

AEM 7620/ECON 7660: The Microeconomics of International Development
Fall 2013

Course time and location:

Wednesdays 10:10 AM – 1:10 PM
Warren 138

Office hours: Wednesdays 2:00-5:00 PM

Instructor:

Chris Barrett
301G Warren Hall
255-4489
cbb2@cornell.edu

Course description: This course is designed for students with graduate level training in microeconomics and econometrics and an interest in international development. It focuses on the specification, estimation and interpretation of models of individual, household, firm/farm, and market behavior. A wide range of topics are covered, with an emphasis on applications to agricultural and food systems and on the integration of theory and methods in empirical work. The intent is to provide an in-depth survey of the research frontiers in various areas of the microeconomics of international development. Students from other fields are welcome and prior background will be taken into consideration in evaluating students' course papers.

The basic philosophy in this course is that I aim to assist the transition from student to scholar. I do not assign homework or exams and do not expect anyone to read everything on the syllabus. Rather, the intent is to expose students to seminal bits of several interrelated literatures, to explain the mechanics of key theories and methods, to encourage students to think critically about what these literatures tell us about microeconomic behavior in the low-income world, and to help train them how to undertake original research of their own as well as to offer constructive criticism of others' research.

Course prerequisites: Completion of the first year Ph.D. course sequence in microeconomic theory (ECON 6090/6100 and/or AEM 7010/7020) and econometrics (AEM 7100/7150/7151 and/or ECON 6190/6200), or instructor permission. History shows that motivated M.S. candidates and Ph.D. candidates from allied disciplines also fare well in the course if they are willing to invest time in understanding at least the intuition of the more advanced material. Students are welcome to audit or to take the course on an S/U basis.

Evaluation: Grades will be based on a term paper (50%), two 2-5 page (single spaced) formal referee reports of current working papers (30%), and course participation (20%).

A 2-5 page proposal for the term paper is due **not later than Wednesday, October 30**. The proposal must clearly identify the question(s) or puzzle(s) the paper aims to address, the literature into which this work fits, and the basic theoretical and/or methodological approach to be followed. The paper need not be turned in this semester; indeed, students are encouraged to invest the time necessary to write a paper of sufficient quality that it can be revised into a publishable manuscript. Typically, that will require students to take an incomplete and finish the paper in the subsequent months. The absolute paper deadline is September 1, 2014; any student not turning in a paper by then will receive a failing grade.

A separate hand out explains the referee report assignment and gives due dates.

Course participation is my subjective assessment of how much you contributed to other students' learning through your own in-class contributions. Most days we will have roughly two hours of lecture-centered discussion followed by about an hour of student-led discussion of working papers and research ideas. I expect students to stimulate one another intellectually during these latter periods, in particular.

Readings: Detailed lecture notes are available on the course Blackboard site, always posted in advance of the lecture. I encourage you to use them so as to spare you taking excessive notes unnecessarily. There is no course text, but I encourage students to try to find a copy of Angus Deaton's *The Analysis of Household Surveys: A Microeconometric Approach to Development Policy* (Johns Hopkins University Press, 1997). It is no longer in print so the Campus Store is unable to order new copies. However, it is still available from many sellers on Amazon.com. It is also available as an online book through Cornell library and the course Blackboard site. All other readings are either available as e-journal articles through Cornell library and/or will be posted on the course Blackboard site. Core readings, which you are strongly encouraged to read, are denoted by an asterisk (*). The reading list below uses the following abbreviations:

AER	<i>American Economic Review</i>	HDE	<i>Handbook of Development Economics</i> (Elsevier, various years).
AJAE	<i>American J. of Agricultural Economics</i>	JAЕ	<i>J. of African Economies</i>
EDCC	<i>Economic Dev't and Cultural Change</i>	JDE	<i>J. Development Economics</i>
EJ	<i>Economic Journal</i>	JDS	<i>J of Development Studies</i>
ETAI	P. Bardhan, ed., <i>The Economic Theory of Agrarian Institutions</i> (Oxford, 1989).	JEL	<i>J of Economic Literature</i>
ETRA	<i>Econometrica</i>	JEP	<i>J of Economic Perspectives</i>
HBS	K. Hoff, A. Braverman and J.E. Stiglitz, eds., <i>The Economics of Rural Organization: Theory, Practice and Policy</i> (Oxford, 1993).	JHR	<i>Journal of Human Resources</i>
HAE	<i>Handbook of Agricultural Economics</i> (Elsevier, various years).	JPE	<i>Journal of Political Economy</i>
		OEP	<i>Oxford Economic Papers</i>
		QJE	<i>Quarterly J of Economics</i>
		REStat	<i>Rev Economics and Statistics</i>
		REStud	<i>Review of Economic Studies</i>
		WD	<i>World Development</i>

