

The Wharton School
University of Pennsylvania

MKTG 271/771-401:
Models and Tools for Marketing Tactics and Strategy
Fall 2008

NOTE: This syllabus is tentative. Minor changes might be made before September 3.

Administrative details

Professor: Renana Peres, Room: TBD , Tel: TBD
Email: peresren@huji.ac.il
<http://renanaperes.homestead.com/>

Head TA: TBD

Office Hours: TBD

Web Café Address: [TBD](#)

Overview and objectives

A model is a stylized representation of reality that is easier to deal with and explore for a specific purpose. Real life scenarios are complex and contain numerous interactions between multiple elements. However, in specific contexts one can isolate only the relevant factors and describe their mutual influence, in many cases, using mathematical tools. Traditionally, models were used in exact sciences – physics, engineering, biology. During the last decades, tools and methodologies from these domains diffused into marketing research, and are widely used by researchers and practitioners. It is fascinating to see how all complex systems are similar – societies, brain cells, gas molecules in the air, and groups of consumers, all obey a similar regularity.

I invite you to join me to a journey of discovering and exploring the nature of markets and industries. This course will help you to:

- Understand how to describe managerial scenarios in marketing using models, and how to use these models for decision making.
- Use a variety of state-of-the-art analytical and simulation techniques used today in marketing.
- Become familiar with methodologies and results from the marketing research literature.

- Evaluate new marketing models and quantitative tools about which you may read in the literature.
- Understand marketing problems more clearly through useful frameworks and by analyzing them quantitatively.
- Not be taken advantage of by some quantitative consultants.

Target participants

The course is quantitative, and involves hands-on exercises and model development. It has been designed for students with some background in quantitative methods as well as some exposure to basic marketing concepts. That is, students who have taken the marketing management course or have an equivalent experience.

Learning methods

The course uses a combination of lectures, problem sets, class discussions and readings.

Each lecture will be opened by presenting a managerial issue related to marketing, and then we will suggest a modeling method to solve this issue. We will thoroughly learn the method, see how it can be applied to the problem, and discuss other problems which could be modeled by this method.

Copies of the lecture notes and data I will be using will be available at the course site. Due to the mathematical nature of the course, there will be much black-board writing, therefore you are warmly advised to take notes during the lectures. If you miss a class you will need to get annotations from a colleague.

You will be asked to read the required material from the reading list below before each class. You are expected to be able to participate in class discussions based on these readings. The lectures will complement the text and will not attempt to cover all points raised in the reading.

Our textbook for the course is:

Marketing Engineering: Computer-Assisted Marketing Analysis and Planning by Lilien and Rangaswamy (LR), Prentice Hall, 2004.

All assigned readings for the course are available in a Bulk Pack (BP) at Wharton Reprographics. This packet will act as the nucleus of a models reference library when, in the field, you are called upon to solve a quantitative problem. Additional material will be posted on the course Website.

There will also be a number of guest lecturers who will share perspectives into the practice of modeling. Please note that there may some changes in the dates they are scheduled to visit the class.

Assessment

- | | |
|------------------------|------------------|
| 1. Class participation | 20% (individual) |
| 2. Problem sets | 30% (couples) |
| 3. Exam | 50% (individual) |

Class participation

Regular class participation is expected and will be a part of the grade. Grading class participation is necessarily subjective. Some of the criteria for evaluating effective class participation include:

- a. Is the participant prepared? Do their comments show evidence of deep case and readings analysis (vs. stating the facts)?
- b. Is the participant a good listener? Are the points made relevant to discussion?
- c. Is the participant an effective communicator? Are concepts presented in a concise and convincing fashion?

You should be prepared for all discussions on the problem sets and the reading materials. Be expected to be “cold called”.

Problem sets

You will be given 8-10 problem sets during the course. You should solve and submit the solution a week later. The problem sets exercise the methods learned in class. They are quantitative and involve analytical computations, graphs, data analysis and Excel simulations, but also require your marketing perspective and decision making skills. Problem sets should be submitted individually or in couples, as you wish. Problem sets should be handed in hard copy, typed, at the beginning of the class. Analytical computations (such as equation solving) can be handwritten only if the handwriting is very clear (as per the subjective judgment of the TA).

I look forward to meeting you on the first day of class. If you have any questions regarding the course, please feel free to contact me.

Outline

SESSION	DAY	DATE	Topic, Methods, and Readings	L&R*
1	Wed	Sep 3	Introduction – <ul style="list-style-type: none"> • What is modeling? • What is it good for? 	
2	Mon	Sep 8	Using models for better business performance <ul style="list-style-type: none"> • The story of ABB Reading: “Models and Managers” “Building Marketing Models that Make Money”	Ch. 1
3	Wed	Sep 10	Product positioning Method: Perceptual maps	Ch. 4 pp. 117-119
4	Mon	Sep 15	Product positioning Method: Perceptual maps, Factor analysis Reading: “Analyzing Consumer Perceptions”	Ch. 4 pp. 128-136
5	Wed	Sep 17	Using perceptual maps to face competition Method: Geometrical analysis of perceptual maps Reading: "Defensive Marketing Strategies"	Ch. 4
6	Mon	Sep 22	What do customers want in a new product? Method: Conjoint analysis Reading: "Conjoint analysis"	Ch. 7, pp. 239-247
7	Wed	Sep 24	How can one forecast the market share of a new product? Method: Conjoint based market share simulations Reading: “Thirty Years of Conjoint Analysis”	Ch. 7, pp. 247-253
8	Mon	Sep 29	How can one forecast the success of a new product? Method: The ASSESSOR model	Ch. 7, pp. 263-271
9	Wed	Oct 1	How can one forecast the success of a new product? Method: Securities Trading of Concepts (STOC)	
10	Mon	Oct 6	How many product varieties to offer? Method: Optimization Reading: "Product line Design"	
11	Wed	Oct 8	How many prototypes to test? Method: Optimization Reading: "Integrated Product Design"	
12	Mon	Oct 20	Growth of markets of new products	Ch. 7, pp.

