

AGEC 622
Balagtas/Ma

AGEC 622 Organization of Agricultural and Food Markets
Spring 2019

Instructor: Joseph Balagtas (OH by appointment) and Meilin Ma (OH MW 2-3pm)

Lecture time and location: TR 1:30-2:45pm at KNOY B031

Instructor office: KRAN 557 & KRAN 629

Instructor email: balagtas@purdue.edu & mameilin@purdue.edu

Prerequisites

ECON 606, ECON 607, and AGEC 651, or consent of the instructor. ECON 620 is highly recommended.

Course Description

This course focuses on industrial organization (I.O.) issues in agricultural and food markets. These markets could hardly be considered to be perfectly competitive. Processing and marketing sectors of agricultural products have been evolving dramatically in recent decades, both in developed and developing economies. Specifically, food manufacturing and retailing have consolidated, product differentiation has increased, and vertical coordination of stages along the supply chain has strengthened. Analysis of these topics requires methodologies from the realm of applied I.O. This course provides students with basic analytical tools for related topics by referring to classic and frontier research papers on I.O. issues in agricultural and food markets in the United States and developing economies. Training students to write research papers using applied I.O. methods is another goal.

Grading

Course grades are based on one research paper (45%), three problem sets (45%), and research presentation (10%).

Grades are not curved. Letter grade A+ is given to grades of 95-100, A to 90-94.9, B+ to 85-89.9, B to 80-84.9, B- to 75-79.9, C to 67-74.9, D to 60-66.9, and F to <60.

Research papers shall be prepared as short journal articles (e.g., articles of 3000-3500 words as published at *Economic Letters*). Instructors help students in choosing a research topic early of the semester. Students will then write one-page proposals and obtain comments from the instructors. First and final drafts and timely comments follow. Formatting guidance and writing rules will be provided. In the last week of the semester, students give 10-minute presentations of their papers to obtain comments from the instructors and their peers.

Due dates

Problem set 1: first lecture of week 3 (Jan 22, 2019)
Brainstorm matrix: : first lecture of week 4 (Jan 29, 2019)
Research proposal: first lecture of week 7 (Feb 19, 2019)
Problem set 2: first lecture of week 9 (Mar 5, 2019)
First draft: first lecture of week 11 (Mar 19, 2019)
Problem set 3: first lecture of week 13 (Apr 2, 2019)
Research presentation: week 16 (Apr 23/25, 2019)
Final draft: 9am on Apr 30, 2019

Reference Textbooks

Carlton, D.W. and J.M. Perloff. 2005. *Modern Industrial Organization*, Fourth Ed. (Boston, MA: Pearson Addison Wesley).

Perloff, J.M., L.S. Karp, and A. Golan. 2007. *Estimating Market Power and Strategies* (New York: Cambridge University Press).

Tirole, J. 1988. *The Theory of Industrial Organization* (Cambridge, MA: MIT Press).

Course Outline

1. Market Power in Modern Agricultural Commodity Markets (9 lectures)

1-1. Economic modeling and course overview

- *Why and how economists construct economic models*
- *How models are applied to answering real-world questions*
- *What this course offers to you and expects from you*

*Varian, Hal. "[How to Build an Economic Model in Your Spare Time.](#)" *American Economist*, 1997, 41(2): 3-10.

1-2. Big pictures of modern agricultural markets

Crespi, John, Tina Saitone, and Richard Sexton. "[Competition in US Farm Product Markets: Do Long-Run Incentives Trump Short-Run Market Power?](#)" *Applied Economic Perspectives and Policy*, 2012, 34(4): 669-95.

McCorriston, Steve. "[Why Should Imperfect Competition Matter to Agricultural Economists?](#)" *European Review of Agricultural Economics*. 2002, 29(3): 349-71.

Reardon, Thomas, Christopher Barrett, Julio Berdegué, and Johan Swinnen. "[Agrifood Industry Transformation and Small Farmers in Developing Countries.](#)" *World Development*, 2009, 37(11): 1717-27.

Sexton, Richard. "[Industrialization and Consolidation in the US Food Sector: Implications for Competition and Welfare.](#)" *American Journal of Agricultural Economics*. 2000, 82(5): 1087-104.

*Sexton, Richard. "[Market Power, Misconceptions, and Modern Agricultural Markets.](#)" *American Journal of Agricultural Economics*, 2013, 95(2): 209-19.