I. KEY MODELING AND ESTIMATION METHODS

IA. Separable and Nonseparable Household Models

Aug. 28

- *I.Singh, L.Squire, and J.Strauss, *Agricultural Household Models* (1986), intro/chap. 1
- *A. De Janvry, M.Fafchamps, and E. Sadoulet, "Peasant Household Behavior With Missing Markets: Some Paradoxes Explained," *EJ* (1991)
- *H.Jacoby, "Shadow Wages and Peasant Family Labour Supply: An Econometric Application to the Peruvian Sierra," *REStud*, 60, 3 (1993): 903-921.
- *C.Barrett, S. Sherlund and A. Adesina, "Shadow Wages, Allocative Inefficiency, and Labor Supply in Smallholder Agriculture" *Agricultural Economics* (2008).
- D.Benjamin, "Household Composition, Labor Markets and Labor Demand: Testing for Separation in Agricultural Household Models," *ETRA* (1992).
- K.T. Le, "Separation Hypothesis Tests in the Agricultural Household Model," *AJAE* 92(5): 1420-31 (2010).

C.Barrett and P. Dorosh, "Farmers' Welfare and Changing Food Prices: Nonparametric Evidence from Rice in Madagascar," *AJAE* (August 1996): 656-669.

J. Newman and P. Gertler, "Family Productivity, Labor Supply and Welfare in a Low Income Country," *JHR* 29, 4 (1994): 989-1026.

IB. Intrahousehold Models

Sep. 4

*A.Deaton, chapter 4.2

*C. Udry, "Gender, Agricultural Production, and the Theory of the Household," *JPE* (1996).

*M.Pitt, M. Rosenzweig, and M.Hassan, "Productivity, Health, and Inequality in the Intra-household Distribution of Food in Low-Income Countries," *AER*, 1990: 1139-1156.

F. Bourguignon, M. Browning, P.-A. Chiappori, "Efficient Intra-Household Allocations and Distribution Factors: Implications and Identification," *REStud* 2009.

L. Haddad and R. Kanbur, "How Serious is the Neglect of Intra-Household Inequality?" *EJ* (1990): 866-881.

S. Dercon and P. Krishnan, "In Sickness and in Health: Risk Sharing within Households in Rural Ethiopia," *JPE* (2000): 688-727.

N. Folbre, "Household Production in the Philippines: A Non-Neoclassical Approach," *EDCC* (1984).

J. McPeak and C. Doss (2006), "Are Household Production Decisions Cooperative? Evidence On Pastoral Migration and Milk Sales From Northern Kenya," *AJAE* 88:525-541.

H. Alderman et al. "Unitary Versus Collective Models of the Household: Is It Time To Shift The Burden of Proof?" *World Bank Research Observer* (1995)

L. Haddad, J. Hoddinott, and H. Alderman, eds., *Intrahousehold Resource Allocation in Developing Countries: Methods, Models and Policy* (Johns Hopkins, 1996).

K.M. Villa, C.B. Barrett and D.R. Just, "Whose Fast and Whose Feast? Intrahousehold Asymmetries in Dietary Diversity Response Among East African Pastoralists," *AJAE* 2011.

G. Bobonis, "Is the Allocation of Resources within the Household Efficient? New Evidence from a Randomized Experiment," *Journal of Political Economy* 2009.

IC. Inference: The Power and Limits of Experiments and Instruments

Sep. 11

*Keane, M. P. (2010). "Structural vs. Atheoretic Approaches to Econometrics." *Journal of Econometrics*.

*Imbens, G.W. and J.M. Wooldridge (2009), "Recent Developments in the Econometrics of Program Evaluation," *JEL*.

