

# Karen Ortiz-Becerra

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## Education

Ph.D. Agricultural and Resource Economics, University of California Davis, 2022 (expected)

Dissertation Title: Essays on Development Economics and Applied Econometrics

Committee: Ashish Shenoy (chair), Michael Carter, Dalia Ghanem, Steve Boucher

M.S. Economics, Universidad de Los Andes, Colombia, 2012

B.A. Economics, Universidad de Los Andes, Colombia, 2010

## Research & Teaching Fields

Primary: Development Economics, Applied Econometrics

Secondary: Labor Economics, Political Economy

## Research

### *Working Papers*

1. Land Consolidation and Rural Labor Markets: Theory and Evidence from Colombia - *Job Market Paper*
2. Testing Attrition Bias in Field Experiments - *Revise and Resubmit at Journal of Human Resources* (with Dalia Ghanem and Sarojini Hirshleifer)
3. Correcting Attrition Bias via Changes-in-Changes (with Dalia Ghanem, Sarojini Hirshleifer, and Désiré Kédagni)

### *Work in Progress*

1. Forced Displacement and Early Nutritional Development - *Data Analysis*
2. The Economic Impacts of Medical Drone Delivery - *Data User Agreement in Progress* (with Oscar Barriga-Cabanillas and Aleksander Michuda)
3. Industries, Employment, and Clientelism in Local Economies - *Data Requested*

## Teaching Experience

Econometric Methods (PhD), Teaching Assistant to Prof. Dalia Ghanem (Spring 2019)

Economics of Agriculture (M.S.), Teaching Assistant to Prof. Julian Alston (Fall 2017)

Development Economics, Teaching Assistant to Prof. Travis Lybbert (Winters 2019,2021)

Agricultural Labor, Teaching Assistant to Prof. Edward Taylor (Spring 2018)

Econometrics for Business Decisions, Teaching Assistant to Prof. Dalia Ghanem (Spring 2021)

Econometric Theory and Applications, Teaching Assistant to Prof. Aaron Smith (Fall 2018 , Fall 2020)

Intermediate Microeconomics, Teaching Assistant to Prof. Kristin Kiesel (Winter 2017, Summer 2018)

## Fellowships & Awards

**2021:** UC Davis Bert and Nell Krantz Fellowship

**2019:** UC Davis Provost's Dissertation Year Fellowship, UC Davis Henry A. Jastro Graduate Research Award, UC Davis Graduate Student Travel Award

**2015:** UC Davis Nonresident Tuition Fellowship

**2014:** Bursary Scholar for Global Violence Reduction Conference at University of Cambridge

**2006:** Scholarship for Undergraduate Studies from The Carvajal Foundation (4 years)

## Presentations

**2021:** LACEA-RIDGE Job Market Showcase, LACEA-LAMES Annual Meeting, 14th Annual Meeting Impact Evaluation Network of The Latin American and Caribbean Economic Association (LACEA), International Association for Applied Econometrics, Midwest International Economic Development Conference, Association for Mentoring & Inclusion in Economics 1st Workshop in Applied Microeconomics

**2020:** AAEA Annual Meeting, Seminar on Applied Economics at The Colombian Central Bank

**2019:** Agricultural & Applied Economics Association (AAEA) Annual Meeting

**2014:** Global Violence Reduction Conference at University of Cambridge

## Policy Publications

1. Un Análisis de la Criminalidad Urbana en Colombia (with Daniel Mejia and Daniel Ortega), Banco de Desarrollo de America Latina CAF, 2015

2. Innovation and Employment: Evidence from Colombian Manufacturing Firms (with Alejandro Caballero, Monica Parra, and Maria Retana), The World Bank, 2011

## Professional Experience

### **Department of Agricultural and Resource Economics, UC Davis**

Graduate Student Researcher for Professor Steve Vosti, 2021-present

Graduate Student Researcher for Professors Steve Boucher and Richard Sexton, 2017-2018

Graduate Student Researcher for Professor Dalia Ghanem, Summer 2017

### **Inter-American Development Bank, Washington DC**

Consultant for the Education Division, 2014-2015

Consultant for the Citizen Security Division, 2013-2014

### **The World Bank, Washington DC**

Consultant for the Chief Economist's Office for Latin America and the Caribbean, 2012-2013

