

Spring 2017

ECON 6460

Agriculture and Sustainable Development Final Exam v1

Final version posted May 9th due May 16th one week later via email to mcleodassign@gmail.com. Please include your name, ECON6460 and final exam in the file name of your completed finals exam. Add a copy in pdf format to your google drive just in case. Please use the template version of this exam to add your answers after each question mark? in a different font, everyone should answer FE-2 or FE-3 and FE-6 and FE-4 or FE-5 (three questions total) FE-7 and FE-8 are EC from the midterm, please do not do them again if you answered them on the midterm. *To get my recommendations for you email me right after my the last class, I will take a look at your midterm and get back to you Thursday latest. Sections/questions in italics are extra credit for everyone and anyone. Even if you present in class, please do FE-1 and you can answer any of these questions as extra credit. EC questions FE-7 and FE-8 are from the midterm, answer them here only if you do not answer them on midterm.*

FE-1 Final Presentation revisions. Thank you for many wonderful special project/presentations. Whether or not you present in class please to take the time to do the final revisions presentation guidelines here and pasted below... If you are satisfied with your midterm grade and are sure that your final presentation meets all of the requirements, then you are done (unless you want to answer any of these questions for extra credit). Be sure to convert your presentation graphics or JPEG and/or save it in pdf format to make the file size manageable.

FE-2 Food Aid in kind, monetization vs. Cash Transfers: World Vision prefers cash transfers as opposed to direct distribution of food aid whenever it can. a) Historically U.S. AID and the USDA have preferred in kind aid. Why? What are the pros and cons direct distribution of food via FFW or “monetization” of food aid that is selling food aid in the market and then giving this cash to those who lack income or jobs). b) Changes in the [Agricultural Act of 2014](#) further increased US AID using cash aid to purchase food locally, what are the pros and cons of this approach? What is the [Bill Emerson Humanitarian Trust](#)? Why did it’s turn into mainly cash after 2008? c) why might direct delivery of food aid work best in South Sudan or the DRC? Why might relying on lower food prices be problematic in BFA or South Sudan or during a famine along the lines of those described in Sen, 1981 [Poverty and Famines](#). d) Did in-kind food aid harm Ethiopia’s poor? E) Has in-kind food aid harmed developing countries? Conventional wisdom as in David Hare’s Map of the [World at the Public Theater](#)... implies that it has, but is their really hard evidence in this regard? Discuss the notion of additionality and “graduation” in this context. Selling food aid may be helpful and cash raised can be used for cash transfers (why might both be necessary). In this context, cash transfers would likely be unconditional. Why?

FE-3 How to help the rural poor? Cash vs. Conditional Cash transfers: A) B&D In Poor Economics B&D, 2011 argue the poor were not hungry citing as evidence low average food budget shares and spending by the poor on TVs, cigarettes and alcohol. However, Banerjee, 2015 [Policies for a better-fed world](#) and Banerjee et al. 2015 below roll back on those arguments substantially. Find some quotes from these papers to highlight their position now compared with their BHP chapter arguments? How do they explain the change in their position? b) Discuss the pros and cons conditional or universal cash transfers [universal UCTs](#) the future of income transfers in developing countries. Mention case studies of Bihar India and Malawi (Baird et al. 2011). Starting with Maharashtra and Bihar province what has India done (famously) to address this problem? [IPC evaluations of Cash](#) Transfers in Africa...

