

# Zwick Center for Food and Resource Policy Annual Report 2017

January 2018

University of Connecticut

Department of Agricultural and Resource  
Economics

[www.zwickcenter.uconn.edu](http://www.zwickcenter.uconn.edu)

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# Mission and Focus

## Mission

The Charles J. Zwick Center for Food and Resource Policy is driven by excellence in quantitative and policy oriented economic research on problems confronting food and energy markets, the use of natural resources, and the environment. The intent is to provide practical recommendations to improve the functioning of markets and related government policies and to advance and disseminate knowledge that impacts public policies to improve society's welfare. Key users include private firms, consumer organizations, non-profit organizations, scholars, public agencies, and policy makers.

## Areas of Focus

The Center's endowment makes it possible to elevate the Department's national prominence, and to focus on high-priority policy and quantitative studies to solve problems in three signature areas:

- **Food Marketing and Industrial Organization**
- **Environmental and Natural Resource Economics**
- **Food and Health Economics and Policy**
- **Economic Development**

## Advisory Board

**Ronald Cotterill** is Professor Emeritus of Agricultural Economics and Economics at the University of Connecticut, and Director Emeritus of the Zwick Center. During his thirty years as a professor, he taught hundreds of students and authored dozens of books, monographs, journal articles, and other works. An internationally renowned expert on the organization and performance of food industries, he has testified before Congress and state legislatures regarding industrial and antitrust issues, and has served as the editor of *Agribusiness* and on the editorial board of the *Journal of Supply Chain Management*. Email: [ronald.cotterill@uconn.edu](mailto:ronald.cotterill@uconn.edu)

**Richard DeFavero** is the founder of DeFavero Builders, a commercial construction company, and an active supporter of the University of Connecticut. An alumnus of the University, he is a recipient of the Augustus and Charles Storrs Award, a lifetime member of the UConn Alumni Association, and provided the gift to endow the DeFavero Chair of Agricultural and Resource Economics.

**Steven Reviczky** is Commissioner of the Connecticut Department of Agriculture. He served as the Executive Director of the Connecticut Farm Bureau Association from 2006 until his appointment as Commissioner in 2011. As Executive Director, he was responsible for the day-to-day operations of the Association and was directly engaged in working with state and local officials, and Congress advocating on matters important to Connecticut's farmers. Email: [Steven.Reviczky@ct.gov](mailto:Steven.Reviczky@ct.gov)

**Robert Smith** is Senior Vice President of Farm Credit East, ACA, which serves over 13,000 customers throughout seven Northeast states. He has led efforts to advocate on behalf of farmers at the legislative level, and has testified in front of Congress and state legislatures. Email: [Robert.Smith@FarmCreditEast.com](mailto:Robert.Smith@FarmCreditEast.com)

**Henry Talmage** is Executive Director of the Connecticut Farm Bureau, where he oversees the state's chief advocacy group for farms and farmers. Previously, he served as the first executive director of the Connecticut Farmland Trust and as president of the Long Island Farm Bureau. Email: [henryt@cfba.org](mailto:henryt@cfba.org)

**Michael Willig** is a Professor in the Department of Ecology and Evolutionary Biology and Director of the Center for Environmental Sciences and Engineering at UConn. His areas of expertise include the application of quantitative and statistical techniques to understand the ecology and conservation of coupled human and natural systems. Email: [michael.willig@uconn.edu](mailto:michael.willig@uconn.edu)

