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NAREA Awards

Outstanding Master's Thesis Award

The Impact of Wal-Mart Supercenters on Incumbents' Pricing Conduct: The Case of the Dallas/Fort Worth Milk Market

Rebecca Cleary

University of Connecticut

Advisor: Rigoberto A. Lopez

As the largest food retailer in the world, Wal-Mart has been a driving force in the metamorphosis of the food-retailing industry. Bringing back the general store format, via its Supercenters, allows it to take advantage of both economies of scale and scope. Due to its expert logistics system, its low-cost mentality, and the sheer size of the company, Wal-Mart has the ability to influence the way in which traditional food retailers, specifically traditional supermarkets, do business.

The aim of this thesis is to empirically quantify the impact of Wal-Mart Supercenters' expansion on the pricing strategies of their competitors and to measure the welfare implications of this expansion through the case of the Dallas/Fort Worth fluid milk market. To achieve this end, a structural oligopoly model of pricing behavior was modified to allow for the potential impact of Wal-Mart Supercenter expansion on the demand facing the incumbents as well as possible mitigating effects on collusion. The theoretical framework was refined into an empirical model consisting of

an equilibrium pricing condition and demand equation.

Empirical results were plausible and consistent with *a priori* expectations. Results show that Wal-Mart has significantly disciplined the Dallas/Fort Worth fluid milk market from the strongly oligopolistic to the perfectly competitive level. The welfare impacts of Wal-Mart Supercenters in this market indicate that the consumers are the main beneficiaries of Wal-Mart Supercenters' expansion, and that even though incumbent supermarkets suffer quasi-rent losses, there is a significant net gain in allocative efficiency.

This study concludes that Wal-Mart Supercenters are a credible threat to traditional food retailers in collusive markets and that they are fundamentally changing the competitive environment of food retailing. Based on the case study, prohibiting Wal-Mart Supercenters' expansion in a market via "Anti-Big Box" legislation could lead to significant consumer and social welfare losses.

Master's Thesis Award of Merit

Mortgage Termination and Risk Rating Migration at AgChoice Farm Credit

Jonathan B. Dressler

Pennsylvania State University

Advisor: Jeffrey R. Stokes

Mortgage termination and risk ratings migration are important when considering risk management

at financial institutions. Mortgage termination can generally be of two types: default and prepay-

ment. Data consisting of 1,094 fixed rate mortgages collateralized by farm real estate to dairy producers, made by AgChoice ACA from January 1, 2001, through December 31, 2006, were utilized to estimate survival and hazard functions for the mortgages. These functions are important components of a competing risks modeling approach for estimating the drivers of mortgage termination. In addition, ordered logistic regression was used to assess risk rating upgrades, retentions, downgrades, and defaults. In all, four models for prepayment and default are presented—two with static covariates and two with static and time-varying covariates—and three ordered logistic regression models with static covariates are presented for the transition years of 2004–2005, 2005–2006, and 2004–2006.

Results from survival analysis regressions indicate that variables for interest rate, branch location, current ratio at origination, refinance, and interactions of refinance and debt-to-asset at origination are significant predictors of the hazard of prepayment. Variables for monthly payment, interest rate, FICO score, and debt-to-asset ratio throughout survival time are significant predictors of the hazard of default.

Results from ordered logit regressions indicate that variables for the previous year's risk rating, the number of years a borrower was a customer, branch location, note origination amount, borrower age, the age of the note at transition year end, and Farmer Mac guarantee are significant predictors of portfolio credit quality changes.

Master's Thesis Award of Merit

Characterization of Public and Stakeholder Objectives in Environmental Management: The Application of Conjoint Analysis and Other Survey Tools to the Management of the Lamprey River

Shannon Rogers

**University of New Hampshire
Advisor: John Halstead**

New Hampshire's rivers are critical economic, environmental, and cultural resources. Nonetheless, they remain vulnerable to development pressures, water withdrawals, siltation, channelization, or other changes that threaten wildlife habitat. Management plans for natural resources can be seen as multi-attribute goods that are held in the public domain and that therefore require input from experts, stakeholders, and citizens. The State is coordinating an instream flow study and water management plan for the Lamprey River, located

in the seacoast region of New Hampshire, and this research adds a key component to the existing study. This thesis explains how the values and objectives of stakeholders and the general public were elicited through interviews and two surveys, one of which utilized conjoint analysis. The interviews and surveys revealed some of the possible conflicts in the Lamprey River watershed and showed that survey respondents in the watershed are concerned with the ecological integrity of the river above all other attributes.

