

## CARLY D. TRACHTMAN

### Contact Information

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### Doctoral Studies

University of California, Berkeley  
 PhD, Agricultural and Resource Economics, Expected completion May 2022  
 DISSERTATION: "Community-based Targeting and Resource Allocation in Developing Countries"

PRIMARY FIELD: Development Economics  
 SECONDARY FIELDS: Agricultural Economics, Behavioral/Experimental Economics

### References

<u>Professor Ethan Ligon</u> ligon@berkeley.edu +1 (510) 859-3264	<u>Professor Jeremy R. Magruder</u> jmagruder@berkeley.edu +1 (510) 643-8742	<u>Professor Elisabeth Sadoulet</u> esadoulet@berkeley.edu +1 (510) 861-0820
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### Placement Officers

<u>Professor Sofia Villas-Boas</u> sberto@berkeley.edu +1 (510) 409-4341	<u>Professor Max Auffhammer</u> auffhammer@berkeley.edu +1 (510) 643-5472	<u>Diana Lazo</u> lazo@berkeley.edu +1 (510) 642-3345
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### Prior Education

<b>UC Berkeley</b>	M.S. in Agricultural and Resource Economics	2018
<b>Lafayette College</b>	B.A. in Economics and Mathematics, with Honors in Economics	2016

### Prior Employment

<b>UC Berkeley</b> , Graduate Student Researcher (Drs. Ligon, Berck, Zilberman, Sadoulet, de Janvry)	2016 - 2020
<b>Lafayette College</b> , Undergraduate Researcher (Dr. David Stifel)	2014 - 2015

### Teaching

<b>UC Berkeley</b>	Master of Development Practice, <i>Math Camp</i> , (served as Instructor of Record)	2021
<b>UC Berkeley</b>	Department of ARE, <i>Introductory Applied Econometrics</i> , Jeremy Magruder	2019
<b>UC Berkeley</b>	Department of ARE, <i>Economic Development</i> , (served as Instructor of Record)	2019
<b>UC Berkeley</b>	Department of ARE, <i>Economic Development</i> , Marco Gonzalez-Navarro	2018
<b>Lafayette College</b>	Department of Math, <i>Differential Calc. &amp; Econ. Modelling</i> , Thomas Yuster	2016
<b>Lafayette College</b>	Department of Economics, <i>Intermediate Microeconomics</i> , Ute Schumacher	2014

### Grants, Fellowships, and Awards

2021	ARE Summer Grant (\$3,000), Certificate of Teaching and Learning in Higher Education
2020	CEGA Targeting Aid Better Grant (\$58,000; with Sena Agyepong, Angela Owusu-Ansah, and Ethan Ligon), CEGA EASST Grant (\$15,000; with Ethan Ligon and Muthoni Ng'ang'a), Sacheti Family Fellowship (\$1,000) Teaching Effectiveness Award (\$500), Outstanding Graduate Student Instructor Award
2017	CEGA Digital Credit Observatory grants (\$66,500; with Ethan Ligon, and Ketki Sheth)
Earlier	Phi Beta Kappa, Lafayette College Department of Economics Award for Scholastic Excellence

### Languages

English (native), Spanish (advanced)

**Job Market  
Paper**

**“How much do our neighbors really know?: The limits of community-based targeting” (JOB MARKET PAPER)** with Yudistira Hendra Permana and Gumilang Aryo Sahadewo [[Text](#)]

Abstract.

A classical motivation for using information provided by the local community to target social benefits in developing countries is that community members may have more current, dynamic welfare information about others than a centralized program implementer. However, there is little direct evidence supporting this claim, which mostly relies on correlations between community-provided information and survey-collected welfare metrics. To understand what information community members have and use in targeting, we conduct lab-in-the-field experiments and community meeting exercises with 300 families in Purworejo, Central Java. Participants individually ranked other community members based on specific welfare benchmarks (consumption, neediness, and assets) and also completed targeting tasks. We find that community-held welfare information is distinct from information captured using standard survey methods, and seems to reflect longer-term fixed attributes, rather than dynamic welfare information. Accordingly, community members use longer-term wealth information to predict dynamic welfare and to target social benefits. Moreover, we find that community information about more dynamic measures does not outperform simple proxy means test scores in predicting more dynamic survey welfare metrics. Finally, we find community members' information sets are fairly concordant, and rankings constructed during community meetings do not seem to more closely reflect survey-collected welfare metrics. These findings suggest that community-based targeting methods may be useful in identifying long-term poverty, but are less useful in identifying acute short-term distress.

**Selected  
Publications**

**“Introducing quality certification in staple food markets in Sub-Saharan Africa: A review of evidence”** with Gashaw Abate, Tanguy Bernard, Alain de Janvry, and Elisabeth Sadoulet. *Food Policy*, Forthcoming. [[Text](#)]

Abstract.