# Zwick Center Personnel

## Core Personnel

### **Rigoberto Lopez**

Director, Professor

Food Marketing and Industrial  
Organization, Food Policy



### **Rebecca Boehm**

Postdoctoral Fellow

Economics of Food, Health, and the  
Environment



### **Shaheer Burney**

Postdoctoral Fellow

Food and Agricultural Economics,  
Food Policy



## Faculty Affiliates

**Tatiana Andreyeva** – Associate Professor  
Health Economics, Food Policy

**Emma Bojinova** – Lecturer  
Health Economics, Industrial Organization

**Boris Bravo-Ureta** – Professor  
International Agricultural Development, Production Economics

**John Bovay** – Assistant Professor and Extension Economist  
Environmental and Resource Economics

**Ronald Cotterill** – Emeritus Director, Emeritus Professor  
Food Marketing and Industrial Organization, Food Policy

**Richard Dunn** – Associate Professor  
Health and Public Economics

**Nathan Fiala** – Assistant Professor  
Food Security, Environment, Development

**Robert Pomeroy** – Professor  
International Development, Fisheries, Marine Policy

**Farhed Shah** – Associate Professor  
Natural Resource and Environmental Economics, Water Policy

**Stephen Swallow** – Professor  
Natural Resource and Environmental Economics, Ecosystem Services, Land-Use Policy

**Charles Towe** – Associate Professor  
Environmental Economics, Land Use Policy, Policy Evaluation

## Fellows

**Michele Baggio** – Economics, University of Connecticut

**Elena Castellari** – Agricultural and Resource Economics, University of Connecticut

**Xiaou Liu** – Associate Professor, Renmin University of China

**Chen Zhu** – Assistant Professor, China Agricultural University

## Supporting Staff

**Amanda Arroyo**, Marketing and Communications intern (2017)

**Madhi Fallahi**, Data Management

## 2017 Highlights

During 2017 the Zwick Center for Food and Resource Policy continues its mission of developing policy-oriented research and recommendations to confront problems associated with food and energy markets, natural resources, and the environment.

Some highlights from 2017 are:

- The Center hired two post-doctoral fellows: Rebecca Boehm (started in January 2017) and Shaheer Burney (started in May 2017). They replace Dr. Adam Rabinowitz who left in 2016 to take a tenure-track position at the University of Georgia.
- During Spring 2017 the Drs. Lopez and Boehm conducted research on the economic impact of Connecticut's agricultural industry, thus updating the 2010 study that was impactful among stakeholders and policy makers in the state. Invited presentations to stakeholders included the Connecticut Department of Agriculture, the Connecticut Farm Bureau, the Department of Extension, and the Rudd Center for Food Policy and Obesity. The Center also co-hosted Marcela Pineda, a visiting student from Zamorano University in Honduras, who assisted with data collection for the economic impact report as well as cost of production of wineries with Profs. Bravo-Ureta and Bovay.
- Over the summer, Zwick Center staff had high profile presentations at several key conferences, addressing the Agricultural & Applied Economics Association annual meeting, the Northeast Agricultural and Resource Economics Association annual meeting, and other conferences in the U.S. and abroad.
- The Center staff also published several journal articles in *World Development*, *Journal of Agricultural Economics*, and *Applied Economics Letters* and continued to target high impact journals for submission, including *Food Policy*, *American Journal of Agricultural Economics*, *Food Quality and Preference*, and *Marketing Letters*.
- The Center also applied to new grants to expand their research projects and leverage the Center's funding. Grants were submitted on local foods, health care provision and diet quality of low income households, and the SNAP program.

# Publications

## Refereed Journal Articles by Core Personnel

Sun, Shengmin & Lopez, Rigoberto, and Liu, Xiaoou. 2017. Property Rights, Labor Mobility and Collectivization: The Impact of Institutional Changes on China's Agriculture in 1950–1978. *International Review of Economics & Finance*, 52(November): 245-351, DOI: 10.1016/j.iref.2017.01.019.

Li, Xun, Rigoberto A. Lopez, and Rui Wang. 2018. Energy Price Shocks and Milk Price Adjustments." *Applied Economics Letters*, 25(4): 268-271, <http://dx.doi.org/10.1080/13504851.2017.1316820>.

Lopez, Rigoberto A., Xi He, and Azzeddine Azzam. 2017. "Stochastic Frontier Estimation of Market Power in the Food Industries." *Journal of Agricultural Economics*, forthcoming.

Scalco, Paulo, Rigoberto A. Lopez, and Xi He. 2017. "Buyer and/or Seller Power? An Application to the Brazilian Milk Market," *Applied Economics Letters*, 24(16): 1173-1176, DOI: 10.1080/13504851.2016.1262515.