Distinguished Member Award

This award recognizes members who have made continuous and outstanding contributions to the Association, the region, and the profession. The award recognizes members for significant recent professional achievement in the

context of an overall meritorious record. Recipients must be members in good standing and be nominated by three other members. A recipient can receive the award more than once, based on recent achievements.

Robert J. Johnston

Until recently, Robert J. Johnston was an Associate Professor of Agricultural and Resource Economics at the University of Connecticut, and also the Associate Director of the Connecticut Sea Grant College Program. Dr. Johnston received his Ph.D. from the Department of Environmental and Natural Resource Economics, University of Rhode Island. He has received numerous awards, including the University of Connecticut College of Agriculture and Natural Resources Research Excellence Award, the University of Rhode Island College of the Environment and Life Sciences Teaching Excellence Award, and the Charles R. Goeldner Article of Excellence Award for Best 2005 Article in the *Journal of Travel Research*.

Dr. Johnston is well known around the world in the fields of non-market valuation, coastal management, and land use economics, and has built a solid reputation on his extensive research, teaching, and extension work. Dr. Johnston has made considerable contributions to the field of resource economics, and has been very active in publishing and receiving grant support for his research. His research contributions to the field have been considerable and have made a measurable impact on policy. In the area of coastal management, he has worked on topics as varied as researching an economic analysis framework and data to support integrated multiple-use ocean management in Massachusetts, to assessing the impact of new and proposed labels in the fresh seafood market. Dr. Johnston is currently working on several research

initiatives, including a variety of projects addressing ecosystem service valuation and benefit transfer.

Dr. Johnston's teaching is primarily in the areas of non-market valuation, tourism economics, benefit-cost analysis, ecosystem conservation, and resource management. He is recognized for his innovative and collaborative teaching methods, which include the incorporation of real-world research, as well as his promotion of interdisciplinary learning.

Dr. Johnston has been consistent in his service to NAREA. He has served on NAREA's Board of Directors since 2003, being elected twice by the membership. He has participated in every annual meeting since 1993, and has held a leadership role in organizing the 2006 annual meetings in Connecticut, serving as the local arrangements coordinator. He has served as a session chair and moderator at the annual meetings in 1999 and from 2002 to 2007. He was on the Selected Papers Committee from 1997 to 1999. From 2004 to 2006, he served as the chair of the Ad Hoc Organization Committee. He also served from 1996 to 2004 as a reviewer for the *Agricultural and Resource Economics Review*.

Beginning this fall, Dr. Johnston has joined Clark University as the Director of the George Perkins Marsh Institute and Professor of Economics. In addition to his teaching, research, and administrative duties, he plans to stay active with NAREA.

NAREA Award for Outstanding Public Service Through Economics

This award was created to recognize and encourage contributions to the general public welfare. The intent is to recognize that agricultural, environmental, consumer, resource, or community development economics can be applied to solve important problems affecting the quality of life of the general public, and that such contributions may come outside the traditional, sometimes narrowly defined, contributions to research, teaching, or extension. The award may be given to anyone, including noneconomists and nonmembers of NAREA.

Walter J. Armbruster

Dr. Walter J. Armbruster became President Emeritus of the Farm Foundation in February 2008,

following a thirty-year career there and having served as its president starting in 1991. Prior to

that, he spent eight years with the Economic Research Service, USDA, where his research focused on pricing, institutions, and policies in the food and agricultural marketing system. Dr. Armbruster then devoted two years as Staff Economist to the administrator of the Agricultural Marketing Service, USDA.

