

MKT 888000: Selected Topics in Marketing
Department of Marketing and International Business
Zicklin School of Business
Baruch College
CUNY

Identification Issues and Topics in Empirical Marketing
Professor Ram Bezawada

Class/Hours and Time: 2:00 pm-4:00 pm Wednesdays (August 29th-Dec 12th)
Note: No class on September 5th and September 19th

Course Overview and Objectives:

The general goal of this course is to familiarize and improve student understanding of research techniques in marketing. Specifically, we will consider/focus on two different paradigms or research schools of thought in economics and marketing—the “experimentalist” school and the “structural” school and examine their approaches. However, regardless of the research school of thought, we will place special emphasis on the identification of the model (s). Thus, you should pay close attention to such details. Given the above, the course will be organized into two parts:

1. We will begin by examining research papers in “*experimentalist*” realm; and thus we will focus on such articles in the first half of the course. We will also consider articles that explicitly discuss endogeneity issues.
2. We will then delve into the “*structural*” models in the second half of the course.

Notes:

- The other main types of models used in marketing research are what usually referred to as *reduced form* models. Since you may be already familiar with such types of models from earlier classes, we will not spend too much time on these (but the syllabus does include some of them as well).
- Moreover, with respect to *structural* models, we will primarily focus on a specific class—*learning models*.

Course Format:

The course format consists of lectures, paper presentations, home works and a final project the details of which follow:

Paper Presentations (55% of the grade)

Students will be assigned to present a paper either every week or every other week (depending on the enrollment). The papers will be assigned in advance. Students who are presenting should prepare for a one-hour presentation that shows a deep understanding of the paper (including estimation techniques in the appendix). Particular attention should be placed on understanding how the identification is achieved for the models. You should be prepared to answer/ defend your answer in class with respect to the above. Other students are expected to contribute by discussing the paper and think of ways to extend the paper.

All students should submit a 2-3 page summary every week of the papers scheduled for presentation.

Research Paper (45% of the grade)

The paper should identify an empirical question and outline the procedure by which you would solve the problem. Then, an econometric/statistical model should be proposed and estimated. Once again, please pay special attention to model identification. This paper should be viewed as a major project and should be of publishable quality. However, I do not expect you to publish this paper at the end of the semester. What I envisage is that with more work during the other semesters and the summer, you can develop a working draft of the paper which will be then of publishable quality. You will present your paper on the last day of class. You can of course use some of your existing work for this purpose as long as it fits the bill.

Reference Books:

- Angrist, Joshua D. and Jorn -Steffen Pischke (2008), *Mostly Harmless Econometrics: An Empiricist's Companion*, Princeton University Press, NJ
- Ben-Akiva, Moshe and Steven R. Lerman (1985), *Discrete Choice Analysis: Theory and Application to Travel Demand*, Cambridge, MA: MIT Press.
- Train, Kenneth E. (2003), *Discrete Choice Methods with Simulation*, Cambridge University Press
- Gelman Andrew, John B. Carlin, Hall S. Stern and Donald B. Rubin (2003), *Bayesian Data Analysis*, Chapman and Hall/CRC.
- Rossi, Peter, Greg Allenby and Rob McCulloch (2006), *Bayesian Statistics and Marketing*, John Wiley and Sons.
- Greene, William H. (1993), *Econometric Analysis*, New York, NY: Macmillan Publishing Company.

Background Preparation:

The course will start with some basic issues and discussions. We will then focus on some basic regression models, discrete choice models. We will then cover more advanced topics. You are advised to familiarize yourself with the material relating to regression and Logit/Probit models in the reference books mentioned above before the start of the first day of class.

In the first class, I give you an overview of some of my work. In addition, we will discuss various topics like job market, review process, academic career etc. We will then discuss:

Week 1 and Week 2: Introduction to issues: Experimental vs. Structural Paradigms

- Angrist, J.D. and J.S. Pischke (2010), "The Credibility Revolution in Empirical Economics: How Better Research Design is Taking the Con out of Econometrics", *Journal of Economic Perspectives*, 24(2), 3-30.
- Keane, M.P. (2010), "A Structural Perspective on the Experimentalist School", *Journal of Economic Perspectives*, 24(2), 47-58.

- Levitt S.D. and J List (2009), “Field Experiments in Economics: The Past, the Present, and the Future”, *European Economic Review*, 53, 1-18.
- Chapter 1 from Angrist, J.D. and J.S. Pischke (2008), Questions about Questions.
- Chapter 2 from Angrist, J.D. and J.S. Pischke (2008), The Experimental Ideal.
- Chapter 1 of Gertler et al. (2011), Impact Evaluation in Practice: *Impact Evaluation: Why Evaluate?*
- Chapter 3 of Gertler et al. (2011), Impact Evaluation in Practice: *Causal Inference and Counterfactuals*

Week 3 and Week 4: Some Relevant Methods

- Chapter 6 of Gertler et al. (2011), Impact Evaluation in Practice: *Differences-in-Differences*
- Chapter 5 of Gertler et al. (2011), Impact Evaluation in Practice: *Regression Discontinuity Design*
- Chapter 7 of Gertler et al. (2011), Impact Evaluation in Practice: *Matching Methods*
- Introduction to Instrumental Variables
- Anderson, M. and Magruder, J. (2012), “Learning from the Crowd: Regression Discontinuity Estimates of the Effects of an Online Review Database,” *Economic Journal*, 122: 957–989.
- Lalive, R. (2008), “How do extended benefits affect unemployment duration? A regression discontinuity approach”, *Journal of Econometrics*, 142(2), 785-806.
- Mealli, F. and C. Ramoichini (2012), “Evaluating the Effects of University Grants by Using Regression Discontinuity Designs”, *Journal of the Royal Statistical Society (Series A)*, 175(3), 775-798.
- Duflo E. and E. Saez (2003), “The Role of Information and Social Interactions in Retirement Plan decisions: Evidence from a Randomized Experiment”, *Quarterly Journal of Economics*, 815-841.