Lopez, Rigoberto A., Xi He, and Eleonora de Falcis. 2017. "What Drives the New Chinese Agricultural Subsidies?" *World Development*, 93(c), pp. 279-292.

Di, Yuan, Rigoberto A. Lopez, and Xiaoou Liu. 2017. "The Impact of Wal-Mart Supercenters' entry on Incumbent Supermarket Profit Margins: A Case Study of Fluid Milk." *China Agricultural Economic Review*, 9 (1), pp. 130-140.

Additional journal articles published in 2017 by the Zwick Center affiliates are listed in <http://zwickcenter.uconn.edu/publications.php>



## Media Coverage of Economic Impacts of Connecticut's Agriculture Industry 2015: Update



**Associated Press:** WWLP.com, WTNH.com, Tri-City Herald, The Argus Press, News OK, Clay Center Dispatch, Huron Daily Tribune, Beaumont Enterprise, NewsTimes.com,

**Other Press:** HartfordBusiness.com, Produce Grower, US News & World Report, Morning Ag Clips, Journal Inquirer, San Francisco Chronicle, Agriculture News-EIN News, HeraldCourier.com, The Greenville Sun, Houston Chronicle, The Washington Times, Sports-Times Union, Western Mass News, Greenwich Time, TheHour, The Day, Republican American, Connecticut Post, New Haven Register, SFGate, StamfordAdvocate.com, Seattlepi.com, Times Union, MyrtleBeachOnline.com, Lexington Herald-Leader, Belleville News Democrat, Sun Herald, The Kansas City Star, Macon Telegraph, The Olympian, Herald

## Outreach and Research Reports

Lopez, R., Boehm, R., Pineda, M., Gunther, P., Carstensen, F. "Economic Impacts of Connecticut's Agricultural and Primary Processing Industry: 2015 update", Research Report No. 6, Zwick Center for Food and Resource Policy, University of Connecticut, September 2017

Bovay, John. 2017. "Milk Cost of Production Estimates for January, February, and March 2017" [or46.pdf](#) and subsequent quarterly reports used by the Department of Agriculture to [release dairy support payments.](#)

Boris E. Bravo-Ureta, Roberto Jara-Rojas, Michée A. Lachaud, Víctor H. Moreira. 2017. "A Meta-Analysis of Farm Efficiency: Evidence from the Production Frontier Literature" [rr5.pdf](#)

Lopez, R.A., Boehm, R., Pineda, M., Gunther, P., and Carstensen, F. *Economic Impacts of Connecticut's Agricultural Industry: Update 2015*, Zwick Center Research Report 6, September 2017. [rr6.pdf](#)

## Working Papers by Core Personnel

**Shaheer Burney**. 2017. "Household Consumption Responses to SNAP Participation" [wp44](#)

Yuqing Zheng, Diansheng Dong, **Shaheer Burney**, and Harry M. Kaiser. 2017. "Eat at Home or Away from Home? The Role of Grocery and Restaurant Food Sales Taxes" [wp45](#)

Chen Zhu, **Rigoberto A. Lopez**, and Xiaou Liu. 2017. "Consumer Responses to Voluntary Nutrition Labeling in the Presence of Information Spillovers" [wp46](#)

**Shaheer Burney**. 2017. "Habit Formation to Dietary Fat in U.S. Demand for Ground Meat and Fluid Milk" [wp47](#)

Norbert L. W. Wilson, Yuqing Zheng, **Shaheer Burney**, Harry Kaiser. 2017. "Do Grocery (Food Sales) Taxes Cause Food Insecurity?" [wp48](#)

## Academic Presentations by Core Personnel

**Boehm, R.**, Ver Ploeg, M., Wilde, P.E., Costello, C., Cash, S.B. "Greenhouse gas emissions, food costs, and nutritional quality of U.S. household food purchases by share of spending on meat: Implications for U.S. consumers and federal nutrition policy", Association for Public Policy Analysis and Management Annual Fall Research Conference, Chicago, IL, November 2017

Tiboldo, G., **Boehm, R.**, Castellari, E., Shah, F.A. "Use of a Carbon Tax on Food Purchases to Contribute Towards the U.S. Greenhouse Gas Emissions Reduction Target for 2025," Agricultural and Applied Economics Association Annual Meeting, Chicago, IL, August 2017