*Barrett, C.B. and M.R. Carter (2010). "The Power and Pitfalls of Experiments in Development Economics: Some Non-random Reflections," *Applied Economic Perspectives and Policy* 32 (4): 515-548.

Wydick, B., P. Glewwe, L. Rutledge (2013). "Does International Child Sponsorship Work? A Six-Country Study of Impacts on Adult Life Outcomes," *JPE*

- Smith, L.A., F. Khan, T.R. Frankenberger, and A.K.M.A. Wadud (2013), "Admissible Evidence in the Court of Development Evaluation? The Impact of CARE's SHOUHARDO Project on Child Stunting in Bangladesh," *World Development*.
- Heckman, J. J. and J. A. Smith (1995). "Assessing the Case for Social Experiments." *JEP* 9(2): 85-110.
- Rodrik, D. (2008). *The new development economics: We shall experiment, but how shall we learn?* Cambridge, MA, Harvard University.
- Hoddinott, J., J. A. Maluccio, J. R. Behrman, R. Flores and R. Martorell (2008). "Effect of a nutrition intervention during early childhood on economic productivity in Guatemalan adults." *The Lancet* 371(9610): 411-416.
- Duflo, E., R. Glennerster and M. Kremer (2008). Using Randomization in Development Economics Research: A Toolkit. *Handbook of Development Economics Volume 4*. T. P. Schultz and J. Strauss. Amsterdam, North-Holland: 3895-3962.
- Miguel, E. and M. Kremer (2004). "Worms: Identifying Impacts on Education and Health in the Presence of Treatment Externalities." *Econometrica* 72(1): 159-217.
- Gertler, P. (2004). "Do Conditional Cash Transfers Improve Child Health? Evidence from PROGRESA's Control Randomized Experiment." *American Economic Review* 94(2): 336-341.
- Gilligan, D.O. and J. Hoddinott (2007), "Is There Persistence in the Impact of Emergency Food Aid? Evidence on Consumption, Food Security, and Assets in Rural Ethiopia," *AJAE*

II. CONSUMPTION, NUTRITION, RISK AND POVERTY TRAPS

IIA. Consumption, nutrition, and health

Sep. 18

- *A. Deaton, chapter 4.1
- *Behrman, J., M. Rosenzweig and A. Foster (1997). "The Dynamics of Agricultural Production and the Calorie-Income Relationship: Evidence from Pakistan." *Journal of Econometrics* 77: 187-207.
- *Strauss, J. and D. Thomas (1998). "Health, nutrition and economic development." *Journal of Economic Literature* 36(2): 766-817.
- Behrman, J. R. and A. B. Deolalikar (1987). "Will Developing Country Nutrition Improve with Income? A Case Study for Rural South India." *Journal of Political Economy* 95(3): 492.
- Bouis, H. E. and L. J. Haddad (1992). "Are estimates of calorie-income elasticities too high? : A recalibration of the plausible range." *Journal of Development Economics* 39(2): 333-364.
- Attanasio, O., Erich Battistin and Alice Mesnard (2011), "Food and Cash Transfers: Evidence From Colombia," *EJ* 122: 92-124.

IIB. Consumption Smoothing: Savings, credit and insurance

Sep. 25

- *A. Deaton, chap. 6.2-6.5
- *Townsend, R. (1994). "Risk and Insurance in Village India." *Econometrica* 62: 539-591.
- *Gertler, P. and J. Gruber (2002). "Insuring Consumption Against Illness." *American Economic Review* 92(1): 51-70.

- *Zimmerman, F. J. and M. R. Carter (2003). "Asset smoothing, consumption smoothing and the reproduction of inequality under risk and subsistence constraints." *Journal of Development Economics* 71(2): 233-260.
- Behrman, J., A. Foster and M. Rosenzweig (1997). "Dynamic savings decisions in agricultural environments with incomplete markets." *Journal of Business & Economic Statistics* 15(2): 282.
- Besley, T. J. (1995). Savings, credit and insurance. *Handbook of Development Economics Volume 3A*. J. Behrman and T. Srinivasan. Amsterdam, Elsevier Science.
- McPeak, J. (2004), "Contrasting income shocks with asset shocks: livestock sales in northern Kenya," *OEP* 56: 263–284.
- Udry, C. (1994). "Risk and Insurance in a Rural Credit Market: An Empirical Investigation in Northern Nigeria." *Review of Economic Studies* 61(3): 495-526.
- Ligon, E., J. P. Thomas and T. Worrall (2002). "Informal Insurance Arrangements with Limited Commitment: Theory and Evidence from Village Economies." *The Review of Economic Studies* 69(1): 209-244.
- Townsend, R. M. (1995). "Financial systems in Northern Thai villages." *Quarterly Journal of Economics* 110(4): 1011-1046.
- Coate, S. and M. Ravallion (1993). "Reciprocity without commitment : Characterization and performance of informal insurance arrangements." *Journal of Development Economics* 40(1): 1-24.
- Vanderpuye-Orgle, J. and C. B. Barrett (2009). "Risk management and social visibility." *African Development Review*.