Week 5 and Week 6: Some Applications of the Above

- Chetty R., A. Looney and K. Kroft (2009), “Salience and Taxation: Theory and Evidence”, *American Economic Review* 99(4), 1145-1177.
- Dhar T. and K. Baylis (2011), “Fast-Food Consumption and the Ban on Advertising Targeting Children: The Quebec Experience”, *Journal of Marketing Research*, 48(5), 799-813.
- Tucker, C. and J. Zhang (2011), “How Does Popularity Information Affect Choices? A Field Experiment”, *Management Science*, 57(5), 828-842.
- Huang Q., V.R. Nijs, K. Hansen, E. T. Anderson (2012), “Wal-Mart's Impact on Supplier Profits”, *Journal of Marketing Research*, 49(2), 131-143.
- Bronnenberg B.J., J.P. Dubé, C. F. Mela (2010), “Do Digital Video Recorders Influence Sales?,” *Journal of Marketing Research*, 47 (6), 998-1010.

Week 7 and Week 8: Endogeneity-Part 1

- Manchanda, P., P.E. Rossi and P. K. Chintagunta (2004), “Response Modeling with Non-Random Marketing Mix,” *Journal of Marketing Research*, 41 467-478.
- Park S. and S. Gupta (2012), “Handling Endogenous Regressors by Joint Estimation Using Copulas,” *Marketing Science*, 31(4), 567-586.
- Zhang J., M. Wedel, R. Pieters R. (2009), “Sales effects of visual attention to

- feature ads: A Bayesian mediation analysis,” *Journal of Marketing Research*, 46(3), 669–681.
- Rutz OJ, RE Bucklin, GP Sonnier (2012), “A Latent Instrumental Variables Approach to Modeling Keyword Conversion in Paid Search Advertising,” *Journal of Marketing Research*, 49(3), 306–319.
 - Dotson J.P., G.M. Allenby (2010), “Investigating the Strategic Influence of Customer and Employee Satisfaction on Firm Financial Performance”, *Marketing Science*, 29(5), 895–908.

Week 9 and Week 10: Endogeneity-Part 2

- Petrin A. and K. Train (2010), “A Control Function Approach to Endogeneity in Consumer Choice Models,” *Journal of Marketing Research*, 47(1), 3-13.
- Montaguti E., S.A. Neslin and S. Valentini (2015), “Can Marketing Campaigns Induce Multichannel Buying and More Profitable Customers? A Field Experiment” *Marketing Science*, Forthcoming.
- Yakov Bart, Andrew T. Stephen, and Miklos Sarvary (2014) Which Products Are Best Suited to Mobile Advertising? A Field Study of Mobile Display Advertising Effects on Consumer Attitudes and Intentions. *Journal of Marketing Research*, 51 (3), 270-285.
- Yubo Chen, Qi Wang, Jinhong Xie (2011) “Online Social Interactions: A Natural Experiment on Word of Mouth Versus Observational Learning,” *Journal of Marketing Research*, 48 (2), 238-254.
- **Introduction Paper for Structural Modeling**: Ching, A. T., Erdem, T., & Keane, M. P. (2013), “An assessment of progress, challenges, and new developments”, *Marketing Science*, 32(6), 913-938.

Note: These papers are more intricate and so we may replace them with other papers during the semester.

Week 11 and Week 12: Structural/Learning Models

- Ching, A., Clark, C. R., Horstmann, I. J., & Lim, H. (2014). The Effects of Publicity on Demand: The Case of Anti-Cholesterol Drugs,” *Marketing Science*, Forthcoming.
- Akerberg, D. (2003), “Advertising, Learning, and Consumer Choice in Experience Good Markets: A Structural Empirical Examination,” *International Economic Review*, 44(3), 1007-1040.
- Erdem, T., M. Keane and B. Sun (2008) , “A Dynamic Model of Brand Choice when Price and Advertising Signal Product Quality,” *Marketing Science*, 27(6): 1111-25.
- Crawford, G. and M. Shum (2005), “Uncertainty and Learning in Pharmaceutical Demand,” *Econometrica*, 73(4): 1137–1173.
- Ching, A. and M. Ishihara (2012a), “Measuring the Informative and Persuasive Roles of Detailing on Prescribing Decisions,” *Management Science*, 58(7):1374-1387.
- Chan T., C. Narasimhan and Y. Xie (2012), “Treatment Effectiveness and Side-effects: A Model of Physician Learning,” *Management Science*, Forthcoming.

Week 13: Discussion of Research Ideas and Presentations