



AgEcon SEARCH
RESEARCH IN AGRICULTURAL & APPLIED ECONOMICS

The World's Largest Open Access Agricultural & Applied Economics Digital Library

This document is discoverable and free to researchers across the globe due to the work of AgEcon Search.

Help ensure our sustainability.

Give to AgEcon Search

AgEcon Search
<http://ageconsearch.umn.edu>
aesearch@umn.edu

*Papers downloaded from **AgEcon Search** may be used for non-commercial purposes and personal study only. No other use, including posting to another Internet site, is permitted without permission from the copyright owner (not AgEcon Search), or as allowed under the provisions of Fair Use, U.S. Copyright Act, Title 17 U.S.C.*

AGRICULTURAL AND RESOURCE ECONOMICS REVIEW

Linking Consumer Health Perceptions to Consumption of Nonalcoholic Beverages ▪
Hyeyoung Kim and Lisa A. House

Consumer Response to Perceived Value and Generic Advertising ▪ *Matthew J. Salois
and Amber Reilly*

The Effects of Prices, Advertising, Expenditures, and Demographics on Demand for
Nonalcoholic Beverages ▪ *Abigail M. Okrent and Joanna P. MacEwan*

The Impact of Four Alternative Policies to Decrease Soda Consumption ▪ *Yizao Liu,
Rigoberto A. Lopez, and Chen Zhu*

Looking for Locapours: Using Zagat Survey Data to Examine Restaurant Demand for
Local Wine ▪ *Joseph M. Perla, Bradley J. Rickard, and Todd M. Schmit*

Distribution Channel Choices of Wineries in Emerging Cool Climate Regions ▪ *Lin Sun,
Miguel I. Gómez, Fabio R. Chaddad, and R. Brent Ross*

Organizational Structure and Operation of the Illinois Wine Industry ▪
Jason R.V. Franken and Kevin J. Bacon

Willingness to Pay for Sensory Attributes in Beer ▪ *Gnel Gabrielyan, Jill J. McCluskey,
Thomas L. Marsh, and Carolyn F. Ross*

Unraveling Demand for Dairy-Alternative Beverages in the United States: The Case of
Soymilk ▪ *Senarath Dharmasena and Oral Capps, Jr.*

Do Consumers Pay More for What They Value More? The Case of Local Milk-based
Dairy Products in Senegal ▪ *Mélanie Lefèvre*

The Impact of Regulatory Change on Retail Pricing: The New York State Milk Price
Gouging Law ▪ *Adam N. Rabinowitz and Yizao Liu*

Published by the
Northeastern Agricultural
and Resource Economics
Association

Volume Number

43 / 1

April 2014

Agricultural and Resource Economics Review (ISSN 1068-2805) is the official publication of the Northeastern Agricultural and Resource Economics Association (NAREA). The purpose of the *Review* is to foster and disseminate professional thought and literature relating to the economics of agriculture, natural resources, and community development. It is the editorial policy of the *ARER* to encourage manuscript submission without regard to author affiliation and/or location. The *ARER* is published three times a year. In addition to normal refereed articles, it also publishes invited papers presented at the annual meetings of the NAREA as well as abstracts of selected papers presented at those meetings. It periodically calls for articles written on a specific topic. Membership in the NAREA is open to all persons having an interest in agricultural and resource economics. Membership dues include a subscription to the *Review* and are \$25 per year for regular membership and \$10 per year for students. The single-copy price is \$15 per issue. The library (or institutional) subscription price is \$125 per year.

Address all manuscripts and editorial material to Dr. Kent Messer, Managing Editor.

Dr. Kent Messer
Department of Applied Economics and Statistics
University of Delaware
531 South College Avenue, #226
Newark, DE 19716 USA

Please see inside back cover for submission instructions.

Address requests for membership, subscriptions, and changes of address to:

Dr. Douglas E. Morris
NAREA Secretary-Treasurer
Department of Natural Resources and the Environment
G68 James Hall
56 College Road
University of New Hampshire
Durham, NH 03824-2601
e-mail: dr.doug@unh.edu

Copyright © 2014 by the Northeastern Agricultural and Resource Economics Association. No article or other material appearing in the *Agricultural and Resource Economics Review* may be republished in full or in part without the written permission of the editor or the NAREA Secretary-Treasurer.