IIC. Welfare Dynamics and Poverty Traps

Oct. 2-9

- *Carter, M. R. and C. B. Barrett (2006). "The economics of poverty traps and persistent poverty: An asset-based approach." *Journal of Development Studies* 42(2): 178-199.
- *Barrett, C.B. and M.R. Carter (2013), "The Economics of Poverty Traps and Persistent Poverty: Empirical and Policy Implications," *JDS*.
- *Dercon, S. (1998). "Wealth, risk and activity choice: cattle in Western Tanzania." *Journal of Development Economics* 55: 1-42.
- *Dasgupta, P. (1997), "Nutritional status, the capacity for work, and poverty traps," *J. Econometrics* 77: 5-37.
- Banerjee, A. and A. Newman (1993). "Occupational choice and the process of development." *Journal of Political Economy* 101: 274-298.
- Rosenzweig, M. R. and H. P. Binswanger (1993). "Wealth, Weather Risk and the Composition and Profitability of Agricultural Investments." *Economic Journal* 103(416): 56-78.
- Azariadis, C. and J. Stachurski (2005) "Poverty Traps" in P. Aghion and S. Durlauf, eds. *Handbook of Economic Growth*, volume 1. Amsterdam: Elsevier.
- Lybbert, T., C. B. Barrett, S. Desta and D. L. Coppock (2004). "Stochastic wealth dynamics and risk management among a poor population." *Economic Journal* 114: 750-777.

- Carter, M.R. and T. Lybbert (2012), "Consumption versus asset smoothing: testing the implications of poverty trap theory in Burkina Faso", *JDE* 99: 255–264.
- Carter, M. R. and J. May (2001). "One Kind of Freedom: Poverty Dynamics in Post-apartheid South Africa." *World Development* 29(12): 1987-2006.
- Adato, M., M. R. Carter and J. May (2006). "Exploring poverty traps and social exclusion in South Africa using qualitative and quantitative data." *Journal of Development Studies* 42(2): 226-247.
- Maccini, S. and D. Yang (2009), "Under the Weather: Health, Schooling, and Economic Consequences of Early-Life Rainfall" *AER* 99:3, 1006–1026.
- Hoddinott, J. (2006), "Shocks and their Consequences Across and Within Households in Rural Zimbabwe," *JDS*.