Third party quality certification can be used to reduce transaction frictions caused by asymmetric information in value chains. Such certification may help to secure the competitiveness of smallholder farmers in domestic markets for staple crops in Sub-Saharan Africa (SSA) in the face of rising competition with high quality imports. Yet, while frequent in high value export crops, quality certification is still rare for staple crops. To understand why this discrepancy persists, we develop a model with four sufficient conditions for the functionality of certification in a value chain—willingness to pay for quality by downstream agents, upstream competition among traders with pass-through of quality-price premiums to farmers, existence of cost-effective certification, and farmers' capacity to respond to certification by enhancing quality. We show that if these conditions hold, certification should theoretically lead to farmers receiving higher prices for higher quality goods, increasing investment in quality-enhancing inputs, and experiencing welfare gains in response to this quality enhancement. To see if these conditions and results hold in practice, we turn to evidence from a country-level diagnostic survey and from results obtained by others. We find that while certification systems exist in most countries surveyed, evidence of downstream willingness to pay for quality and of price premiums paid to farmers for quality is uneven. However, in cases where quality price premiums do exist, we find evidence that producers respond by enhancing quality. We conclude that policymakers can promote quality certification in staple chains by first ensuring that the four conditions we identify hold.

**“Urban Networks and Targeting: Evidence from Liberia”** with Lori Beaman, Niall Keleher, and Jeremy Magruder; *American Economic Association Papers and Proceedings*, 2021. [[Text](#)]

Abstract.

Welfare information held in social networks may be useful in targeting social benefits. In this paper, we ask residents of Monrovia, Liberia to identify poor neighbors and target an unconditional cash transfer to reveal the quality of information that can be extracted from this urban network. We did so in three different ways: asking people at random who should receive the transfer; asking leaders who should receive the transfer; and asking random people to nominate neighbors to identify who should receive the transfer. These individuals were asked to report on whether various neighbors were in the poorest 20% of households in their block, as well as nominate up to two of their neighbors to receive a one time cash transfer of around \$80. We find that all three of these approaches led to better targeting than would be achievable by random selection. The gains, however, were modest in each of these approaches, and none excelled over the others. In a broad sense, we also found that all three groups have limited knowledge of community poverty, as demonstrated by their low accuracy at determining which community members are poorest both based on per capita consumption and proxy means score benchmarks. This is despite social networks in this context being quite stable (as neighbors have resided in the same community for about a decade), and poor households being highly integrated in these networks.

**Selected  
Publications  
(continued)**

**“Recycling Policies, Behavior and Convenience: Survey Evidence from the CalRecycle Program.”** with Peter Berck, Marshall Blundell, Gabriel Englander, Samantha Gold, Shelley He, Janet Horsager, Scott Kaplan, Molly Sears, Andrew Stevens, Carly Trachtman, Rebecca Taylor, and Sofia B. Villas-Boas; *Applied Economic Perspectives and Policy*, 2021. [[Text](#)]

Abstract.

AB2020 established a deposit-refund system in California, where consumers are reimbursed the California Redemption Value (CRV) upon recycling eligible containers at a recycling center. We study recycling under this policy, focusing on consumer convenience, reported recycling and diversion behavior, and responses to changes in the CRV amount. We find that consumers prefer nearby centers with flexible operating hours and short waiting times. While the CRV induces recycling, an increase in CRV would not lead to major recycling increases, given the limited number of containers entering trash streams. Finally, most diverted containers are taken from trash streams, not curbside recycling bins.

**“What explains low adoption of digital payment technologies? Evidence from small-scale merchants in Jaipur, India.”** with Ethan Ligon, Badal Malick, and Ketki Sheth; *PLoS ONE*, 2019. [[Text](#)]

Abstract.

The availability of digital payment technologies (such as internet banking, mobile money, and credit/debit cards) has rapidly increased in the developing world, and is a cornerstone for financial inclusion initiatives in developing countries. Despite significant efforts to promote digital payments, rates of adoption remain modest in some low-income countries. In particular, the rate of adoption in India remains low despite significant efforts to promote adoption. In this paper, we consider possible reasons for the low rates of adoption among merchants in Jaipur, India with small fixed-location store enterprises. Using survey data for 1,003 merchants, we find little evidence that supply-side barriers to obtaining necessary infrastructure or meeting prerequisite requirements to adopt digital payments explain the low level of adoption. Merchants are able to obtain infrastructure to transact digitally (such as bank accounts and smart phones), fees on digital platforms are affordable, and merchants are sufficiently literate to be able to use digital payment systems. We conclude that adoption is both feasible and inexpensive. Therefore, low rates of adoption do not appear to be the result of supply-side barriers, but due rather to demand-side factors or taxes. We find direct evidence of such demand-side factors, such as a perceived lack of customers wanting to pay digitally, and concerns that records of mobile payments might increase tax liability. Our results thus suggest that simply lowering the costs associated with adopting these technologies is unlikely to be successful in increasing adoption of digital payments.

