Identification Issues and Topics in Empirical Marketing

Professor Ram Bezawada

Class/Hours and Time: 9:30 am to 11:30 am Thursdays

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 (40% 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 (40% 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.

Assignments (20 % of grade): There will be 1-2 assignments the details of which will be explained in class.

Reference Books:

- Gelman Andrew, John B. Carlin, Hall S. Stern and Donald B. Rubin (2003), Bayesian Data Analysis, Chapman and Hall/CRC.

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
- 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

**Week 5 and Week 6: Some Applications of the Above**

**Week 7 and Week 8: Endogeneity-Part 1**

**Week 9 and Week 10: Endogeneity-Part 2**


**Week 11 and Week 12: Structural/Learning Models**


**Week 13: Discussion of Research Ideas and Presentations**