

Seminar on Marketing Models I

Course No : 02814940

Credit : 2

Prerequisite : statistics. Econometrics, microeconomics

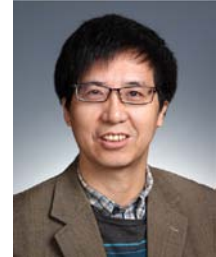
Program : UG

Instructor : 符国群

Semester : 2015 Spring

Instructor's resume/brief introduction(Within 500 words) :

Guoqun Fu is Professor and doctoral supervisor of Department of Marketing at Guanghua School of Management, Peking University. He had been serving as Chair of Department of Business Administration at Wuhan University, a member of Academic Degrees Committee at Wuhan University, and a member of the Standing Committee of the NPC, Hunan Province. He earned his Ph.D. in Economics from Wuhan University and Ph. D. in Management from Aston University.



Instructor's contact information :

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TA's contact information::

Office hour:

Wed, 14 : 00 – 17 : 00

Program Learning Goals and Objectives

- 1 **Learning Goal 1** Graduates will be thoroughly familiar with the specialized knowledge and theories required for the completion of academic research.
 - 1.1 Objective 1 Graduates will have a deep understanding of basic knowledge and theories in their specialized area.
 - 1.2 Objective 2 Graduates will be familiar with the latest academic findings in their specialized area and will be knowledgeable about related areas.
 - 1.3 Objective 3 Graduates will be familiar with research methodologies in their specialized area, and will be able to apply them effectively.
- 2 **Learning Goal 2** Graduates will be creative scholars, who are able to write and publish high-quality graduation dissertation and research papers.
 - 2.1 Objective 1 Graduates will write and publish high-quality graduation dissertation and research papers
 - 2.2 Objective 2 Graduates will be critical thinkers and innovative problems solvers.
- 3 **Learning Goal 3** Graduates will have a broad vision of globalization and will be able to communicate and cooperate with international scholars
 - 3.1 Objective 1 Graduates will have excellent oral and written communication skills
 - 3.2 Objective 2 Graduates will be able to conduct efficient academic communication in at

least one foreign language

- 4 **Learning Goal 4** Graduates will be aware of academic ethics and will have a sense of social responsibility.
- 4.1 Objective 1 Graduates will have a sense of social responsibility.
 - 4.2 Objective 2 Graduates will be aware of potential ethical issues in their academic career.
 - 4.3 Objective 3 Graduates will demonstrate concern for social issues.

Course Overview

This course is about quantitative modeling in marketing research. Topics include: choice models , conjoint models, **Heterogeneity, CLV/Attrition Models**, Bayesian Statistics and Marketing, Spatial Model and Social Network Analysis, **Introduction to New Empirical Industrial Organization, and Big Data Marketing: Personalization and Recommendation**. The material will be primarily drawn from classical and recently published journal articles. Directions for future research will be identified in the topics of marketing science covered in the course. The readings will be primarily drawn from such journals as *Marketing Science*, *Management Science*, the *Journal of Marketing Research*, and the *Journal of Marketing*.

Course Objectives

The objectives of this course are to introduce and discuss various quantitative/analytical models in marketing. First, this course provides the students necessary skills to build marketing models and tools to empirically analyze the data. Second, students are expected to be able to apply typical marketing models in analyzing and solving real world problems. Third, students should be able to competently review and criticize different streams of research and appraise its practical application in solving problems.

Detailed Course Plan

Week 1:

Topic: INTRODUCTION TO MARKETING MODELS

Lecture: Analytical models and empirical models

Reading:

Leeflang, P and D. Wittink (2000), "Building Models for Marketing Decisions: Past, Present, and Future," *International Journal of Research in Marketing*, **17** (2000), 105-126.

Moorthy, K. Sridhar. (1993), "Theoretical Modeling in Marketing", *Journal of Marketing*, **57** (April), 92-106.

Rao and Monroe (1996), Causes and Consequences of Price Premium, *Journal of Business*, Vol.69(4), 511-535.

Week 2:

Topic: **Consumer Choice Model I**

Reading:

Guadagni, Peter M. and John D. C. Little (1983). "A Logit Model of Brand Choice Calibrated on Scanner Data," *Marketing Science*, 2(3), 203-238.

McFadden, Daniel (1980), "Econometric Models for Probabilistic Choice among Products," *The Journal of Business*, 53(3), S13-S29.