PUBLISHED BY THE NORTHEASTERN AGRICULTURAL
AND RESOURCE ECONOMICS ASSOCIATION

PRINTED BY SHERIDAN PRESS, INC., HANOVER, PENNSYLVANIA

AGRICULTURAL AND RESOURCE ECONOMICS REVIEW

Volume 43 / Number 1 ■ April 2014

Contents

Foreword

Beverage Markets and Policy ■ *Harry M. Kaiser, Jill J. McCluskey,
and Bradley J. Rickard*.....iii

Selected Papers

Linking Consumer Health Perceptions to Consumption of Nonalcoholic
Beverages ■ *Hyeyoung Kim and Lisa A. House*..... 1

Consumer Response to Perceived Value and Generic Advertising ■
Matthew J. Salois and Amber Reilly 17

The Effects of Prices, Advertising, Expenditures, and Demographics on
Demand for Nonalcoholic Beverages ■ *Abigail M. Okrent and Joanna P. MacEwan* 31

The Impact of Four Alternative Policies to Decrease Soda Consumption ■
Yizao Liu, Rigoberto A. Lopez, and Chen Zhu 53

Looking for Locapours: Using Zagat Survey Data to Examine Restaurant
Demand for Local Wine ■ *Joseph M. Perla, Bradley J. Rickard, and Todd M. Schmit* 69

Distribution Channel Choices of Wineries in Emerging Cool Climate Regions ■
Lin Sun, Miguel I. Gómez, Fabio R. Chaddad, and R. Brent Ross..... 87

Organizational Structure and Operation of the Illinois Wine Industry ■
Jason R. V. Franken and Kevin J. Bacon 104

Willingness to Pay for Sensory Attributes in Beer ■ *Gnel Gabrielyan,
Jill J. McCluskey, Thomas L. Marsh, and Carolyn F. Ross*..... 125

Unraveling Demand for Dairy-Alternative Beverages in the United States:
The Case of Soymilk ■ *Senarath Dharmasena and Oral Capps, Jr.*..... 140

Do Consumers Pay More for What They Value More? The Case of Local
Milk-based Dairy Products in Senegal ■ *Mélanie Lefèvre* 158

The Impact of Regulatory Change on Retail Pricing: The New York State
Milk Price Gouging Law ■ *Adam N. Rabinowitz and Yizao Liu* 178

AGRICULTURAL AND RESOURCE ECONOMICS REVIEW

Volume 43 / Number 1 ■ April 2014

MANAGING EDITOR

Kent D. Messer
University of Delaware

EDITORS

Neha Khanna
Binghamton University

Arnab Basu
Cornell University

EDITORS FOR THIS SPECIAL ISSUE

Harry M. Kaiser
Cornell University

Jill J. McCluskey
Washington State University

Bradley J. Rickard
Cornell University

EDITORIAL BOARD

Amy Ando
University of Illinois

Marc Bellemare
University of Minnesota

Hung-Hao Chang
National Taiwan University, Taiwan

Jeremy Clark
University of Canterbury, New Zealand

Stephen Goetz
Penn State University

John Hoddinott
International Food Policy Research Institute

Yanhong Jin
Rutgers University

Harry Kaiser
Cornell University

Robert King
University of Minnesota

Travis Lybbert
University of California, Davis

Matin Qaim
University of Göttingen, Germany

Kimberly Rollins
University of Nevada, Reno

James Shortle
Penn State University

Jordan Suter
Colorado State University

TECHNICAL EDITOR

Natalie Karst
West Sacramento, California

ASSOCIATION OFFICERS

PRESIDENT Joshua Duke
University of Delaware

PRESIDENT-ELECT Ted Jaenicke
Pennsylvania State University

PAST PRESIDENT Kathleen Bell
University of Maine

SECRETARY-TREASURER Douglas E. Morris
University of New Hampshire

EXECUTIVE COMMITTEE

Alessandro Bonanno
Wageningen University - The Netherlands
Director 2013-2016

Allison Borchers
Economic Research Service, USDA
Director 2012-2015

Martin Heintzelman
Clarkson University
Director 2012-2015

Sarah Jacobson
Williams College
Director 2013-2016

Todd Schmit
Cornell University
Director 2011-2014

Patrick Walsh
U.S. Environmental Protection Agency
Director 2013-2014

William Wheeler
U.S. Environmental Protection Agency
Government Representative (ex-officio)

FOREWORD

Beverage Markets and Policy

**Harry M. Kaiser, Jill J. McCluskey,
and Bradley J. Rickard**

Beverages are a large component of the total food category and yet the various marketing and policy issues faced by the beverage industry have received relatively little attention among food and agricultural economists. There has been a substantial increase in the variety of beverages available, and this diversity of products provides new opportunities for economists to study consumer demand for specific attributes. At the same time, there is growing concern that some beverages may be important contributors to the rise in obesity in the United States and elsewhere. As a result, various policies have been implemented or are being considered to curb consumption of high-calorie beverages and encourage consumption of healthier beverages. In addition, there has been a proliferation of alcoholic beverage products. Competition by alcoholic products creates an opportunity for agricultural and food economists to study a host of marketing issues that include product labeling and differentiation and the role of geographic proximity (i.e., local foods) on consumer demand. Furthermore, unique policy issues are associated with alcoholic beverages, and many of the policy considerations are complicated because regulations differ widely by state.