1-3. Theoretical background

- *Structure-Conduct-Performance Approach*
- *New Empirical IO*

Bresnahan, Timothy. "[Empirical Studies of Industries with Market Power.](#)" *Handbook of Industrial Organization*, 1989, 2:1011-57.

- *Oligopoly and oligopsony power*
- *Flexible-Oligopoly-Oligopsony-Market Model (FOOM)*

Workshop: Writing a Research Article (1 lecture)

- *How to generate research ideas*
- *How to write a research proposal*
- *How to collect data for empirical analysis*
- *Guidance for academic writing and formatting*

McCloskey, Donald. "[The Rhetoric of Economics.](#)" *Journal of Economic Literature*, 1983, 21(2): 481-517.

McCloskey, Donald. "[Economic Writing.](#)" *Economic Inquiry*, 1985, 23(2): 187-222.

Williams, Joseph. "[Style: Toward Clarity and Grace.](#)" University of Chicago Press, 1990.

1.4. Market power in commodity markets

- *Market definition and market integration*

Tirole, Introduction

Barrett, Christopher. "[Market Analysis Methods: Are Our Enriched Toolkits Well Suited to Enlivened Markets?](#)" *American Journal of Agricultural Economics*, 1996, 78(3): 825-29.

*Barrett, Christopher and Jau-Rong Li. "[Distinguishing Between Equilibrium and Integration in Spatial Market Analysis.](#)" *American Journal of Agricultural Economics*, 2002, 86(3): 292-307.

Sexton, Richard, Catherine L. Kling, and Hoy Carman. "[Market Integration, Efficiency of Arbitrage, And Imperfect Competition: Methodology and Application to US Celery.](#)" *American Journal of Agricultural Economics*, 1991, 73(3): 568-80.

- *Measurement of market power*

Perloff, Jeffrey, Larry Karp, and Amos Golan. "Estimating Market Power and Strategies." Cambridge University Press, 2007.

Mérel, Pierre. "[Measuring Market Power in the French Comté Cheese Market.](#)" *European Review of Agricultural Economics*, 2009, 36(1): 31-51.

*Carkir, Metin and Joseph Balagtas. "[Estimating Market Power of U.S. Dairy Cooperatives in the Fluid Milk Market.](#)" *American Journal of Agricultural Economics*, 2012, 94(3): 647-58.

*Nevo, Aviv. "[Measuring Market Power in the Ready-to-Eat Cereal Industry.](#)" *Econometrica*, 2001, 69(2): 307-42.

- *Market power and agricultural policy*

*Russo, Carlo, Rachael E. Goodhue, and Richard J. Sexton. "[Agricultural Support Policies in Imperfectly Competitive Markets: Why Market Power Matters in Policy Design.](#)" *American Journal of Agricultural Economics*, 2011, 93(5): 1328-40.

*Sexton, Richard, Ian Sheldon, Steve McCorrison, and Humei Wang. "[Agricultural Trade Liberalization and Economic Development: The Role of Downstream Market Power.](#)" *Agricultural Economics*, 2007, 36(2): 253-70.

- *Market power and retail pricing*

*Allain, Marie-Laure, Claire Chambolle, Stephane Turolla, and Sofia B. Villas-Boas. "[Retail Mergers and Food Prices: Evidence from France.](#)" *Journal of Industrial Economics*, 2017, 65(3): 469-509.

Ma, Meilin, Tina Saitone, Richard Sexton, Richard Volpe, and Michelle Sansena. "[Market Concentration, Market Shares, and Retail Food Prices in the U.S. Women, Infants and Children Program.](#)" *Applied Economic Perspectives and Policy*, 2018.

Nevo, Aviv, and Adam Rosen. "[Identification with Imperfect Instruments.](#)" *Review of Economics and Statistics*, 2012, 94(3): 659-71.

*Thomassen, Øyvind, Howard Smith, Stephan Seiler, and Pasquale Schiraldi. "[Multi-Category Competition and Market Power: A Model of Supermarket Pricing.](#)" *American Economic Review*, 2017, 107(8): 2308-51.

*Richards, Timothy, Stephen Hamilton, and Koichi Yonezawa. "[Retail Market Power in a Shopping Basket Model of Supermarket Competition.](#)" *Journal of Retailing*, 94(3): 321-42.

