kuziemko, I. (2011) "Why Do Mothers Breastfeed Girls Less Than Boys: Evidence and Implications for Child Health in India," *Quarterly Journal of Economics*, 126(3): 1485-1538.
- Jensen, R. (2000): "Agricultural Volatility and Investments in Children," *American Economic Review*, 90(2), 399—405.
- Jensen, Robert. "The digital divide: Information (technology), market performance, and welfare in the South Indian fisheries sector." *The Quarterly Journal of Economics* (2007): 879-924.
- Jensen, R., and N. Miller (2008): "Giffen Behavior and Subsistence Consumption," *American Economic Review*, 98(4), 1553–1577.

- Jensen, R. T. (2010). "Economic opportunities and gender differences in human capital: Experimental evidence for India." NBER Working Paper No 16021.
- Jensen, Robert. "The (perceived) returns to education and the demand for schooling." *The Quarterly Journal of Economics* 125.2 (2010): 515-548.
- Karlan, D. & Zinman, J. (2009) " Observing unobservables: Identifying information asymmetries with a consumer credit field experiment," *Econometrica* 77(6): 1993-2008.
- Karlan, Dean, Ed Kutsoati, Margaret McMillan, and Chris Udry. 2010. "Crop Price Indemnified Loans for Farmers: A Pilot Experiment in Rural Ghana," *The Journal of Risk and Insurance* 78(1): 37-55.
- Kaur, Supreet, "Nominal Wage Rigidity in Village Labor Markets," 2017. NBER Working Paper No. 20770
- Kremer, M., and T. Miguel (2007): "The Illusion of Sustainability," *Quarterly Journal of Economics* 122 (3): 1007-1065.
- La Ferrara, E., A. Chong, and S. Duryea (2008). "Soap Operas and Fertility: Evidence from Brazil," *Inter-American Development Bank Working Paper No. 633*.
- Lundberg, S. J., R. A. Pollak, and T. J. Wales (1997): "Do Husbands and Wives Pool Their Resources? Evidence from the United Kingdom Child Benefit," *Journal of Human Resources*, 32(4), 463—480.
- McKenzie, David (2017): "Identifying and spurring high-growth entrepreneurship: experimental evidence from a business plan competition," *American Economic Review*, 107(8), 2278-2307.
- McKenzie, David and Susana Puerto (2017): "Growing Markets through Business Training for Female Entrepreneurs: A Market-Level Randomized Experiment in Kenya," *World Bank Policy Research Working Paper 7993*.
- McMillan, John, and Christopher Woodruff. "Interfirm relationships and informal credit in Vietnam." *The Quarterly Journal of Economics* 114.4 (1999): 1285-1320.
- Miller, Grant. 2010. "Contraception as Development? New Evidence from Family Planning in Colombia," *Economic Journal* 120(June): 709-736.
- Montero, Eduardo. (2017). "Cooperative Property Rights and Agricultural Development: Evidence from Land Reform in El Salvador." *Working Paper*.
- Morduch, J. (1999): "The Microfinance Promise," *Journal of Economic Literature*, 37(4), 1569—1614.

- Munshi, K. and J. Myaux (2006): "Social Norms and the Fertility Transition," *Journal of Development Economics* 80(1): 1-38.
- Nguyen, Trang. (2008). "Information, role models and perceived returns to education: Experimental evidence from Madagascar." Unpublished manuscript.
- Olken, B. (2007): "Monitoring Corruption: Evidence from a Field Experiment in Indonesia," *Journal of Political Economy* 115(2): 200-249.
- Olken, B. A., and P. Barron (2009). "The Simple Economics of Extortion: Evidence from Trucking in Aceh," *Journal of Political Economy* 117(3), 417-452.
- Paxson, C. H. (1992): "Using Weather Variability to Estimate the Response of Savings to Transitory Income in Thailand," *American Economic Review*, 82(1), 15—33.
- Probe Team (1999a): "The School Environment," in *Public Report on Basic Education in India*, chap. 4. Oxford University Press, Delhi.
- Probe Team (1999b): "Schooling and the Family," in *Public Report on Basic Education in India*, chap. 3. Oxford University Press, Delhi.
- Qian, Nancy (2008): "Missing Women and the Price of Tea in China" *Quarterly Journal of Economics*, 123(3), 1251-1285.
- Rao, V. (1993): "The Rising Price of Husbands: A Hedonic Analysis of Dowry Increases in Rural India," *Journal of Political Economy*, 101(4), 666—677.
- Ray, D. (1998). *Development Economics*. Princeton University Press: Princeton, NJ.
- Rose, E. (1999): "Consumption Smoothing and Excess Female Mortality in Rural India," *Review of Economics and Statistics*, 81(1), 41—49.
- Rosenzweig, Mark R. and Oded Stark (1989) "Consumption Smoothing, Migration, and Marriage: Evidence from Rural India." *The Journal of Political Economy*, 97(4): 905-926.
- Schilbach, Frank (2015): "Alcohol and Self-Control: A Field Experiment in India," mimeo, MIT.
- Shleifer, A., and R. W. Vishny (1993): "Corruption," *The Quarterly Journal of Economics*, 108(3).
- Subramanian, S., and A. Deaton (1996): "The Demand for Food and Calories," *Journal of Political Economy*, 104(1), 133—162.
- Thomas, D. (1990): "Intra-household Resource Allocation: An Inferential Approach," *Journal of Human Resources*, 25(4), 635—664.

Thomas, D., and et al. (2006): “Causal Effect of Health on Labor Market Outcomes: Experimental Evidence,” California Center for Population Research, Working Paper 070-06.

Thornton, R. (2008): “The Demand for, and Impact of, Learning HIV Status,” *American Economic Review* 98(5): 1829–1863.

Townsend, R. (1995): “Financial Systems in Northern Thai Villages,” *Quarterly Journal of Economics*, 110(4), 1011—1046.

Udry, C. (1990): “Credit Markets in Northern Nigeria: Credit as Insurance in a Rural Economy,” *World Bank Economic Review*, 4(3), 251—69.

Udry, C. (1996): “Gender, Agricultural Production, and the Theory of the Household,” *Journal of Political Economy*, 101(5), 1010—1045.