Tiboldo, G., **Boehm, R.**, Castellar, E., Shah, F.A. "Towards a socially optimal combination of carbon taxes and other policies for influencing U.S. food purchases," Northeast Agricultural and Resource Economics Association Annual Meeting, Washington, D.C., July 2017

Darrouzet-Nardi, A., **Boehm, R.**, Stabley, S. "Should the Definition of Food Deserts Incorporate a Seasonal Component?", Experimental Biology, Chicago, IL, April 2017

**Boehm, R.**, Cooksey Stowers, K., Schwartz, M. "Clustering of diet, physical activity, and health behaviors in adolescents: Results from a county-level, multiyear initiative to reduce sugary drink consumption and obesity," Friedman Fellows Symposium, Chicago, IL, April 2017

**Burney, S.**, Zheng, Y. "Impact of SNAP Participation on Sales of Carbonated Soda." 2017. Agricultural and Applied Economics Association (AAEA) Annual Meeting, Chicago, IL, July, 2017

**Burney, S.**, Davis, A. “The Role of Local Governments in Entrepreneurial Development.” 2017. Community Development Society (CDS)/National Association of Community Development Extension Professionals (NACDEP) Conference, Big Sky, MT.

Tiboldo, G., E. Castellari, A. Bonanno, and **R.A. Lopez**. “Welfare Implications of Private Labels Withdrawal.” Symposium presentation, European Association of Agricultural Economics Congress, September 1, 2017, Parma, Italy.

## Outreach Presentations by Core Personnel

**Lopez, R.** and **R. Boehm**. Invited speaker, “Economic Impact of Connecticut’s Agricultural Industries: Update 2015.” Presented to the Connecticut Department of Agriculture (April 10, 2017), the Connecticut Farm Bureau Association (March 16, 2017), and the Annual Meeting of the Working Lands Alliance (November 16, 2017).

Martin, J. and **Boehm, R.** “Status of Hunger and Nutritional Security in Connecticut”, Connecticut Food Bank Annual Hunger Summit, Hartford, CT, September 20, 2017

**Boehm, R.** “Marching on Its Stomach: CT Feeds the Troops in WWI and beyond”, Connecticut Old State House History Day, Hartford, CT, August 10, 2017

**Lopez, R.** Invited presenter, Connecticut Dairy Summit, “Update on the Economic Impact of the Connecticut Dairy Industry,” Legislative Office Building, January 3, 2017.

## External Grants by Key Personnel

**Boehm, R.** and Carlson, A. Sylvia Lane Mentor Fellowship grant (\$2,500)  
Title: Are Healthy Diets Affordable? Using USDA’s Linkages Database to Estimate the Cost of USDA Healthy Food Patterns

**Boehm, R.**, Schwartz, M., Wilde, P. USDA Food Insecurity Incentive Program evaluation sub-contract (\$314,470)  
*Title: Optimizing Local Food Outlets: marketplace and customer analysis across new England*

**Boehm, R.**, Burney, S., and Lopez, R. USDA Agriculture and Food Research Initiative Foundational Grant for New Investigators (\$259,960)  
*Title: Impact of U.S. Health Care Provision Changes on Diet Quality Among the Poor, not funded.*

Martin, J. and **Boehm, R.** USDA Farmers’ Market Promotion Program (\$500,000)  
*Title: Discover CT Grown – A Co-Marketing Strategy for Increasing Consumers of Local Food, pending.*

## Seminar Series

The Zwick Center is a co-sponsor of the Department of Agricultural and Resource Economics seminar series

### Spring 2017

**Tuesday, 1/17/17** - Speaker: Aaron Adalja, University of Maryland  
Lecture Title: Who pays for Voluntary Quality Certification?