**“Food markets’ structural empirical analysis: a review of methods and topics.”** with Celine Bonnet, Molly Sears, and Sofia Villas-Boas; *European Review of Agricultural Economics*, 2018. [[Text](#)]

Abstract.

We review the current literature on applied policy analysis and empirical structural food industrial organisation research. Within that context, we provide an overview on the state of research and summarise the core problems researchers face when estimating the demand and structural supply models implemented in applied research to date. We focus on important themes, such as providing a better understanding of vertical relationships in food markets, price formation, competition issues, environmental and nutritional policies.

**Research  
Papers**

**“Reduce, Reuse, Redeem: Deposit-Refund Recycling Programs in the Presence of Alternatives”** with Peter Berck, Molly Sears, Rebecca Taylor, and Sofia Villas-Boas. *Revise and Resubmit at AJAE* [[Text](#)]

Abstract.

We estimate consumer preferences and willingness to pay for current beverage container recycling methods, including curbside pick-up services, drop-off at government-subsidized recycling centers, and drop-off at non-subsidized centers. Using a representative online and telephone survey of California households, we estimate a discrete choice model that identifies the key attributes explaining consumers’ beverage container disposal decisions: the refund amount (paid to consumers only if they recycle at drop-off centers), the volume of recyclable material generated by the household, and the effort associated with bringing recyclable materials to recycling centers. Additionally, we use counterfactual policy analysis to show that increasing the refund amount increases overall recycling rates, with the largest changes in consumer surplus accruing to inframarginal consumers, who are on the boundary between taking containers to recycling centers and recycling using curbside pick-up, namely white and higher income consumers. Conversely, we show that eliminating government-subsidized drop-off centers does not significantly alter consumer surplus for any major demographic group, and has little impact on recycling rates.

## Research in Progress

**“Using IMUE to Improve Targeting to LEAP Beneficiaries in Ghana”** with Sena Agyepong, Angela Owusu-Ansah, and Ethan Ligon.

Abstract.

The Government of Ghana’s flagship social protection program, Livelihood Empowerment Against Poverty (LEAP), provides cash transfers and free health insurance to nearly a quarter million extremely poor Ghanaian households. But the LEAP program lacks resources to reach all extremely poor households, and faces difficulties in targeting the most vulnerable households under their proxy means-based approach based. In this project, we construct an alternative welfare index, incorporating estimation of households’ marginal utility of expenditure on different goods that predicts both household poverty, and which households will benefit most from the cash transfer. By using the new index for targeting, the Ghanaian government should be able to identify households for whom cash transfers will have the largest benefit.

**“Understanding Gender-Specific Constraints to Agricultural Technology: Evidence from Cassava Farming in Kenya.”** with Ethan Ligon and Muthoni Ng’ang’a.

Abstract.

Female subsistence farmers in developing countries often have lower levels of agricultural productivity than men, partially due to lower adoption rates of agricultural technologies. These lower adoption rates may be due to lack of physical or informational access to new technologies, among other explanations. In this study, we consider these two classes of explanations of low technology use among females, and consider the relative impacts of interventions designed to combat each. We consider the technology of improved cassava in Murang’a County, Kenya, a more climate-resistant maize substitute. Using a randomized control trial with a 2x2 matrix treatment design, we test the effects on cassava adoption by female farmers of two interventions: delivering cassava seeds directly to female farmers at their homes (improved access), and hiring female “lead farmers,” to diffuse information about cassava seeds (improved information access), as well as explore complementarities between these interventions.

**“Mapping Value Chain Configurations: A Framework and Application to Senegalese Onions”** with Abdoulaye Cissé, Alain de Janvry, Samba Mbaye, Elizabeth Sadoulet, and Mame Mor Syll Anta.

Abstract.

In this project, we create a unified framework for evaluating domestic agricultural value chains in developing country contexts. Our method focuses on identifying sequences of value chain actor types who transact and handle goods from initial production to final sale, which we classify as different “configurations” within the chain. We can then quantify the relative importance of each configuration in terms of overall output volume, and study configurations’ heterogeneous features. The methodology consists of conducting key informant interviews to help identify all relevant configurations of the value chain, collecting survey data from each actor type, observing transactions along the chain, and analyzing results. We test the feasibility and performance of this methodology by applying it to the domestic onion value chain in Senegal.

## Talks

- 2021 SEEDEC, NEUDC, Lafayette College, ESA Job Market Seminar Series, IPA Annual Researcher Gathering, University of San Francisco
- 2019 NEUDC, PacDev, AERE, WEAI, 10th Annual Conference on Industrial Organization and the Food Industry

## Refereeing

*World Development, Social Business*

## Activities

- 2020 - 2021 Co-President, [Economics for Equity at Berkeley](#); ARE Undergraduate Outreach Committee
- 2019 - 2020 ARE Student Admissions Committee; Women in Economics at Berkeley Leadership Committee
- 2018 - 2019 Development Lunch Seminar Student Organizer, [EASST Mentor](#)