FE-4 Costs and cure for food price instability. A) Why did food prices rise sharply after 2007, according to...? What explains this policy shift? B. How did this rise in food prices affect the poor in developing countries? (see the [billion hungry people lecture notes](#)). What policies help low income counties [cope with food price shocks](#)? What is the problem with export controls? C. Did these policies prevent a rise in malnutrition during 2008-2010 (how do we know this, cite data from the FAO and other malnutrition

measures... did the food price shock affect U5MR in Asia or Africa?). D. Argue for more generous U.S. Food Aid using the [2007 Ethanol Mandate](#) legislation in the U.S. as your rationale (see David Wright 2011 JEP article and his video presentation parts 1 & 2 and perhaps Zimmerman's Biofuels slides). E. The 2007 ethanol mandate was a disaster for the rural poor, but how might GMOs in feed and biofuels and ethanol mandates help prevent future price instability (if properly managed)

FE-5 Impact Evaluation: A) How is the impact of the [Millennium Villages Project](#) (MVP) being assessed? See Clemens, Sachs and McKenzie at the world bank, largely newspapers and blog entries... What is happening now with an MVP in Ghana (hint DFID)? Does Sachs anticipate a successful outcome? Why not. What was the problem with the first round of evaluations published in 2011 (Kenya)? How might its impact evaluation be impacted by its locations and the recent "African Growth miracle" (see the Morduch evaluation of a graduation program that failed... why did it fail?) b) Ironically how does the African growth miracle make it more difficult for selective interventions such as the MVP to succeed (say for example garment exports in Ethiopia... see the great run book). C) Contrast the views of JPAL, Deaton and [Ravallion re RCTs?](#) Briefly Explain how the deworming and Millennium Villages "low hanging fruit" controversy both support and undermine the case for randomized trials (hint: external validity). D) this question continues as EC FE-8 below.

FE-6 Migration, Gender and climate resilience (climate refugees?): A) Discuss how the [new economics of migration](#) provides one explanation the success of Kerala and MPESA in enhancing women's status and reducing poverty in female headed households as well high "resilience" among FHH Andersen et al. 2012 find in Mexico. a) why might sending a family member workers to cities or countries be the response to of rural households to risk and climate change. What does Andersen mean by resilient households. b) Does the gender of that migrant matter? (compare the situations the Hassans find themselves in BGD compared the Min's family in Hubei during the 1990s... see also Jack and Suri, 2016 and Briere et al. 2002 on remittances to the DR. C) Extrapolating from the experience of Min and Guimin, how roughly how many Chinese were lifted out of poverty by remittances (potentially) using Leslie Chang's *Factory Girls* description of [Min's family in Hubei](#) suggest Chapter 10. What does their mother mean when she says "we treat our daughters like sons"? Do they? Who pressured them to keep the younger siblings in school. D) Use the evidence presented by Andersen et al. to discuss where resilience comes from. Does she show or assume diversified incomes reduce risk? Why is a reliable monthly income (as opposed to lean seasons...) important for poverty reduction and child health and nutrition (see the famous *Atkin quote from his Mexico paper and Poor Economics* pasted below).

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Climate Change Diversification and Resilience

Andersen, Lykke E.; Verner, Dorte (2010) [Social impacts of climate change in Mexico](#): A municipality level analysis of the effects of recent and future climate change on human development and inequality, Development Research [Working Paper No. 2010/09 Institute for Advanced Development Studies](#) (INESAD), La Paz

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The limits of randomized trials

Baird, S., J. H. Hicks, M. Kremer, and E. Miguel (Baird et. al. 2016) "[Worms at Work](#): Long-run Impacts of a Child Health Investment." [The quarterly journal of economics](#) 131, no. 4 : 1637-1680. Or see [Baird et al. 2017](#).

*Clemens, M., and J. Sandefur. 2015. "[Mapping the Worm Wars](#): What the Public Should Take Away from the Scientific Debate about Mass Deworming." Center for Global Development Blog.