- *Market power in the context developing economies*

*Mitra, Sandip, Dilip Mookherjee, Maximo Torero, and Sujata Visaria. "[Asymmetric Information and Middleman Margins: An Experiment with Indian Potato Farmers.](#)" *Review of Economics and Statistics*, 2018, 100 (1): 1-13.

2. Horizontal and Vertical Integration (6 lectures)

2-1. Theoretical background

- *Boundary of a firm*

Tirole, Chapter 1-1

- *The principal-agent problem and adverse selection*

*Hennessy, David. "[Information Asymmetry as a Reason for Food Industry Vertical Integration.](#)" *American Journal of Agricultural Economics*, 1996, 78(4): 1034-43.

- *Bargaining, moral hazard, and the hold-up problem*

2.2 Integration of agricultural supply chains

*Du, Xiaoxue, Liang Lu, Thomas Reardon, and David Zilberman. "[Economics of Agricultural Supply Chain Design: A Portfolio Selection Approach.](#)" *American Journal of Agricultural Economics*, 2016, 98(5): 1377-88.

*Sexton, Richard. "[Cooperatives and the Forces Shaping Agricultural Marketing.](#)" *American Journal of Agricultural Economics*, 1986, 68(5): 1167-72.

Villas-Boas, Sofia. "[Vertical Relationships between Manufacturers and Retailers: Inference with Limited Data.](#)" *Review of Economic Studies*, 2007, 74(2): 625-62.

2-3. Producer cooperatives

- *Farmer cooperatives in developed economies*

*Karantininis, Kostas, and Angelo Zago. "[Endogenous Membership in Mixed Duopsonies.](#)" *American Journal of Agricultural Economics*, 2001, 83(5): 1266-72.

*Sexton, Richard. "[The Formation of Cooperatives: A Game-Theoretic Approach with Implications for Cooperative Finance, Decision Making, and Stability.](#)" *American Journal of Agricultural Economics*, 1986, 68(2): 214-25.

*Sexton, Richard, and Julie Iskow. "[What Do We Know About The Economic Efficiency of Cooperatives: An Evaluative Survey.](#)" *Journal of Agricultural Cooperation*, 1993, 8: 15-27.

Vercammen, James, Murray Fulton, and Charles Hyde. "[Nonlinear Pricing Schemes for Agricultural Cooperatives.](#)" *American Journal of Agricultural Economics*, 1996, 78(3): 572-84.

- *Farmer cooperatives in developing economies*

*Banerjee, Abhijit, Dilip Mookherjee, Kaivan Munshi, and Debraj Ray. "[Inequality, Control Rights, and Rent Seeking: Sugar Cooperatives in Maharashtra.](#)" *Journal of Political Economy*, 2001, 109(1): 138-90.

*Fischer, Elisabeth, and Matin Qaim. "[Linking Smallholders to Markets: Determinants and Impacts of Farmer Collective Action in Kenya.](#)" *World Development*, 2012, 40(6): 1255-68.

Sukhtankar, Sandip. "[Sweetening the Deal? Political Connections and Sugar Mills in India.](#)" *American Economic Journal: Applied Economics*, 2012, 4(3): 43-63.

2-4. Contract farming

- *Contracting and welfare*

*Bellemare, Marc, and Jeffrey Bloem. "[Does Contract Farming Improve Welfare? A Review.](#)" *World Development*, 2018, 112: 259-71.

- *Contracting and productivity*

*Key, Nigel and William McBride. "[Production Contracts and Productivity in the U.S. Hog Sector.](#)" *American Journal of Agricultural Economics*, 2003, 85(1): 121-33.

- *Contracting and quality*

Goodhue, Rachael. "[Food Quality: The Design of Incentive Contracts.](#)" *Annual Review of Resource Economics*, 2011, 3(1): 119-40.

*Goodhue, Rachael, Dale Heien, Hyunok Lee, and Daniel Sumner. "[Contracts and Quality in the California Winegrape Industry.](#)" *Review of Industrial Organization*, 2003, 23(3-4): 267-82.

Goodhue, Rachael, Sandeep Mohapatra, and Gordon Rausser. "[Interactions between Incentive Instruments: Contracts and Quality in Processing Tomatoes.](#)" *American Journal of Agricultural Economics*, 2010, 92(5): 1283-93.

*Saenger, Christoph, Maximo Torero, and Matin Qaim. "[Impact of Third-Party Contract Enforcement in Agricultural Markets – a Field Experiment in Vietnam.](#)" *American Journal of Agricultural Economics*, 2014, 96(4): 1220-38.