The issues related specifically to beverages were examined in a series of papers presented as part of the Northeastern Agricultural and Resource Economics Association (NAREA) workshop “Beverage Markets and Policy,” which was held in Ithaca, New York, in June 2013. Based on a peer-review process, we have selected eleven of those papers for this special issue of *Agricultural and Resource Economics Review*. The principle goal of the NAREA workshop was to convene recognized and emerging experts to debate and advance research on the contemporary economic problems in beverage markets with an emphasis on development of industry-led initiatives and policies that address economic development, sustainable agriculture, and human health considerations.

Each of the articles in this issue falls into one of three broad groups. The first examines consumer response to advertising and public policies in beverage markets and focuses largely on juice and soda products. The second group of articles looks at key marketing considerations in alcoholic beverage markets in selected U.S. regions. Three of the four papers focus on marketing issues in burgeoning wine regions, and the fourth paper examines consumer preferences in the craft beer market. The final group of articles focuses on milk markets and

Harry M. Kaiser is the Gellert Family Professor in the Charles H. Dyson School of Applied Economics and Management at Cornell University, Jill J. McCluskey is a professor in the School of Economic Sciences at Washington State University, and Bradley J. Rickard is an assistant professor in the Charles H. Dyson School of Applied Economics and Management at Cornell University. Correspondence: *Bradley Rickard* • *Dyson School of Applied Economics and Management* • *Cornell University* • 137 Reservoir Avenue • Ithaca, NY 14853 • Phone +1.607.255.7417 • Email b.rickard@cornell.edu.

policy. Dairy markets and policy issues have received considerable attention by agricultural and food economists in recent years, but this set of papers provides analyses on new topics in this arena.

The first four articles of this special issue examine consumer response to advertising and public policies in beverage markets. Hyeyoung Kim and Lisa House (2014) examine the role of knowledge and perceptions on consumption patterns for several nonalcoholic beverages. Using survey data from a large sample, they show that, for most beverage products studied, consumer perceptions about health have both own-beverage and cross-beverage impacts. Matthew Salois and Amber Reilly (2014) examine the impacts of perceived value and generic advertising efforts in the orange juice market using information from detailed survey data made available by the Florida Department of Citrus. Results here indicate that perceived value does impact consumption and that generic advertising—but not brand advertising—influences the perceived value to consumers. Abigail Okrent and Joanna MacEwan (2014) use Nielsen Homescan data and advertising expenditures to study the effects of advertising and prices on nonalcoholic beverage consumption. They show that the magnitudes of elasticities of demand with respect to advertising are much smaller than their price and expenditure counterparts. Yizao Liu, Rigoberto Lopez, and Chen Zhu (2014) analyze cross-sectional household data from seven urban markets for 2006 through 2008 to assess the possible impacts of a tax on carbonated soft drinks (a price change), elimination of television advertising, elimination of large retail container sizes, and reduction of the sugar content for current products. The authors' econometric results, which are based on two Nielsen data sets, demonstrate that elimination of large retail container sizes would be most effective and taxes on calories would be least effective of the options considered in reducing consumption of carbonated soft drinks.

Four articles focus on a range of marketing issues associated with alcoholic beverage markets. Joe Perla, Brad Rickard, and Todd Schmit (2014) examine demand for local wines by restaurants in New York State using a data set that included information about menus and expert ratings for individual restaurants. Their results show that certain expert ratings and specific cuisine styles are good indicators of the demand for local wine by restaurants. Lin Sun, Miguel Gómez, Fabio Chaddad, and Brent Ross (2014) study the impact of distribution channels on sales for wineries in emerging cool climate regions. Their work demonstrates that the share of wine sold through intermediated market channels increases with a winery's size, age, degree of vertical integration, degree of inter-winery collaboration, intensity of promotion effort, and degree of marketing challenges faced. Jason Franken and Kevin Bacon (2014) examine marketing and procurement decisions by organizations in the burgeoning wine industry in Illinois. Using data from two surveys, the authors find evidence that temporal specificity (related to fruit perishability) increases the probability that formal written contracts will be used by wineries. In addition, both holdup and temporal specificity are shown to increase informal contract use in this industry. Gnel Gabrielyan, Jill McCluskey, Thomas Marsh, and Carolyn Ross (2014) use an economic and sensory experiment to study willingness to pay for craft beers, which are differentiated by product characteristics that include the level of hoppiness. Their work suggests that craft brewers can charge a higher price margin if they brew beers that are differentiated by hoppiness.