Ben-Akiva, Moshe and Steven R. Lerman (1985), *Discrete Choice Analysis: Theory and Application to Travel Demand*, MIT Press, Cambridge, MA.

Train, Kenneth (2009), *Discrete Choice Methods with Simulation*, 2nd ed. Cambridge University Press,

Cambridge, UK. <http://elsa.berkeley.edu/books/choice2.html>.
Book Chapter 2, *The History of Marketing Science*.

Week 3:

Topic: **Consumer Choice Model II**

Reading:

*Bucklin, Randolph E. and James M. Lattin (1991), "A Two-Stage Model of Purchase Incidence and Brand Choice," *Marketing Science*, 10 (Winter), 24-39.

Gilbride, Timothy J. and Greg M. Allengy (2004) "A Choice Model with Conjunctive, Disjunctive and Compensatory Screening Rule," *Marketing Science*, 23(3), 391-406.

Gupta, Sachin and Pradeep K. Chintagunta (1994), "On Using Demographic Variables to Determine Segment Membership in Logit Mixture Models," *Journal of Marketing Research*, 31(1), 128-136.

Kuhfeld, Warren F. (2005). "Marketing Research Methods in SAS." Working paper.

Recommended:

Pradeep Chintagunta and Harikesh Nair (2011). "Discrete Choice Models of Consumer Demand in Marketing," *Marketing Science*, (Invited paper), 30(6), 977-996.

Week 4:

Topic: **Conjoint Models**

Reading:

Green, P.E., Krieger, A.M., and Wind, Y. (2001), "Thirty Years of Conjoint Analysis: Reflections and Prospects", *INTERFACES* 31: 3, Part 2, S56-S73.

Hauser, John R. and Vithala R. Rao. (2003). "Conjoint analysis, related modeling, and applications." In *Marketing Research and Modeling: progress and Prospects: A Tribute to Paul E. Green*, Eds. Yoram Wind, and Paul E. Green.

Iyengar, R., Jedidi, K, and Kohli, R. (2008), "A Conjoint Approach to Multipart Pricing", *Journal of Marketing Research*, XLV, 195-210.

Park, Young-hoon, Min Ding, and Vithala R. Rao. (2008). "Eliciting Preference for Complex Products: A Web-Based Upgrading Method." *Journal of Marketing Research*, (October), 1-24.

Week 5:

Topic: **Heterogeneity I**

Reading:

Allenby, Greg and Peter Rossi (1999), "Marketing Models of Heterogeneity," *Journal of Econometrics*, 89, 57-78.

Wedel, Michel, Wagner A. Kamakura, Neeraj Arora, A. Bemmaor, J. Chiang, Terry Elrod, Richard Johnson, Peter Lenk, Scott Neslin, C.S. Poulsen (1999), "Discrete and Continuous Representation of Heterogeneity", *Marketing Letters*, 10 (3), 217-230.

Andrews, Rick, Andrew Ainslie, and Imran S. Currim (2002), "An Empirical Comparison of Logit Choice Models with Discrete versus Continuous Representations of Heterogeneity" *Journal of Marketing Research*, 39 (November), 479-487.

Recommended:

Dubé J.P., G. J. Hitsch and P. Rossi (2010). "State Dependence and Alternative Explanations for Consumer Inertia," *RAND Journal of Economics*, 41(3), 417-445.

Week 6:**Topic: Heterogeneity II****Reading:**

- *Kamakura, Wagner A. and Gary J. Russell (1989), "A Probabilistic Choice Model for Market Segmentation and Elasticity Structure," *Journal of Marketing Research*, 26, 379-390.
- Chintagunta, Pradeep K. (1992), "Estimating a Multinomial Probit Model of Brand Choice Using the Method of Simulated Moments," *Marketing Science*, 11 (Autumn), 386-407.
- Gönül, Füsün and Kannan Srinivasan (1993), "Modeling Multiple Sources of Heterogeneity in Multinomial Logit Models: Methodological and Empirical Issues," *Marketing Science*, 12 (Summer), 213-229.
- Allenby, Greg M., Neeraj Arora, and James L. Ginter (1998). "On the Heterogeneity of Demand," *Journal of Marketing Research*, 35, 384-389.