During his career with USDA, Dr. Armbruster served on several task forces to advise the Secretary of Agriculture on issues of the day related to fruit and vegetable marketing orders, price reporting for the agricultural industry, and various marketing issues specific to industry segments. He received a USDA Certificate of Merit in 1978 for his work. He contributed to a number of national extension education projects as author or coauthor of articles related to marketing orders, fruit and vegetable industry pricing, and contract bargaining activities of agricultural producers.

Dr. Armbruster's early work carried over to his Farm Foundation career, where he stayed involved with the fruit, vegetable, and specialty crop industry marketing and policy issues. He helped initiate the NEC-63 Regional Committee on Commodity Promotion Research, and led the organization of the Food and Agricultural Marketing Consortium (now the Food and Agricultural Policy Section of the Agricultural and Applied Economics Association) to help integrate work being done under numerous regional research projects into policy information useful to decision makers. Dr. Armbruster currently serves as the first chairman of the Specialty Crop Committee, under the auspices of the National Agricultural Research, Extension, Education and Economics Advisory Board, reporting annually to the Secretary of Agriculture and Congress. His co-edited book *Federal Marketing Programs: Issues and Options* provided supplemental readings for many agricultural economics marketing classes for a number of years following its publication in 1983. His 1985 co-edited "red book"—*Research on Effectiveness of Agricultural Commodity Promotion*—was the most widely used reference in this emerging focus area for a number of years.

In his Farm Foundation position, Dr. Armbruster worked tirelessly to help improve the economic prospects for agriculture and rural communities through better public policies and private

sector strategies. He organized numerous conferences in collaboration with colleagues from the land grant universities, government agencies, and industry. Dr. Armbruster's goal has long been to bring forth the best research possible on economic and policy issues facing agriculture and rural areas, present it in understandable language to decision makers, and facilitate interaction among researchers, government officials, and university administrators so that they can anticipate and grapple with emerging problems and issues.

Simultaneously, Dr. Armbruster has devoted much time and effort to providing leadership in the profession of agricultural economics. He served on the Executive Board of the American Agricultural Economics Association (AAEA) (now called the Agricultural and Applied Economics Association) as its president and on the AAEA Foundation Board; on the board and as president of the American Agricultural Law Association; and on the board and as president of the International Food and Agribusiness Management Association. As the first chairman of the Council on Food, Agricultural and Resource Economics (C-FARE), he helped to establish it as a voice for the profession in national issues affecting agricultural economics research, extension, and education, and to deliver the profession's research insights to policymakers in the legislative and administrative branches of the U.S. government. He has served as Secretary-Treasurer of the International Association of Agricultural Economists since 1991. Currently, Dr. Armbruster is serving his third three-year term on the National Agricultural Research, Extension, Education and Economics Advisory Board, and is its vice chairman. He has served on numerous other boards or advisory committees for the land grant universities and U.S. government agencies.

Dr. Armbruster is a fellow of the AAEA, the International Food and Agribusiness Management Association, and the American Association for the Advancement of Science. He has received distinguished service awards from the American Agricultural Law Association and the Chicago Farmers, an organization of farm owners and those with related agricultural interests. He is also a Distinguished Agricultural Alumni, Purdue University.

Journal Article of the Year for 2007**Yield Reserve Program Costs in the Virginia Coastal Plain**

(*ARER* Vol. 36, No. 2, October 2007: 197–212)

Todd Metcalfe, Darrell J. Bosch, James W. Pease, Mark M. Alley, and Steve B. Phillips

A proposed Yield Reserve Program designed to compensate farmers for any reduced yields resulting from nitrogen (N) application rates reduced to below recommended rates is evaluated. Assuming that farmers currently follow Extension recommendations for applying N, Yield Reserve Program participation reduces expected net revenue by \$10 to \$13/ha. The Yield Reserve Program reduces expected net revenue by \$17 to \$20/ha for

farmers who apply N to maximize expected net revenue. Farmers' costs of participation increase with lower probabilities of inadequate rainfall and higher corn prices and decline with higher N prices. The Yield Reserve Program can significantly reduce N applications to cropland, which may reduce N content of surface waters, but the costs to taxpayers and farmers will depend on how the program is implemented.