**Wednesday, 1/18/17** - Speaker: Yu Na Lee, University of Minnesota  
Lecture Title: Commodity Price Volatility and Migration: Evidence from Rural Ethiopia

**Friday, 2/10/17** - Speaker: Matthew Turner, Brown University  
Lecture Title: Urban Form and Driving: Evidence from US Cities

**Friday, 3/3/17** - Speaker: Gal Hochman, Rutgers University  
Lecture Title: Sustainable Intensive Fish-farming: the Prospects of Aquaponics

**Friday, 3/24/17** - Speaker: Daniel Moscovici, The Richard Stockton College of New Jersey  
Lecture Title: Coase Revisited: Economic Efficiency under Externalities, Transaction Costs and Non-Convexity

**Friday, 3/31/17** - Speaker: Jeremy Foltz, University of Wisconsin-Madison  
Lecture Title: Do Higher Salaries Lower Petty Corruption? A Policy Experiment on West Africa's Highways

**Friday, 4/7/17** - Speaker: Robert Johnston, Clark University  
Lecture Title: Accommodating Spatial Heterogeneity within Ecosystem Service Benefit Transfer: Advancing the Frontier

**Friday, 4/21/17** - Speaker: Giulia Tiboldo, Xi He, Jacque Julien, Mahesh Dahal, University of Connecticut  
Lecture Title: 4 topics from current ARE PhD students

**Friday, 4/28/17** - Speaker: Sean Cash, Tufts University  
Lecture Title: Young food consumers: How does *homo economicus* grow?

**Fall 2017**

**Friday, 9/8/17** – Speaker: Jesse Shapiro, Brown University

Lecture Title: How Are SNAP Benefits Spent? The Evidence From a Retail Panel

**Friday, 10/6/17** – Speaker: Rebecca Boehm, University of Connecticut

Lecture Title: Can You Taste the Climate Changing? U.S. Tea Consumers Willing to Pay Premium for Climate-Friendly Agricultural Practices and Climate-Sensitive Quality Attributes

**Friday, 10/20/17** – Speaker: Nathan Fiala, University of Connecticut

Lecture Title: Social Accountability and Service Delivery: Evidence From a Large-Scale Experiment in Uganda

**Friday, 10/27/17** – Speaker: Shaheer Burney, University of Connecticut

Lecture Title: In-Kind Benefits and Household Behavior: The Impact of SNAP on Food-Away-From-Home Consumption

**Friday, 11/3/17** – Speaker: Eric Njuki, University of Connecticut

Lecture Title: Accounting for Technological and Environmental Heterogeneity in U.S. Agricultural Productivity Using Random Parameters

**Friday, 11/10/17** – Speaker: Guanlong Fu, Giulia Tiboldo, Joanna Kamiche Zegarra, University of Connecticut

Lecture Title: Preliminary results from ARE dissertation work

**Friday, 11/17/17** – Speaker: Chris Barrett, Cornell University

Lecture Title: Revisiting the Effect of Food Aid on Conflict: A Methodological Caution

**Friday, 12/1/17** – Speaker: Jörg Peter, Leibniz Institute for Economic Research

Lecture Title: One-off subsidies and long-run adoption – Experimental evidence on improved cooking stoves in Senegal

**Friday, 12/8/17** – Speaker: Klaus Moeltner, Virginia Tech

Lecture Title: Coastal home values in Connecticut: Using matching methods to separate flood risk from amenity effects

## Other Funded Activities

- Supplementary graduate student funding
- Funding for travel for graduate students and faculty
- Funding supporting staff salary
- Collaboration with state agencies and partners
- Support to recruit new faculty
- Data purchases
  - University of Chicago Kilts Center (\$7,000/year)
- Scholarships for students:
  - Xi He (Ph.D.)
  - Risa Lewis (B.S.)
- Co-funding of a Zamorano University intern:
  - Marcela Pineda Santos, Spring 2017



## Future Directions

The Zwick Center for Food and Resource Policy at the University of Connecticut is in a position to lead cutting edge research, education, and outreach in economic and business analyses in Connecticut. This includes a combination of engaging research studies on agricultural economic impacts, quantitative evaluation of public policies, feasibility studies, increasing local and healthy food consumption and enhancing food security and environmental sustainability.