III. PRODUCTIVITY, TECHNOLOGY ADOPTION, AND AGRARIAN CONTRACTS

IIIA. Smallholder Productivity

Oct. 16

- *G. Feder, "The Relation Between Farm Size and Farm Productivity: The Role of Family Labor, Supervision and Credit Constraints," *JDE* 18 (1985): 297-313.
- *M. Carter, "Identification of the Inverse Relationship Between Farm Size and Productivity: An Empirical Analysis of Peasant Agricultural Production," *OEP* 36 (1984): 131-145.
- *S. Sherlund, C. Barrett, and A. Adesina, "Smallholder Technical Efficiency Controlling For Environmental Production Conditions" *JDE* (2002).
- M. Kremer (1993), "The O-Ring Theory of Economic Development", *QJE* 108(3): 551-575.
- A.K. Shah, S. Mullainathan and E. Shafir (2012), "Some Consequences of Having Too Little," *Science* 338, 682.
- R. Heltberg, "Rural Market Imperfections and the Farm Size-Productivity Relationship: Evidence from Pakistan," *WD* 26, 10 (1998): 1807-1826.
- C.B. Barrett, "On Price Risk and The Inverse Farm Size-Productivity Relationship," *JDE* 51, 2 (December 1996): 193-215.
- Bhalla, S.S., and P. Roy, "Mis-Specification in Farm Productivity Analysis: The Role of Land Quality," *OEP* 40 (1988): 55-73.
- D. Benjamin, "Can Unobserved Land Quality Explain the Inverse Productivity Relationship?" *JDE* (Feb. 1995): 51-84.
- J.J. Assuncao and J.H.B. Braido (2007), "Testing Household-Specific Explanations For the Inverse Productivity Relationship", *AJAE* 89(4): 980-990.
- C.B. Barrett, M.F. Bellemare and J.Y. Hou (2010), "Reconsidering Conventional Explanations of the Inverse Productivity–Size Relationship," *WD* 38(1): 88–97.
- M. Ali and D. Byerlee, "Economic Efficiency of Small Farmers in a Changing World: A Survey of Recent Evidence," *Journal of International Development*, 3, 1 (1991): 1-27.
- C. Barrett, "How Credible Are Estimates of Peasant Allocative, Scale or Scope Efficiency? A Commentary," *Journal of International Development* (1997).

IIIB. Technology adoption

Oct. 23-30

- *G. Feder, R. Just, and D. Zilberman, "Adoption of Agricultural Innovations in Developing Countries: A Survey," *EDCC* 33 (1985): 255-298.
- *A. Foster and M. Rosenzweig, "Learning By Doing and Learning from Others: Human Capital and Technical Change in Agriculture," *JPE* (1995).
- *T. Conley and C. Udry, "Learning About a New Technology: Pineapple in Ghana," *AER* (2010).
- *T.Suri, "Selection and Comparative Advantage In Technology Adoption," *Econometrica* 79(1): 159-209.
- B. Minten and C.B. Barrett (2008), "Agricultural Technology, Productivity and Poverty in Madagascar," *World Development* 36(5): 797-822.
- L. Cameron, "The Importance of Learning in the Adoption of High-Yielding Variety Seeds," *AJAE* 81 (Feb. 1999): 83-94.
- T. Besley and A. Case, "Modeling Technology Adoption in Developing Countries," *AER* 83 (May 1993): 396-402.
- R. Just and D. Zilberman, "Stochastic Structure, Farm Size and Technology Adoption in Developing Agriculture," *OEP* 35 (1983): 307-328.
- T.-K. Kim, A. Hallam and D. Hayes, "Technology Adoption Under Price Uncertainty," *JDE* (January 1992)
- D. Hennessy, "Stochastic technologies and the adoption decision," *JDE* 54 (1997).
- C.M. Moser and C.B. Barrett, "The Complex Dynamics of Smallholder Technology Adoption: The Case of SRI in Madagascar," *Agricultural Economics* (2006).
- E. Duflo, M. Kremer and J. Robinson (2011), "Nudging Farmers to Use Fertilizer: Theory and Experimental Evidence from Kenya," *AER*.
- Marenya, P.P. and C.B. Barrett (2009), "State-conditional Fertilizer Yield Response on Western Kenyan Farms," *AJAE* 91(4): 991-1006.

IIIC. Agrarian contracts

Oct. 30-Nov. 6

- *K. Otsuka, H. Chuma and Y. Hayami, "Land and Labor Contracts in Agrarian Economies: Theories and Facts," *JEL* (1992).
- *M. Eswaran and A. Kotwal, "A Theory of Contractual Structure in Agriculture," *AER* 75, 3 (1985): 352-367.
- *J.-J. Laffont and M.S. Matoussi, "Moral Hazard, Financial Constraints and Sharecropping in El Oulja," *REStud* (July 1995)
- *A. Foster and M. Rosenzweig, "A Test for Moral Hazard in the Labor Market: Contractual Arrangements, Effort and Health," *REStat*, May 1994: 213-227.
- R. Shaban, "Testing Between Competing Models of Sharecropping," *JPE* 95, 5 (1987).
- C. Bell, "A Comparison of Principal-Agent and Bargaining Solutions: The Case of Tenancy Contracts," *ETAI*.
- J.E. Stiglitz, "Incentives and Risk Sharing in Sharecropping," *REStud* 41, 2 (1974): 219-155.
- D. Newbery, "Risk-Sharing, Sharecropping, and Uncertain Labour Markets," *REStud* (1977): 585-594.

