EMPIRICAL MODELS IN MARKETING
(MKTG 9560)

Spring 2023

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Friday 10am – 1:00pm

Objectives:

This seminar-based class is designed to introduce doctoral students to the fundamental empirical models and estimation methods utilized in quantitative academic marketing papers. That is, if this class is successful, you should know the basic purpose, data requirements, mathematical formulation, and equally important the jargon/verbiage, associated with a wide assortment of quantitative marketing models.

Outline of Each Class Session:

Each class session will have a similar structure. We will review two published papers (in some rare cases possibly three), consisting of a "classic marketing paper" that seminally introduced a concept/model to the literature, followed by a more recent updated version of the same concept. In this manner, students will become familiar with the tradition of marketing science, but also gain knowledge of "modern updates" to those papers. Given that only two papers are assigned for each week, a deep and detailed coverage of each paper, with detailed pre-reading on the students' part, is expected.

Course Materials and Website:

Copies of the papers sit on the course canvas site which can be accessed by logging into (https://wharton.instructure.com/login).

Grading:

Your grade in the course will consist of three parts.

(i) Each week, you are required to turn in <u>AT THE BEGINNING OF CLASS</u>, a no more than 5-page summary of the papers from that week.   These short summaries will be graded based on your ability to: (i) concisely summarize the papers, (ii) provide a description of opportunities to extend these papers into novel research areas, (iii) your ability to raise critical questions about any aspect of the paper of your choosing, and (iv) most importantly, tie one or more of the papers to a problem that YOU ARE WORKING ON.

(ii) The reason that we are meeting as a class is for you to share your ideas with others. Come to class prepared to discuss both papers that are assigned.

(iii)   As a final project, I will ask each of you to construct a no more than 30-minute presentation summarizing "Lecture N+1".   That is, if there was one additional lecture, what would it be on? You pick the paper, or two papers, write up a summary of them (20 pages or less), and prepare a presentation on the topic.

<u>Contact Information</u>

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Course Outline

<u>Session</u>

1. **January 13th   Choice Models/Loyalty**

   <u>Paper 1</u>: Guadagni, P.M. and Little, J.D.C. (1983), "A Logit Model of Brand Choice Calibrated on Scanner Data", *Marketing Science*, Vol. 2, No. 3, pp 203-238.

   <u>Paper 2</u>: Dube, J-P, Hitsch, G, and Rossi, P.E. (2010), "State Dependence and Alternative Explanations for Consumer Inertia", *RAND Journal of Economics*, Bol. 41, No. 3, pp 417-445.

2. **January 20th   Conjoint Analysis**

   <u>Paper 1</u>: Marshall, P. and Bradlow, E.T. (2002), "A Unified Approach to Conjoint Analysis Models", *Journal of the American Statistical Association*, 97:459, pp. 674-682.

   <u>Paper 2</u>: Iyengar, R., Jedidi, K, and Kohli, R. (2008), "A Conjoint Approach to Multipart Pricing", *Journal of Marketing Research*, Vol. XLV, pp. 195-210.

3. **January 27th   CLV/Attrition Models**

   <u>Paper 1</u>: Schmittlein, D.C., Morrison, D.G. and Colombo, R. (1987), "Counting Your Customers: Who Are They and What Will They Do Next?", *Management Science*, Vol. 33, No. 1, pp. 1-24.

   <u>Paper 2</u>: Schweidel, D. A. and Knox, G. (2013), "Incorporating Direct Marketing Activity into Latent Attrition Models," *Marketing Science*, 32 (3), pp. 471-487.

4. **February 3rd   Integrated Models for Multiple Outcomes**

   <u>Paper 1</u>: Chintagunta, P.K. (1993), "Investigating Purchase Incidence, Brand Choice and Purchase Quantity Decisions of Households, *Marketing Science*, Vol. 12, No. 2, pp. 184-208.

   <u>Paper 2</u>: Gupta, S. (1988), "Impact of Sales Promotions on When, What and How Much to Buy," Journal of Marketing Research, 30 (4), 342-355.

5. **February 10th   Learning Models**

   <u>Paper 1:</u> Erdem, T. and Keane, M.P. (1996), "Decision-Making under Uncertainty: Capturing Dynamic Brand Choice Processes in Turbulent Consumer Goods Markets" *Marketing Science*, Vol. 15, No. 1, pp. 1-20.

Paper 2: Iyengar, Raghuram, Asim Ansari and Sunil Gupta (2007), "A Model of Consumer Learning for Service Quality and Usage," *Journal of Marketing Research*, 44 (4), 529-544.

6. February 17th   WHARTON MARKETING CAMP

7. February 24th   Heterogeneity / HMM

Paper 1: Rossi, P.E., McCulloch, R.E., and Allenby, G.M. (1996), "The Value of Purchase History Data in Target Marketing", *Marketing Science*, Vol. 15, No. 4, pp. 321-340.

Paper 2: Kamakura, Wagner and Russell, Gary. (1989), "A Probabilistic Choice Model for Market Segmentation," *Journal of Marketing Research*, 26, 379-390.

Paper 3: Netzer, O., Lattin, J.M., and Srinivasan, V. (2008), "A Hidden Markov Model of Customer Relationship Dynamics", *Marketing Science*, Vol. 27, No. 2, pp. 185-204.

8. March 3rd   Lecture N+1 (Bradlow and Iyengar)