The final three articles in this special issue examine dairy markets and dairy policy. Senarath Dharmasena and Oral Capps, Jr. (2014) examine the demand

for a dairy-alternative functional beverage, soymilk, using Nielsen Homescan data. Using a Tobit econometric model, they find that income, age, employment status, education level, race, ethnicity, region, and presence of children in a household are significant drivers of demand for soymilk. Mélanie Lefèvre (2014) examines preferences of consumers for sour-milk products made with local fresh milk versus ones made with imported powdered milk in the Dakar region of Senegal. Using unique survey data and a hedonic pricing model, the author tests whether there is a price differential for sour milk based on the raw material used to make it and if misinformation (incorrect or deceiving product labeling) is associated with the price for each type of product. The author ultimately finds that misinformation prevents consumers from paying more for products made with local fresh milk. Adam Rabinowitz and Yizao Liu (2014) examine the effect of a change in administration of New York State's controversial milk price gouging law on retail milk prices. Using a regression discontinuity approach, the authors show that the change in the law reduced prices and increased consumer welfare for retail milk purchasers in New York.

As part of the organizing committee for the workshop and as guest co-editors of this special issue, we thank the authors for their participation and cooperation. We also congratulate them for making important contributions to the growing body of research that is examining marketing and policy issues in beverage markets. We hope these papers stimulate additional work by food and agricultural economists who are interested in the wide range of marketing and policy issues that face beverage markets in the United States and elsewhere.

References

- Dharmasena, S., and O. Capps, Jr. 2014. "Unraveling Demand for Dairy-Alternative Beverages in the United States: The Case of Soymilk." *Agricultural and Resource Economics Review* 43(1): 140–157.
- Franken, J.R.V., and K.J. Bacon. 2014. "Organizational Structure and Operation of the Illinois Wine Industry." *Agricultural and Resource Economics Review* 43(1): 104–124.
- Gabrielyan, G., J.J. McCluskey, T.L. Marsh, and C.F. Ross. "Willingness to Pay for Sensory Attributes in Beer." *Agricultural and Resource Economics Review* 43(1): 125–139.
- Kim, H., and L.A. House. 2014. Linking Consumer Health Perceptions to Consumption of Nonalcoholic Beverages." *Agricultural and Resource Economics Review* 43(1): 1–16.
- Lefèvre, M. 2014. "Do Consumers Pay More for What They Value More? The Case of Local Milk-based Dairy Products in Senegal." *Agricultural and Resource Economics Review* 43(1): 158–177.
- Liu, Y., R.A. Lopez, and C. Zhu. 2014. "The Impact of Four Alternative Policies to Decrease Soda Consumption." *Agricultural and Resource Economics Review* 43(1): 53–68.
- Okrent, A.M., and J.P. MacEwan. 2014. "The Effects of Prices, Advertising, Expenditures, and Demographics on Demand for Nonalcoholic Beverages." *Agricultural and Resource Economics Review* 43(1): 31–52.
- Perla, J.M., B.J. Rickard, and T.M. Schmit. 2014. "Looking for Locapours: Using Zagat Survey Data to Examine Restaurant Demand for Local Wine." *Agricultural and Resource Economics Review* 43(1): 69–86.
- Rabinowitz, A.N., and Y. Liu. 2014. "The Impact of Regulatory Change on Retail Pricing: The New York State Milk Price Gouging Law." *Agricultural and Resource Economics Review* 43(1): 178–192.
- Salois, M.J., and A. Reilly. 2014. "Consumer Response to Perceived Value and Generic Advertising." *Agricultural and Resource Economics Review* 43(1): 17–30.
- Sun, L., M.I. Gómez, F.R. Chaddad, and R.B. Ross. 2014. "Distribution Channel Choices of Wineries in Emerging Cool Climate Regions." *Agricultural and Resource Economics Review* 43(1): 87–103.