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*Ravallion, Martin (2009), "[Should the Randomistas Rule?](#)," The Economists' Voice, 6 (2)

*Givewell, 2015 Alexander Sparkman [New deworming reanalyses and Cochrane review](#)

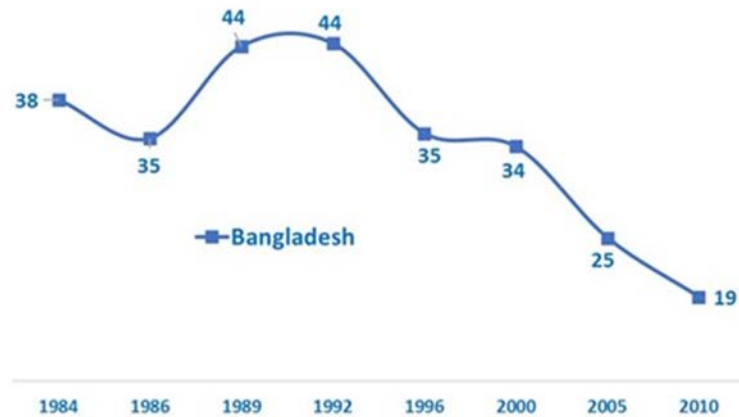
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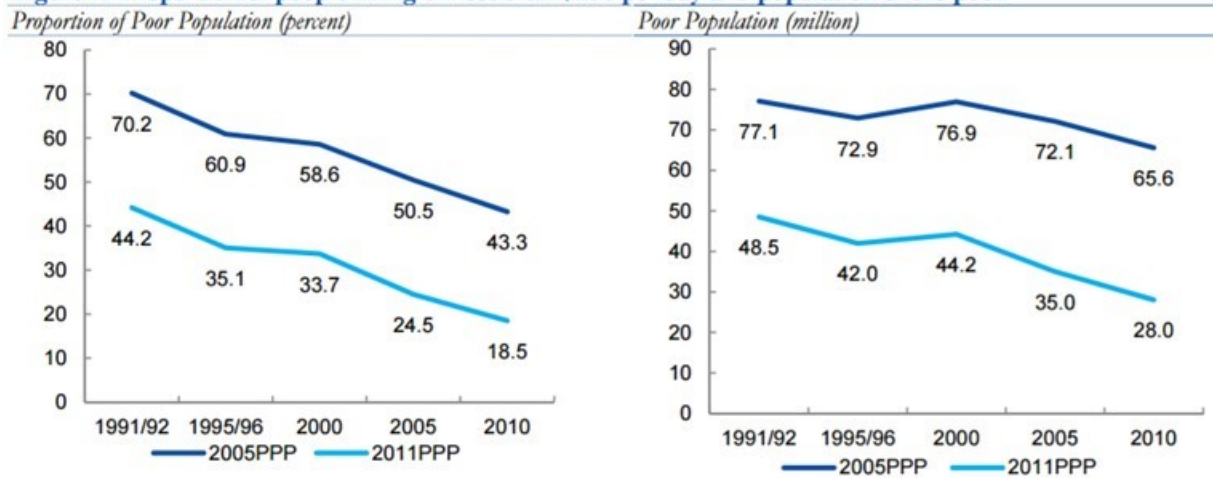
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Figure P-5 Bangladesh \$1.90 Day \$2011 PPP Poverty rates



Source: World Bank, PovcalNet: an online analysis tool for global poverty monitoring
<http://research.worldbank.org/PovcalNet/povOnDemand.aspx>

Figure 1: Proportion of people living on less than \$1.90 per day and population of the poor