- *Contracting and pricing*

* Barrett, Christopher, Maren Bachke, Marc Bellemare, Hope Michelson, Sudha Narayanan, Thomas Walker. "[Smallholder Participation in Contract Farming: Comparative Evidence from Five Countries.](#)" *World Development*, 2012, 40(4): 715-30.

*Chambolle, Claire, and Sylvaine Poret. "[When Fairtrade Contracts for Some Are Profitable for Others.](#)" *European Review of Agricultural Economics*, 2013, 40(5): 835-71.

Mohapatra, Sandeep, Rachael Goodhue, Colin Carter, and James Chalfant. "[Effects of Forward Sales on Spot Markets: Pre-Commitment Sales and Prices for Fresh Strawberries.](#)" *American Journal of Agricultural Economics*, 2010, 92(1): 152-63.

3. Quality and Product Differentiation (8 lectures)

3-1. Theoretical background

Tirole, Chapter 7

*Giannakas, Konstantinos. "[Consumer Demand in Vertically Differentiated Markets.](#)" Lusk, Jayson, Jutta Roosen, and Jason Shogren, eds. *Oxford Handbook on the Economics of Food Consumption and Policy*, London: Oxford University Press, 2011, 243-59.

*Mérel, Pierre and Richard Sexton. "[Models of Horizontal Product Differentiation in Food Market.](#)" Chapter 10 in Lusk, J., J. Roosen, and J. Shogren, eds. *Oxford Handbook on the Economics of Food Consumption and Policy*, London: Oxford University Press, 2011, 260-91.

Mérel, Pierre, Richard Sexton, and Aya Suzuki. "[Optimal Investment in Transportation Infrastructure When Middlemen Have Market Power: A Developing-Country Analysis.](#)" *American Journal of Agricultural Economics*, 2009, 91(2): 462-76.

3-2. Implications of quality differentiation

*Gasmi, Farid, Jean Jacques Laffont, and Quang Vuong. "[Econometric Analysis of Collusive Behavior in a Soft-Drink Market.](#)" *Journal of Economics and Management Strategy*, 1992, 1(2): 277-311.

*Kalnins, Arturs. "[Hamburger Prices and Spatial Econometrics.](#)" *Journal of Economics and Management Strategy*, 2003, 12(4): 591-616.

*Lavoie, Natalie. "[Price Discrimination in the Context of Vertical Differentiation: an Application to Canadian Wheat Exports.](#)" *American Journal of Agricultural Economics*, 2005, 87(4): 835-54.

Saitone, Tina, and Richard Sexton. "[Product Differentiation and Quality in Food Markets: Industrial Organization Impacts.](#)" *Annual Review of Resource Economics*, 2010, 2: 341-68.

Saitone, Tina, Richard Sexton, and Daniel Sumner. "[What Happens When Food Marketers Require Restrictive Farming Practices?](#)" *American Journal of Agricultural Economics*, 2015, 97(4): 1021-43.

*Von Schlippenbach, Vanessa, and Isabel Teichmann. "[The Strategic Use of Private Quality Standards in Food Supply Chains.](#)" *American Journal of Agricultural Economics*, 2011, 94(5): 1189-201.

3-3. Quality certification and imperfect information

*Akerloff, George. "[The Market for 'Lemons': Quality Uncertainty and the Market Mechanism.](#)" *Quarterly Journal of Economics*, 1978, 84(3): 488-500.

*Chalfant, James and Richard Sexton. "[Marketing Orders, Grading Errors, and Price Discrimination.](#)" *American Journal of Agricultural Economics*, 2002, 84(1): 53-66.

Mérel, Pierre. "[On the Deadweight Cost of Production Requirements for Geographically Differentiated Agricultural Products.](#)" *American Journal of Agricultural Economics*, 2009, 91(3): 642-55.

Moschini, GianCarlo, Luisa Menapace, and Daniel Pick. "[Geographical Indications and the Competitive Provision of Quality in Agricultural Markets.](#)" *American Journal of Agricultural Economics*, 2008, 90(3): 794-812.

*Saitone, Tina and Richard Sexton. "[Impacts of Minimum Quality Standards Imposed Through Marketing Orders or Related Producer Organizations.](#)" *American Journal of Agricultural Economics*, 2010, 92(1): 164-80.