			Method: The Bass diffusion model Reading: "Forecasting the Adoption of a new Product"	253-261
13	Wed	Oct 22	Growth of markets of new products <ul style="list-style-type: none"> Estimating the Bass model parameters 	
14	Mon	Oct 27	Do innovators help to product diffusion? <ul style="list-style-type: none"> Incorporating heterogeneity into the Bass model Reading: "Riding the Saddle"	
15	Wed	Oct 29	Did Fax penetrate faster than the CDROM? <ul style="list-style-type: none"> Penetration of network goods 	
16	Mon	Nov 3	Method: Agent based models - terminology and overview Reading: "Talk of The Network"	
17	Wed	Nov 5	Should the firm focus on its stronger markets? Method: Agent based models Reading: "The Role of Seeding"	
18	Mon	Nov 10	From density to destiny Method: Agent based models and information theory Reading: "From Density to Density"	
19	Wed	Nov 12	How to help our customers choose? <ul style="list-style-type: none"> Online advisors Method: Bayesian inference Reading: "Listening In"	
20	Mon	Nov 17	Customer switching and price promotions Method: Switching matrices Reading: "Do We Care What Others Get?"	
21	Wed	Nov 19	What is the value of a customer? Method: Customer Lifetime Value (CLV) Reading: "Customers as assets" "Valuing Customers"	
22	Mon	Nov 24	Drew Boyd – Johnson and Johnson Using the templates model for ideation	
23	Wed	Nov 26	Should a firm focus on acquisition or retention? Method: Optimization Reading: "Managing when Customer Equity Matters"	
24	Mon	Dec 1	Course summary	
25	Wed	Dec 3	Final exam	

L&R: Lilien and Rangaswamy.

Readings

- Models and Managers: The Concept of a Decision Calculus*, John D.C. Little (2004), *Management science* 50 (12) pp. 1841-1853.
- Building Marketing Models that Can Make Money*, Leonard M. Lodish (2001), *Interfaces* 3(2) pp. 45-55.
- Analyzing Consumer Perceptions* (HBS# 9-599-110).
- Defensive Marketing Strategies*, John R. Hauser and Steven M. Shugan (1983), *Marketing Science* 2(4) pp. 319-360.
- Conjoint Analysis* (HBS# 9-590-059)
- Thirty Years of Conjoint Analysis: Reflections and Prospects*. Paul E. Green, Abba M. Krieger and Yoram Wind. (2001) *Interfaces* 31:3 – Supplement pp. 56-73.
- Product Line Design and Production Technology*, Netessine S., Taylor T. (2007). *Marketing Science* 26(1) 101-117.
- Integrated product design for marketability and manufacturing*, Srinivasan, V, Lovejoy, William S and Beach, David, *Journal of Marketing Research* (1997) 34(1) pp. 154-163.
- Forecasting the Adoption of a New Product* (HBS# 505-062)
- Riding the Saddle: How Cross-Market Communications Can Create a Major Slump in Sales*, Jacob Goldenberg, Barak Libai and Eitan Muller (2002), *Journal of Marketing* 66 pp.1-16.
- Talk of the Network: A Complex Systems Look at the Underlying Process of Word-of-Mouth*, Jacob Goldenberg, Barak Libai and Eitan Muller (2001), *Marketing Letters* 12 pp. 209-221.
- The Role of Seeding in Multi-market entry*, Libai, Muller and Peres (2005), *International Journal of Research in Marketing* 22(4) 375-393.
- From Density to Destiny: Using Spatial Dimension of Sales Data for Early Prediction of New Product Success*, Tal Garber, Jacob Goldenberg, Barak Libai and Eitan Muller (2004), *Marketing Science*, 23 pp. 419-429.
- 'Listening In' to find and Explore New combinations of Customer Needs*, Urban, Glen, and John Hauser (2004), *Journal of Marketing* 68 (2).
- Do We Care What Others Get? A Behaviorist Approach to Targeted Promotions* Fred Feinberg, Aradhna Krishna, Z. John Zhang (2002) *Journal of Marketing Research* 39 pp. 277-291.
- Customers as Assets*, Sunil Gupta and Donald Lehman (2003) *Journal of Interactive Marketing*, 17 (1), pp. 9-24.
- Valuing Customers*, Sunil Gupta, Donald R. Lehmann, and Jennifer Stuart (2004) *Journal of Marketing Research*, February, 7-18.
- Managing When Customer Equity Matters*, Dominique M. Hanssens, Daniel Thorpe, Carl Finkbeiner (2008). HBR May. Product number R0805J.