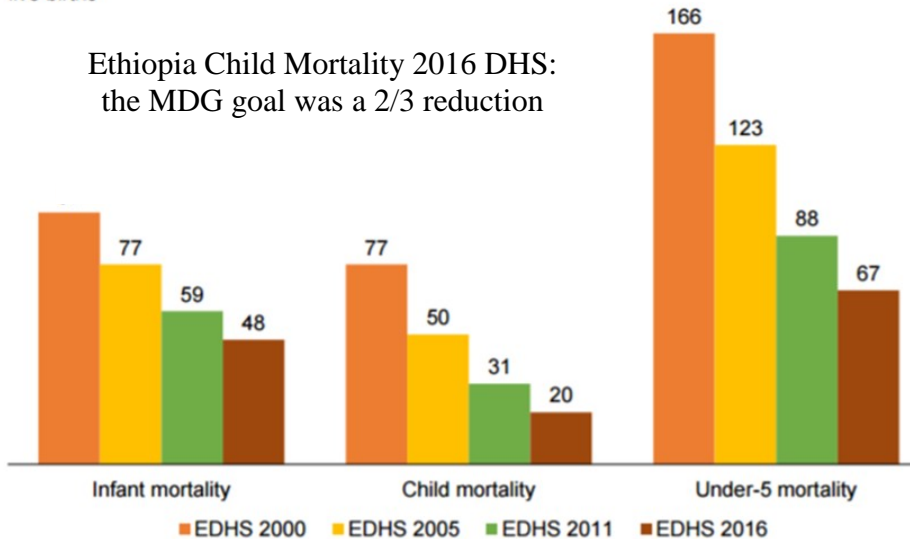


Source: World Development Indicators (June, 2016) and PovcalNet.

Resilience via diversification: with [Goats](#) and Chickens and remittances Source:Mubarak, 2016, http://faculty.som.yale.edu/mushfiqmobarak/featuredresearch/seasonal_migration.pdf

Data Sources

<http://www.childmortality.org/> CME Info is a database containing the latest child mortality estimates based on the research of the UN Inter-agency Group for Child Mortality Estimation.

Figure 4 Trends in childhood mortality, 2000-2016Deaths per 1,000
live birthsEthiopia Child Mortality 2016 DHS:
the MDG goal was a 2/3 reduction

DHS 2016 Ethiopia, <https://www.usaid.gov/sites/default/files/documents/1860/Ethiopia%20DHS%202016%20KIR%20-%20Final%2010-17-2016.pdf> www.gdsnet.org/GenderClimateChangeLatinAmerica.pdf

www.gdsnet.org/INESADGenderEthnicityClimateChangewp07_2014.pdf Community Development

FE-1.7E (previously MQ-1.4) Local farm market dynamics: Why has it been so hard to get farmers in Africa to adopt new seed varieties (as opposed to farmers in Asia, who are using Swarna seeds for example). Examples include NERICA in Uganda, fertilizer in Kenya or Mali or the Suri's influential *Econometrica* paper¹ (now on the google drive and available online on campus). Start with Suri's findings and explain them using Figure 18.16 from D&S, 2015 Chapter 18 to explain why we may observe no crowding in when food is not "traded" that is figure (a) applies not figure (b). If farmers in India, poor or not, do face a flat demand curve as in figure (18.26b) why would new seeds "crowd" in new inputs (and raise land prices). Who benefits from higher land prices? Who loses? Explain why Figure 18.26a amplifies the "lean season" problem, but figure b shifts risk to farmers who may become reluctant to take the risk of new varieties (this is a problem in India now, after extensive road building. (hint: how did Ali Zafar solve BFA's regional famine problem).

FE-1.8E Deworming's fall from grace... (Previously MQ-1.5) (a) To what extent does deworming's transition from "low hanging fruit" to questionable intervention both "validate" and the "randomista" criticisms of Deaton, Pritchett and show why the randomized trial approach works (Hint: what is the Cochrane report, does this sort of reversal occur with medical interventions)? For Givewell what created the crucial "external validity" problem for deworming (despite elegant defenses of by Clemens and Sandefur (2015) papers by colleagues and students and various blog posts by Blattman for example; Miguel and Kremer were and are very well respected economists...). (b) Sketch out a scenario under which deworming children stages a comeback as a health and education intervention. What makes this comeback unlikely (recall they are prescribing a pill...). What if Il Ninos weather extremes become frequent events? When would you recommend deworming as an education and health policy for children?

¹ Tavneet Suri (2011) Selection And Comparative Advantage In Technology Adoption, *Econometrica*, Vol. 79:1 159-209.