### **Department of Economics, Universidad de Los Andes, Colombia**

Research Assistant to Professor Raquel Bernal, 2011-2012

### **Fedesarrollo, Colombia**

Research Assistant to Dr. Monica Parra, 2010-2011

## Published Software

ATTREGTEST: A Stata module to implement regression-based attrition tests

## Skills and Service

Languages: English (fluent), Spanish (native)

Computer: Stata, Python, R, L<sup>A</sup>T<sub>E</sub>X

Service: Co-founder of the UC Davis Econometrics Reading Group

## References

### **Ashish Shenoy**

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### **Michael Carter**

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### **Dalia Ghanem**

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### **Steve Boucher**

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## Working Papers

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### **Land Consolidation and Rural Labor Markets: Theory and Evidence from Colombia**

*(JOB MARKET PAPER)*

The consolidation of land in large farms is accelerating in many developing countries. This paper studies the implications of land consolidation on rural employment and workers' welfare. I develop a general equilibrium model of local labor markets that considers both farm and nonfarm labor. Large-farm consolidation affects the demand for farm labor via labor intensity and the nonfarm labor demand through non-homothetic consumption growth. The model shows that consolidation may reduce workers' income if the pull response in the nonfarm sector is small relative to the shift in farm labor demand. I examine this question in the Colombian setting by assembling a novel dataset and leveraging quasi-experimental variation in the ability of rural counties to respond to a trade shock that changed land use. Regions with an increase in large-farm consolidation experienced a decline in the share of agricultural labor and a sizeable increase in unemployment rates. These findings shed light on the distributional impacts of consolidation across individuals and the potential implications of structural transformation within rural economies.

### **Testing Attrition Bias in Field Experiments** (with Dalia Ghanem and Sarojini Hirshleifer)

*Revise and resubmit at Journal of Human Resources*

We approach attrition in field experiments with baseline data as an identification problem in a panel model. A systematic review of the literature indicates that there is no consensus on how to test for attrition bias. We establish identifying assumptions for treatment effects for both the respondent subpopulation and the study population. We propose randomization and regression-based procedures to test their sharp implications. We then relate our proposed tests to current empirical practice, and demonstrate that the most commonly used test can over-reject internal validity. Simulations and applications further support the relevance of our analysis.

### **Correcting Attrition Bias via Changes-in-Changes** (with Dalia Ghanem, Sarojini Hirshleifer, and Désiré Kédagni)

*Draft Available Upon Request*

Attrition is a common and potentially important threat to internal validity in treatment effect studies. We extend the changes-in-changes approach to identify the average treatment effect for respondents and the entire study population in the presence of attrition. Our method can be applied in randomized experiments as well as difference-in-difference designs. A simulation experiment points to the advantages of this approach relative to one of the most commonly used approaches in the literature, inverse probability weighting. The application of our proposed corrections is illustrated using an outcome from a large-scale randomized experiment.

## Work in Progress

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### **Forced Displacement and Early Nutritional Development**

*Status: Data Analysis*

Forced displacement is one of the main development challenges in developing countries. Of the 82.4 million forcibly displaced people worldwide, 86% are hosted in low and middle-income countries (UNHCR, 2020). The goal of this paper is to estimate the impact of internal displacement on early nutrition and health. Using a rich dataset of households displaced during the conflict in Colombia, I compare siblings born before and after the forced migration took place. This analysis will shed light on the effects of forced migration on the accumulation of human capital and its implications for public policies targeted at displaced children.

### **The Economic Impacts of Medical Drone Delivery** (with Oscar Barriga-Cabanillas and Aleksander Michuda)

*Status: Data User Agreement in Progress*

The lack of road infrastructure can hinder access to vaccines and medicines necessary to promote health. Unmanned aviation drones are a new technology that can help deliver these health supplies in remote locations. Using a novel dataset from an emergency drone delivery service and quasi-experimental variation in its radius of influence, we examine the effects of this new technology on health outcomes. This data will also allow us to examine effects on local employment. This new technology employs a considerable amount of people across the different distribution centers and, thereby, has the potential to prompt a shift of labor out of the agricultural sector.

### **Industries, Employment, and Clientelism in Local Economies**

*Status: Data Requested*

Public jobs account for a substantial share of rural non-farm employment. These jobs are usually formal and offer high earnings prospects. In this paper, I explore the political economy implications of the composition of non-farm employment. In particular, I examine whether towns with agro-industries display a lower incidence of patronage. I study this hypothesis using a rich household survey that elicits the willingness to sell the vote in return for a favor in rural Colombia. The results of this study will shed light on the relationship between the political process and the transformation of rural economies.