

ANDREW HOBBS

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EDUCATION

Ph.D. Agricultural and Resource Economics, *University of California, Davis* 2015-2020 (Expected)

- Fields: Development Economics, Environmental Economics.
- Referee: American Journal of Agricultural Economics, Journal of Development Studies.

M.A. Economics, *University of British Columbia* 2010

Honors B.S. Economics, B.A. International Studies, *University of Utah* 2009

CURRENT RESEARCH

Household Decisionmaking Under Risk: Evidence from Samburu County, Kenya,

Intra-household models have explored a range of ways couples may make decisions in different circumstances, and many of those models have implications for decision-making in the face of risk. I develop a tablet-based game that simulates pastoralist life over several years. I obtain rich data that allow me to measure individual and household risk preferences and use structural methods to evaluate how well observed decisions fit existing theories. I also test how varying the framing of insurance to emphasize its benefits for the household versus livestock differentially affects women and men.

Computer Vision for Drought Resilience,

Index insurance for farmers relies on accurate satellite-based estimates of yield or forage quality. This project couples new, high resolution satellite data with computer vision techniques to develop algorithms that will lead to better indices and therefore better farmer outcomes.

Do Droughts Drive Deforestation? Evidence From Mozambique,

Many Mozambican farmers subsist by a combination of farming and gathering of forest products, especially charcoal. When droughts strike, farmers rely more heavily on charcoal, increasing forest loss. This study uses satellite data to measure impact of drought on deforestation, and shows that more frequent, more severe droughts due to climate change are also leading to forest loss through this channel.

Combining index-based livestock insurance with a poverty graduation program in Kenya,

with Michael Carter, Andrew Mude, Nathan Jensen, and Nobu Ikegami

Kenya's Index-Based Livestock Insurance (IBLI) program has proven successful in improving quality of life in several arid areas in northern Kenya. BOMA's Rural Entrepreneur Access Program (REAP) has also proven successful in alleviating poverty by providing women business opportunities to support their families during the dry months. We are implementing a randomized controlled trial to test whether a combination of the two yields greater benefits than the sum of the individual effects.

EMPLOYMENT

Adjunct Professor, *University of California, San Francisco* Fall 2019

- Developed materials and taught Masters level course in Development Economics.

Graduate Student Researcher, *University of California, Davis* 2016-Present

- Worked with Michael Carter and the International Livestock Research Institute to implement a Randomized Controlled Trial (RCT) on the impact of a women's poverty graduation program and an index-based livestock insurance product.

Graduate Student Instructor , *University of California, Davis* 2016

- Led discussion sections and grading for upper division course in Environmental Economics.

Analyst, *Climate Policy Initiative* 2010-2016

- Led Climate Policy Initiative's (CPI) work program on agriculture and forest protection in Mozambique, working closely with Barclays Africa on agricultural credit initiatives, value chain analyses, and land tenure issues.
- Managed projects analyzing the impact of solar leasing in California, building codes in the U.S., land use policy in Mozambique, and oil refinery emissions in the European Union.
- Conceptualized, designed, and coded the California Carbon Dashboard, an interactive website that informs stakeholders about California's carbon price and related policies.
- Supported research on concentrating solar power in South Africa and building energy efficiency in China, Germany, and the United States.

Graduate Research/ Teaching Assistant, *University of British Columbia* 2009 - 2010

- Developed novel statistical methodology for groundbreaking research on the determinants of equity share splits among founders of startups.
- Taught introductory and development economics courses for classes of 20 and 120 students throughout the year.

Research Assistant, *University of Utah Department of Pediatrics* 2007 - 2009

- Managed data collection and developed and maintained a database for a study focused on identifying the healthcare needs of Spanish-speaking families of children with special healthcare needs such as severe ADHD, neurological problems, physical disabilities, and chronic illnesses.

Senior Project Supervisor, *Amigos de las Américas, Chontales, Nicaragua* 2008

- Worked with PLAN Nicaragua to develop a program focusing on environmental stewardship, health promotion, and youth leadership.
- Trained and supported a team of six supervisors and 56 volunteers in 23 Nicaraguan communities.

PRESENTATIONS

"Household Decisions Under Risk: Evidence from Samburu County, Kenya." American Agricultural Economics Association, July 21, 2019, Atlanta, Georgia.

"Durable Empowerment: Designing Insurance to Maximize Benefits for Women" Digital Credit Observatory Women's Economic Empowerment Convening, June 27, 2019, Berkeley, California.

"Computer Vision for Drought Resilience" Computer Vision and Pattern Recognition (CVPR 2019), June 15, 2019, Long Beach, California.

"Do Droughts Drive Deforestation?" Association of Environmental and Resource Economics Summer Conference, May 30, 2019, Incline Village, California.

"Household Decisions Under Risk: Evidence from Samburu County, Kenya." Departmental Seminar, University of San Francisco Department of Economics, January 31, 2019, San Francisco, California.

"More frequent flooding accelerates deforestation in Mozambique." Geo4Dev, November 15, 2018, Berkeley, California.

"Learning about pastoralist decisionmaking with games." International Center for Evaluation & Development Evidence to Action Conference, July 24, 2018, Nairobi, Kenya.

"Lessons for South Africa from the solar leasing boom in California." Solar Indaba, September 4, 2013, Cape Town, South Africa.

"Financial Incentives for Energy Efficient Retrofits in Buildings." ACEEE Buildings Summer Study, August 12, 2012.

"Remittances, Poverty, & Inequality in Nicaragua." University of Utah Undergraduate Research Symposium, Salt Lake City, UT, USA, March 31, 2009.

PUBLICATIONS

"Challenges and Opportunities for Efficient Land Use in Mozambique: Taxes, Financing, and Infrastructure" (2016). *Climate Policy Initiative*. with Amanda de Albuquerque

"The California Carbon Dashboard." (2013). *Climate Policy Initiative*. Interactive Website.

"Improving Solar Policy: Lessons from the solar leasing boom in California." (2013). *Climate Policy Initiative*. with Elinor Benami, Brendan Pierpont, and Uday Varadarajan.

"Building Energy Efficiency in China, Germany, and the United States." (2012). *Climate Policy Initiative*. with Hermann Amecke, Aleksandra Novikova, Yang Xiu, and Shengyuan Zhang.

"Clearing the Air: Carbon Pricing and Local Air Pollution in California." (2012). *Climate Policy Initiative*. with Kath Rowley.

"Codes to Cleaner Buildings: Effectiveness of U.S. Building Energy Codes." (2011). *Climate Policy Initiative*. with Jeff Deason.

"Measuring the effect of bi-directional migration remittances on poverty and inequality in Nicaragua." (2012). *Applied Economics*, Volume 44, Issue 19.

SKILLS

- Economic modeling, econometric analysis, machine learning, statistical methods, GIS analysis, and financial modeling.
- Full professional proficiency in Spanish; proficient in Portuguese.
- Data analysis and numerical methods in python and R.
- Visualization and analysis in Google Earth Engine, QGIS, and D3.js.