Green Revolution References: *short briefings, quick reads with nice pictures...

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Shahidur R. Khandker, Wahiduddin Mahmud (2012) [Seasonal Hunger and Public Policies](#): Evidence from Northwest Bangladesh, the World Bank.

*The GiveWell Blog, 2017, Why we're considering No Lean Season as a potential 2017 top charity

*No Lean Season, [January 2016 Update](#) and [Evidence Action](#) posted on Givewell blog) [Phone call notes](#)

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Climate Change Diversification and Resilience

Andersen, Lykke E.; Verner, Dorte (2010) Social impacts of climate change in Mexico: A municipality level analysis of the effects of recent and future climate change on human development and inequality, Development Research Working Paper Series, No. 2010/09 Institute for Advanced Development Studies (INESAD), La Paz <https://www.econstor.eu/bitstream/10419/45680/1/641464479.pdf>

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Worm wars and the limits of randomized trials

Baird, S., J. H. Hicks, M. Kremer, and E. Miguel (Baird et. al. 2016) "[Worms at Work](#): Long-run Impacts of a Child Health Investment." [The quarterly journal of economics](#) 131, no. 4 : 1637-1680. Or see [Baird et al. 2017](#).

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*Chris Blattman, 2015 [10 things I learned from the Worm wars](#)

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Duflo, Esther, Rachel Glennerster, and Michael Kremer (2007), "Using Randomization in Development Economics: A Toolkit," Handbook of Development Economics, 4, 3895-3962

*Deaton, Angus (2009), "Instruments of Development: [Randomization in the Tropics](#), and the Search for the Elusive Keys to Economic Development," NBER Working Paper No. 14690

Roy, Andrew Donald. "[Some thoughts on the distribution of earnings.](#)" Oxford economic papers 3, no. 2 (1951): 135-146.

“Attention to the role of brawn suggests that health-based development, similar to the experience in Bangladesh, will, in the absence of any other changes, increase the schooling of women relative to men, increase occupational differentiation by gender and thus differences in returns to schooling by gender, but increase the gap in earnings between men and women. Similarly, a policy that favors agricultural development - a sector in which brawn has relatively high payoffs - will augment the earnings of men, who have an absolute advantage in brawn, relative to women and increase the gender division of labor across activities. In contrast, a policy promoting openness to trade and foreign investment that changes the occupational mix in favor of jobs that are skill-intensive will augment the earnings of women relative to men, increase schooling investments by women relative to men, and lower the gap in schooling returns.” (Pitt et al. 2012 section 9)

Due to the importance of soil preparation, societies that traditionally practiced plough agriculture—rather than shifting hoe cultivation—tended to develop a specialization of production along gender lines. Men tended to work outside the home in the fields, while women specialized in activities within the home. This division of labor then generated norms about the appropriate role of women in society. Societies characterized by plough agriculture, and the resulting gender-based division of labor, developed a cultural belief that the natural place for women is within the home. Alesina, 2013. P. 475

1. Impact evaluation and particularly randomized trials has become standard for assessing the develop policies. The goal of most of these policy experiments is to demonstrate external validity by being “scaled up” which is what happened to deworming. (a) Briefly map out the controversy surrounding Kremer and Miguel’s (2004) *Econometrica* paper. In your view was it too early to “scale up” mass deworming (as Givewell, 2015 and J-PAL did? Deworming should be justified on its own right (but see massive India experiment), but not listed as cheap way of improving school performance. (b) How did Jack and Suri’s analysis of MPESA’s impact and the various Progresia impact evaluations avoid these problems (including the “moral” issue identified by Roodman in his blog entry on randomized trials. (c) Why is Clemens and Sandefur (2015) to road map out of this debate incomplete? What about the 1998 Kenya El Nino problem? Has it been dealt with?
2. There are several dimensions of Bangladesh’s growth miracle: agricultural, health, education, malnutrition, fertility, and exports. Gender is of course a cross-cutting issue. (a) Identify one of these topics and prepare at least 4 slides per person presenting evidence on this issue to the class (we will put these online). For example