- U.S. Census Bureau. 2013. "Poverty Thresholds" data. Available at www.census.gov/hhes/www/poverty/data/threshld (accessed February 10, 2014).
- White House Task Force on Childhood Obesity. 2010. *Report to the President: Solving the Problem of Childhood Obesity within a Generation*. Executive Office of the President of the United States, Washington, DC. Available at www.letsmove.gov/sites/letsmove.gov/files/TaskForce_on_Childhood_Obesity_May2010_FullReport.pdf (accessed December 18, 2013).
- Zhen, C., M.K. Wohlgenant, S. Karns, and P. Kaufman. 2011. "Habit Formation and Demand for Sugar-Sweetened Beverages." *American Journal of Agricultural Economics* 93(1): 175-193.
- Zheng, Y., and H.M. Kaiser. 2008. "Advertising and U.S. Nonalcoholic Beverage Demand." *Agricultural and Resource Economics Review* 31(2): 147-159.
- Zheng, Y., H. Kinnucan, and H.M. Kaiser. 2010. "Measuring and Testing Advertising-induced Rotation in the Demand Curve." *Applied Economics* 42(13): 1601-1614.

ARER GUIDELINES FOR MANUSCRIPT SUBMISSION

Manuscripts must be submitted electronically as PDFs. To upload a PDF manuscript, cover letter, and other supporting documentation, please go to www.narea.org/Journal/guidelines.html. The information will be transmitted securely and anonymity will be maintained as your submission is transmitted to referees. Questions for the editors may be addressed to *Kent Messer, Managing Editor*, at messer@udel.edu.

SPECIAL EXPEDITED REVIEW FOR PAPERS CO-AUTHORED BY GRADUATE STUDENTS

The *ARER* editors have established an expedited review process for manuscripts that include graduate students as co-authors. The process is designed to take approximately four months from submission to final decision. For example, a paper submitted at the start of a semester could go through the entire review process before the semester ends. The three-step process works as follows.

1. Upon submission, the manuscript will undergo an expedited review such that the authors will receive a decision and reviews in approximately two months. The review process will have the same rigor as other *ARER* submissions.
2. If a revision is requested, authors will be expected to complete their revisions and response to reviewers within 45 days.
3. Upon receipt of the revised manuscript, the *ARER* editor will make a decision on whether to publish the paper based on its current condition. In other words, there will not be a second or third round of revisions.

Authors who wish to be considered for this expedited review process should indicate preference for the "Special Expedited Review" in the box entitled "Brief Comments/Instructions to Editor" that is part of the *ARER* online submission process and in the cover letter to the editors.

COVER LETTER

The cover letter should indicate that the material is original work, is not being offered for publication elsewhere, is not published elsewhere, and, so far as the author(s) knows, does not infringe on other published material protected by copyright.

TITLE PAGE and ABSTRACT

On the first page, list the title of the paper, an abstract not to exceed 100 words, and up to eight key words or short phrases (in alphabetical order) describing the content of the manuscript. Funding attribution statements should be placed here.

TEXT PREPARATION

The manuscript should be submitted as an 8.5 × 11 inch document with 1-inch margins and all material, including references and footnotes, double-spaced. Number footnotes consecutively throughout the manuscript using superscript numbers. Do not number headings and subheadings and avoid third-level headings. Refer to the most recent copy of *ARER* for basic style and format (www.narea.org/journal/issues.html).

TABLES and FIGURES/GRAPHICS

Each table should be placed on a separate page. Table titles should be short and descriptive. Do not use color in figures and graphics as it will not be reproduced in the printed copy. Do not include figure captions in the graphic itself. After a manuscript has been accepted, the corresponding author will consult with the technical editor in preparing an acceptable electronic version of the figure or graphic.

PERMISSIONS

Authors are responsible for obtaining necessary permissions to quote or reproduce material, including figures, from already published works and/or any copyrighted material. Please supply an appropriate line of credit where necessary. Personal communication citations are not encouraged, and author(s) using them should have a letter sent to the editors from the source acknowledging agreement with the text.

MATHEMATICAL NOTATION

Use only essential mathematical notation. Avoid using the same character for both superscripts and subscripts, using capital letters as superscripts and subscripts, and using overbars, tildes, carets, and other modifications of standard type. Use character formatting, not equations, for bold (vectors and matrices), italics (variables), and superscript and subscript styles. Do not italicize numbers or Greek letters.

REFERENCES

List references alphabetically and unnumbered at the end of the manuscript with the heading "References." List only those actually cited. Cite references in the text by the name(s) of the author(s) and the year of publication (Author 2013). Use letters (e.g., 1999a and 1999b) if there is more than one source by the same author or authors in a given year. A style sheet on references and citations is available at www.narea.org/journal/guidelines.html. Provide volume and issue number for journal articles.

PAGE CHARGE

A page charge of \$65 per printed journal page is billed to the corresponding author's department, agency, or institution after the article is accepted for publication.