- P. Dubois, "Moral Hazard, Land Fertility and Sharecropping in a Rural Area of the Philippines," *JDE* 68:1 (2002): 35-64.
- M. Eswaran and A. Kotwal, "A Theory of Two-Tiered Labor Markets in Agrarian Economies," *AER* (March 1985): 162-177.
- G. Frisvold, "Does Supervision Matter? Some Hypothesis Tests Using Indian Farm-Level Data," *JDE* 43 (1994): 217-238.
- L. Braido (2008), "Evidence on the Incentive Properties of Share Contracts," *J. of Law and Economics* 51: 327-349.
- J.-L. Arcand, C. Ai and F. Ethier (2007), "Moral hazard and Marshallian inefficiency: Evidence from Tunisia," *JDE* 83: 411-445.

IV. UNDERSTANDING MARKET AND NON-MARKET EXCHANGE

IVA. Market Order Mechanisms and Market Participation

Nov. 13

- *J.-P. Platteau, "Behind The Market Stage Where Real Societies Exist," two parts, *JDS* (1994).
- *N. Key, E. Sadoulet and A. DeJanvry, "Transactions Costs and Agricultural Household Supply Response," *AJAE* (2000).
- *C.B. Barrett (2008) "Smallholder Market Participation: Concepts and Evidence from Eastern and Southern Africa," *Food Policy* 33(4): 299-317.
- M.F. Bellemare and C.B. Barrett, "An Ordered Tobit Model of Market Participation: Evidence from Kenya and Ethiopia," *AJAE* (2006).
- S.W. Omamo, "Transport Costs and Smallholder Cropping Choices: An Application to Siaya District, Kenya," *AJAE* (February 1998).
- C.B. Barrett, "Food Marketing Liberalization and Trader Entry: Evidence from Madagascar," *WD* 25 (May 1997): 763-777.
- M. Fafchamps and B. Minten, "Property Rights in a Flea Market Economy," *EDCC* (2001).
- E. Stephens and C.B. Barrett (2011), "Incomplete Credit Markets and Commodity Marketing Behaviour," *J. Agricultural Economics* 62(1): 1-24.
- R. Jensen (2007), "The Digital Divide: Information (Technology), Market Performance, and Welfare in the South Indian Fisheries Sector," *QJE* 122 (3): 879-924
- H.C. Michelson (2013), "Small Farmers, NGOs, and A Walmart World: Welfare Effects of Supermarkets Operating in Nicaragua," *AJAE* 95 (3): 628-649.
- J. Chamberlin and T.S. Jayne (2013), "Unpacking the Meaning of 'Market Access': Evidence from Rural Kenya," *WD*

Note: No meeting on Wednesday, Nov. 20 (apologies, but I will be out of town)

IVB. Social networks and non-market exchange

Dec. 4

- *A. Banerjee, A.G.Chandresekhar, E.Duflo and M.O. Jackson (2013), "The Diffusion of Microfinance," *Science* 341.
- *J.P. Platteau (2006), "Solidarity Norms and Institutions in Village Societies: Static and Dynamic Considerations" in *Handbook on Gift-Giving, Reciprocity and Altruism*, S. Kolm and J. Mercier-Ythier (eds.), Amsterdam: Elsevier.

- *M. Fafchamps and B. Minten (2002), "Returns To Social Network Capital Among Traders," *OEP* 54: 173-206.
- R.E. Kranton, "Reciprocal Exchange: A Self-Sustaining System," *AER* (Sept. 1996).
- B.D. Bernheim (1994), "A Theory of Conformity," *JPE* 102(5): 841-877.
- P. Krishnan and A. Sciubba (2009), "Links and Architecture in Village Networks," *Economic Journal*, 119: 917-949.
- P. Santos and C.B. Barrett (2011), "Persistent poverty and informal credit," *JDE* 96: 337-347.
- S. Chantarat and C.B. Barrett (2012), "Social network capital, economic mobility and poverty traps" *Journal of Economic Inequality* 10:299-342.
- F. Carlsson, G. Gupta, and O Johansson-Stenman (2009), "Keeping up with the Vaishyas? Caste and relative standing in India," *OEP* 61 (2009), 52-73.