the findings brains vs. brawn Roy model tested in Bangladesh by Pitt, Rosenzweig and Hassan (2012) and by Baird et al. (in Kenya suggest health interventions and trade and export jobs favor women over men, whereas agricultural innovation favors men (“brawn”). However, Behrman et. al (2009) find no gender bias and that only “brains” or skills increase wages. (b) briefly explain the economic reasoning behind these results. Does it seem plausible that the lower “opportunity cost” of female explains increased female education? What other interventions in Bangladesh and Kenya (and Mexico) might explain increased reduced gender bias in education (c) Kabeer (2012,2017), Heath (2013) offer other explanations of increased female education. How can use the DHS for BDG to check this? Do it, put some data for BDG into your slides (for example).

To Specialize or Diversify: Agricultural Diversity and Poverty Dynamics in Ethiopia Michler, J D and Josephson, A L (2017) To Specialize or Diversify: Agricultural Diversity and Poverty Dynamics in Ethiopia. World Development, 89. pp. 214-226. ISSN 0305-750X

Intensify or diversify? Agriculture as a pathway from poverty in eastern Kenya, Series Paper Number 40 Verkaart, S and Orr, A and Harris, D and Claessens, L (2017) Intensify or diversify? Agriculture as a pathway from poverty in eastern Kenya, Series Paper Number 40. [Socioeconomics Discussion Paper Series] <http://oar.icrisat.org/9937/> http://oar.icrisat.org/9937/1/S_Verkaart_et_al_2017_ISEDPS_40.pdf

Welfare impacts of improved chickpea adoption: A pathway for rural development in Ethiopia? Verkaart, S and Munyua, B G and Mausch, K and Michler, J D (2017) Welfare impacts of improved chickpea adoption: A pathway for rural development in Ethiopia? Food Policy, 66. pp. 50-61. ISSN 0306-9192

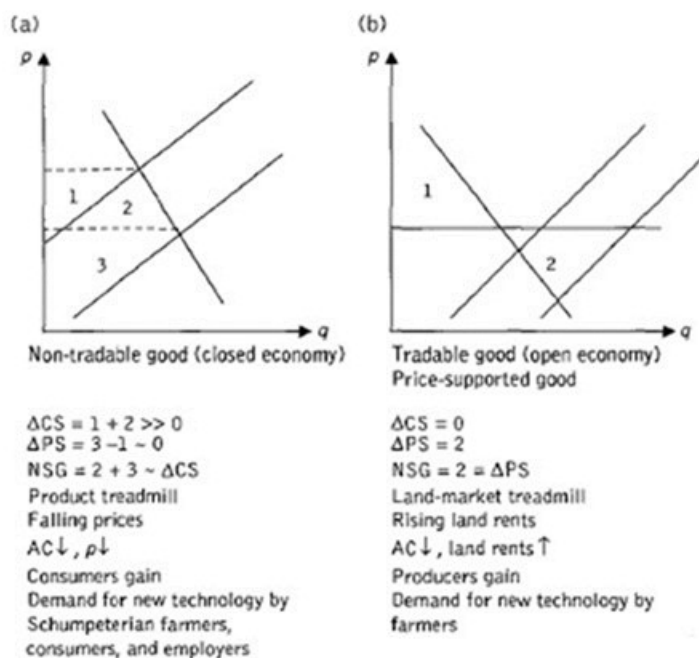


Figure 18.16 Welfare gains from technological change for a non-tradable good (product-market treadmill) (a) and a tradable good (land-market treadmill) (b)

Resilience via diversification: with Goats and Chickens and remittances

See also www.gdsnet.org/DejanvrySadouletChapter18AgricDevelop.pdf