3-4. Non-price competition

Crespi, John and Stéphan Marette. "[Generic Advertising and Product Differentiation.](#)" *American Journal of Agricultural Economics*, 2002, 84(3): 691-701.

Matsa, David. "[Competition and Product Quality in the Supermarket Industry.](#)" *Quarterly Journal of Economics*, 2011, 126(3): 1539-91.

*Richards, T.J. and S.F. Hamilton. "[Variety Pass-Through: An Examination of the Ready-To-Eat Breakfast Cereal Market.](#)" *Review of Economics and Statistics*, 95(1): 166-79.

*Richards, Timothy and Luis Padilla. "[Promotion and Fast Food Demand.](#)" *American Journal of Agricultural Economics*, 2009, 91(1): 168-83.

*Roe, Brian and Ian Sheldon. "[Credence Good Labeling: The Efficiency and Distributional Implications of Several Policy Approaches.](#)" *American Journal of Agricultural Economics*, 2007, 89(4): 1020-33.

Suzuki, Nobuhiro, Harry M. Kaiser, John E. Lenz, Olan D. Forker, and Kohei Kobayashi. "[Evaluating Generic Milk Promotion Effectiveness with an Imperfect Competition Model.](#)" *American Journal of Agricultural Economics*, 1994, 76(2): 296-302.

Zhang, Mingxia and Richard J. Sexton. "[Optimal Commodity Promotion When Downstream Markets Are Imperfectly Competitive.](#)" *American Journal of Agricultural Economics*, 2002, 84(2): 352-65.

4. Innovation and New Trends in Food Supply Chains (5 lectures)

4-1. Economics of R&D

Tirole, Chapter 10

- *Patents and licensing*
- *Process innovations*

4-2. Innovation in the Agricultural Sector

*Huang, Shu-Yu and Richard J. Sexton. "[Measuring Returns to an Innovation in an Imperfectly Competitive Market: Application to Mechanical Harvesting of Processing Tomatoes in Taiwan.](#)" *American Journal of Agricultural Economics*, 1996, 78(3): 558-71.

Alston, Julian, Matthew Andersen, Jennifer James, and Philip Pardey. "[The Economic Returns to U.S. Public Agricultural Research.](#)" *American Journal of Agricultural Economics*, 2011, 93(5): 1257-77.

*Alston, Julian M., Richard J. Sexton, and Mingxia Zhang. "[The Effects of Imperfect Competition on the Size and Distribution of Research Benefits.](#)" *American Journal of Agricultural Economics*, 1997, 79(4): 1252-65.

*Moschini, Giancarlo and Harvey Lapan. "[Intellectual Property Rights and the Welfare Effects of Agricultural R&D.](#)" *American Journal of Agricultural Economics*, 1997, 79(4): 1229-42.

Zilberman, David, Liang Lu, and Thomas Reardon. "[Innovation-Induced Food Supply Chain Design.](#)" *Food Policy*, 2017.

4-3. E-Commerce

*Brynjolfsson, Erik, and Michael D. Smith. "[Frictionless Commerce? A Comparison of Internet and Conventional Retailers.](#)" *Management Science*, 2000, 46(4): 563-85.

*Clay, Karen, Ramayya Krishnan, Eric Wolff, and Danny Fernandes. "[Retail Strategies on the Web: Price and Non-Price Competition in the Online Book Industry.](#)" *Journal of Industrial Economics*, 2003, 250(3): 351-67.

Forman, Chris, Anindya Ghose, and Avi Goldfarb. "[Competition between Local and Electronic Markets: How the Benefit of Buying Online Depends on Where You Live.](#)" *Management Science*, 2009, 55(1): 47-57.

*Goldmanis, Maris, Ali Hortaçsu, Chad Syverson, and Önsel Emre. "[E-Commerce and the Market Structure of Retail Industries.](#)" *Economic Journal*, 2010, 120(545): 651-82.

*Lendle, Andreas, Marcelo Olarreaga, Simon Schropp, and Pierre-Louis Vézina. "[There Goes Gravity: eBay and the Death of Distance.](#)" *Economic Journal*, 2016, 126(591): 406-41.

Richards, Timothy, Stephen Hamilton, and William Allender. "[Search and Price Dispersion in Online Grocery Markets.](#)" *International Journal of Industrial Organization*, 2016, 47: 255-81.