### Research

Research studies on economic impacts, feasibility, and food systems will be conducted in the next three years within the following three areas:

#### 1. Economic impacts at the sector level

- Assessment of trends in the industry
- Assessment of the state regulatory environment
- Current contribution of the state's agricultural industry
- Budgeting and financial analysis
- Vetting the profitability of new products and technologies
- Conducting market assessments for new and existing products
- Establishing a clearing house for information

#### 2. Food systems research

- Assessment of local food expenditure
- Evaluation of household and community food security
- Enhancement of nutrition and food policy outreach
- Establishing a clearing house of food systems data
- Evaluation of the healthiness and environmental sustainability of food choices

#### 3. Climate change and environmental sustainability

- Assessment of impact of climate change on agricultural sector
- Valuation of the environmental benefits provided by agricultural sector
- Assessment of solar and other renewable energy production potential on farms and non-prime agricultural land



- Policy recommendations to protect Connecticut producers from adverse weather events due to climate change

The Center continues to support Ph.D. students with graduate assistantships and fellowships and post-doctoral fellows to participate in related research projects and training in pertinent areas. We further enhance this development through the provision of travel support to disseminate work at academic conferences and through the publication of the Working Paper Series, Outreach Series, and Research Report Series. Over 90 publications have been widely distributed since 2011 through these three publication series.

## **Outreach**

Within the research focus outlined above, the Zwick Center will produce peer-reviewed academic journal publications, outreach publications, and impact decision making through dissemination and direct communication with policy makers. Human capital development, through graduate assistantships in the existing M.S. and Ph.D. programs will also occur in the pertinent areas. In addition to the standard research and education models, the Zwick Center's mission of improving society welfare is further aided by UConn's commitment to community engagement in research and teaching.

## **Impact**

To aid in understanding the potential impact and outreach activities we have outlined a few examples of recent work and outcomes below:

One example of the type of impact the Zwick Center has had in recent years is with the dairy program research performed by the Zwick Center since 2011. This research has resulted in over a dozen publications from the Zwick Center, as well as support for the administration and continuation of a dairy support program to aid dairy farmers in Connecticut. Over \$5 million has been distributed to dairy farmers resulting in the addition of about 75 jobs per year and roughly \$10 million in additional annual sales for the industry.

A second example is conducting studies to support policy decisions and implementation such as a series of economic impact reports involving Connecticut agriculture, forestry, and fishery industries. With the initial report released in 2010 on the economic impact of Connecticut



agricultural industry and another report specifically requested by the legislature to implement Public Act 09-229 on the economic impact of the dairy industry, two additional reports have been issued in partnerships with Farm Credit East involving impacts of agriculture, forestry and fisheries in the Northeast, including Connecticut. Additional reports focusing on the maritime industries and local foods have also been issued and well-received by stakeholders and policy makers alike. An update on Connecticut's agricultural industry impacts in 2015 is due to be released in September 2017 at the Connecticut Capitol Building by Rep. Joe Courtney and Agriculture Secretary Steven Reviczky.

A third example is the community food security work that the Zwick Center has continued. With the initial report in 2005 and the subsequent report in 2012, this research has generated substantial media attention through television, print, and Internet, not just in Connecticut but across the United States including Washington, D.C. and San Francisco, California. This report has served to facilitate the organization of several advocacy groups and has prompted legislators and NGO's to take focus on the problems associated with food security in Connecticut towns. A subsequent project that started in 2016 is currently underway to be released in 2017, with a delay due to the departure of Dr. Adam Rabinowitz.

The Zwick Center will lead these education, research, and outreach programs in partnerships with government, academic, and advocacy groups. Potential partners with whom we have existing relationships includes state and city governments such as the State of Connecticut, the Connecticut Food Policy Council, and the Governor's Council for Agricultural Development; University of Connecticut faculty and staff including the Department of Extension, Office of Public Engagement, and the Center for Health, Intervention, and Prevention including the newly affiliated Rudd Center for Food Policy and Obesity; advocacy groups including End Hunger Connecticut and the Hartford Food System. In the next three years, the Center will continue its path of excellence in research and outreach with a focus on quantitative assessments of policy impacts to inform policy decisions to ensure that the agriculture, forestry, and fishery industries in Connecticut are both economically and environmentally sustainable for the current and future generations.