Week 7:**Topic: Introduction to New Empirical Industrial Organization****Week 8****Topic: Bayesian Statistics and Marketing****Reading:**

- Peter E. Rossi • Greg M. Allenby (2003), Bayesian Statistics and Marketing, *Marketing Science*, Vol. 22, No. 3, pp. 304-328
- YUXIN CHEN and JOEL H. STECKEL(2012), Modeling Credit Card Share of Wallet: Solving the Incomplete Information Problem, *Journal of Marketing Research* Vol. XLIX, 655-669

Week 9:**Topic: Spatial Model and Social Network Analysis**

- SHA YANG and GREG M. ALLENBY(2003), Modeling Interdependent Consumer Preferences, *Journal of Marketing Research*, Vol. XL 282-294
- XINLEI (JACK) CHEN, YUXIN CHEN, and PING XIAO (2013), The Impact of Sampling and Network Topology on the Estimation of Social Intercorrelations, *Journal of Marketing Research* Vol. L (February), 95-110

Week 10:**Topic: Big Data Marketing: Personalization and Recommendation.****Reading:**

- ANAND V. BODAPATI (2008)*, Recommendation Systems with Purchase Data, *Journal of Marketing Research*, Vol. XLV (February), 77-93
- Chung, Rust and Wedel (2009), My Mobile Music: An Adaptive Personalization System for Digital Audio Players, Vol. 28, No. 1, January-February, pp. 52-68
- Neeraj Arora et al.(2008), Putting one-to-one marketing to work: Personalization, customization, and choice, *Market Letters* 19:305-321

Week 11:**Topic: CLV/Attrition Models****Reading:**

- Schmittlein, D. C., Morrison, D. G. and Colombo, R. (1987). "Counting Your Customers: Who Are They

- and What Will They Do Next?" *Management Science*, 33(1), 1-24.
- Schweidel, D. A. and Knox, G. (2013). "Incorporating Direct Marketing Activity into Latent Attrition Models," *Marketing Science*, 32 (3), 471-487.
- Kumar, V., R. Venkatesan, T. Bohling, and D. Beckmann (2008b). The power of CLV: Managing Customer Lifetime Value at IBM, *Marketing Science*, 27(4), 585-599.
- Gupta, Sunil, Donald R. Lehmann, and Jennifer Ames Stuart. (2003), "Valuing Customers", *Journal of Marketing Research*, XLI (February), 7-18.

Week 12:

Topic: OVERVIEW/STUDENTS' PROPOSAL PRESENTATION/FINAL EXAM

Final Exam:

Teaching Methods

In each session, the classes consist of instructor's lectures and student-led presentations and discussions. The discussion of each topic will be based on a few readings identified for the topic. In addition to covering an overview of a topic, productive directions of future research on the topic and some ways of conducting such future research will be indicated.

IT tools to be used in the classroom

Please review some aspects of statistical theory for reviewing such topics as maximum likelihood theory, hypothesis testing, model comparison, and Bayesian methods. It is possible that you have looked at these topics from earlier courses.

Also, please try to become familiar with one of the (standard) statistical software packages such as SAS and SPSS. It will be useful to you to skim through the respective manual.

Further, you may like to build some expertise in advanced computer languages such as MATLAB, AND R. Tutorial and brief review of coding skills on some advanced software will be given throughout the sessions depending on the progress.

Textbooks

The papers for each topic and session will be used in stead of standard textbook.

References & Readings

1. Leeflang, Peter S.H., Dick R. Wittink, Michel Wedel, Philippe A. Naert. 2003. *Building Models for Marketing Decisions*, Kluwer Academic Publishers, 2003.
2. Ben-Akiva, Moshe and Steven R. Lerman. 1991. *Discrete Choice Analysis*, MIT Press.
3. Lilien, G. L., P. Kotler, and K. S. Moorthy. 1992. *Marketing Models*, Prentice Hall.
5. Greene, William. 2003. *Econometric Analysis*, Prentice-Hall, Fifth Edition.
6. Train, Kenneth E. 2003. *Discrete Choice Methods with Simulation*, Cambridge University Press.
7. Aaker, David A., V. Kumar, and George S. Day. 2003. *Marketing Research*. 8th edition. John Wiley & Sons, Inc.
8. Blattberg, Robert C., Byung-Do Kim, and Scott A. Neslin. 2008. *Database Marketing: Analyzing and Managing Customers*. Springer.

Videos, CD-ROMs and other adjunct learning resources used

Rules students must follow

This course encourages active interaction and participation in class discussion. Students need to give sufficient excuse for their absence.

Course Assessment

- Attendance and Participation (20%)
- Presentations and Projects (30%)
- Final Exam (50%)