

AEM 6700 - Economics of Consumer Demand
Fall semester, 2016

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Times and Place: Monday and Wednesday 8:40am – 9:55am
Warren Hall B02.

Office hours: Wednesdays 2:00pm – 4:00pm

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(Office hours to be defined)

Course Objectives: This course is designed primarily for graduate students in applied economics and other students interested in gaining knowledge on the economics of consumer demand and its applications. It is a course based in economic theory and its empirical applications focusing on consumer demand. We will study the core of consumer theory and essential mathematical economics to understand how researchers, private businesses and policymakers use models of consumer behavior and demand response to support decision-making. We will spend considerable time identifying relevant consumer demand related problems/issues; analyzing how economic theory can help us shed light on these problems/issues; employing basic quantitative models to understand how to use data to understand consumer demand and behavior; and discussing how theory and empirical models can support decision-making. We will examine the relevance of demand models in the areas of public policy, development economics, marketing/management, and environmental economics. Exposure to a wide variety of publications in this area, and the term project assignment, will provide you with the opportunity to develop your analytical skills and perhaps produce an article of publishable quality.

The objectives of this course are to:

1. Develop an understanding of the theories and the types of data available analyze consumer demand.
2. Familiarize with a variety of applied models that address fundamental problems in consumer demand.
3. Gain experience in framing, solving, and communicating solutions to demand economics problems.
4. Prepare the student for advanced courses in microeconomics.

Dynamics of the Course: each topic will be introduced with a practical problem before going into the theory and methods that can help frame it. You will work on these problems in small groups as an in-class activity. Next we will discuss the different approaches used by groups to shed light of the problem. Subsequently, we will study the theories and the empirical models that

can help us understand the problem. Therefore, in the sessions with an in-class activity, it is important that at least one member of the group has a laptop.

In addition, journal articles will be assigned on a weekly basis, and a student will be the discussion leader in class on each reading assignment. There will be 2-3 problem sets during the semester. The problem sets are intended to strengthen the concepts discussed in class and prepare students for the exams.

Students will be introduced to several basic statistical methods to analyze demand. Recognizing that not all students have experience using statistical software, training opportunities will be offered to learn the basics of STATA. However, students are free to use any statistical software they are familiar and comfortable with.

Participation in in-class activities, contribution to discussion of journal articles, completion of problem sets and class attendance, all influence the class participation grade (see below).

Course Grade: The final grade for this course will consist of four parts. There will be two exams, a midterm (30%) and a final exam (30%). In addition, a course project (25%) is required. Finally, several group assignments, class participation and attendance will count 15%. In this course, active participation is very important through discussion of journal articles, general discussion of issues, etc. Included in class participation will be several group take-home assignments requiring a group oral presentation in class. So while formal attendance will not be taken, it will count against you in your class participation if you repeatedly miss class. The course project will be a term paper on some subject in economics of consumer demand picked by you with the approval of the instructor. If one is interested in an area of economics of demand for thesis research, it might be useful choose a topic for the course project that is complementary to the thesis, e.g., a literature review, a smaller scaled model, or some other aspect of the thesis research.

Textbooks: There is no textbook for this class, but there are required readings on reserve and in Blackboard. In addition, a copy of my lecture notes will be available in Blackboard too. The link to blackboard is: <https://blackboard.cornell.edu>. Recommended reference books that have excellent economic intuition for the study of the economics of demand are:

- Varian, H. 2002. *Microeconomic Analysis*, Englewood Cliffs: Prentice-Hall.
- Deaton, A. and J. Muellbauer. 1980. *Economics and Consumer Behavior*, Cambridge, UK: Cambridge University Press.
- Train, K.E. 2009. *Discrete Choice Methods with Simulation, Second edition*, Cambridge, UK, Cambridge University Press.

Content:

I. The Theory of Demand for Goods and Services (Weeks 1-3)

- Motivation: Demand for Blueberries
- Preferences
- Constraints
- Consumer Optimization
 - (1) Assumptions
 - (2) Lagrangian (Direct) Method
 - (3) Examples
 - (4) Theoretical Restrictions on Systems of Demand Equations
- Duality and The Envelope Theorem
 - (1) General Concept
 - (2) Application I: Indirect Utility
 - (3) Application II: Expenditure Function
 - (4) Roy's Theorem
 - (5) Shephard's Lemma

Readings: Varian (2002) Chapter 3; Deaton and Muellbauer (1980) Chapters 1-3.

II. Application of Consumer Demand Systems (Weeks 4-5)

- Motivation: Demand for Meats
- Consumer behavior: from theory to empirical application
- Data for estimating demand models
- Continuous demand systems: AIDS and Rotterdam
- Estimating demand systems; endogeneity and instrumental variables estimation
- Data organization and variable choice
- Estimating an AIDS model: example
- Estimating a Rotterdam model: example

Readings: Deaton and Muellbauer (1980); Barten (1993); Eales and Unnevehr (1988, 1993). Gao and Spreen (1994).

III. Introduction to Discrete Choice Theory and Random Utility Models (Weeks 6-7)

- Motivation: "Demand for paper towels"
- Random utility concept
- Simple logit model
- Nested logit model
- Mixed logit model and extensions
- Estimating a discrete choice models: Examples

Readings: Train (2009) Chapters 1-4; Gracia and de Magistris (2008); Anderson and de Palma (1992); Berry (1994); Richards, Patterson and Tegene (2007).

*******EXAM 1*******

IV. Experimental Economics Methods and Consumer Demand (Week 8)

- Motivation: “Deciding how and where to grow lettuce”
- Basic Concepts in Experimental Economics
- Example: “Developing a Broccoli Industry in the East Coast”
- Links to environmental economics: “Demand for Environmentally and Socially-Responsible Labels”

Readings: Davis and Holt (1993) Chapter 1; Verteramo et al. (2016); Fan et al. (2016).

V. Other topics in applied demand models (Weeks 9-13)

- Eliciting consumer utility in the development of new products: Conjoint Analysis
Readings: Malhotra (2010) Chapter 21; Rao (2014) Chapter 1
- Customer satisfaction and demand in retailing: Factor Analysis and Multivariate statistical methods
Readings: Malhotra (2010) Chapter 19; Gómez et al. (2004); Gómez and Shapiro (2014).

Price promotions and consumer response: Using scanner retail data to study demand
Readings: Pauwels et al. (2002).
- Demand models in development economics: Income Elasticity of Demand
Readings: Attanasio et al. (2011); Behrman, and Deolalikar (1987).
- Forecasting demand using univariate time series analysis
Readings: Enders (2010) Chapters 1-3.

Supplementary Reading List

Anderson, S. P. and de Palma, A. 1992. “Multiproduct Firms: A Nested Logit Approach.”
Journal of Industrial Economics 40: 261-275.

Anderson, S., De Palma, A. and J.-F. Thisse. 1989. “Demand for Differentiated Products, Discrete Choice Models, and the Characteristics Approach,” Review of Economic Studies 56: 21-35.

Attanasio, O., Erich Battistin and Alice Mesnard (2011), “Food and Cash Transfers: Evidence from Colombia,” EJ 122: 92–124.

- Behrman, J. R. and A. B. Deolalikar (1987). "Will Developing Country Nutrition Improve with Income? A Case Study for Rural South India." *Journal of Political Economy* 95(3).
- Berry, S. T. 1994. "Estimating Discrete Choice Models of Product Differentiation." *RAND Journal of Economics* 25: 242-262.
- Bouis, H. E. and L. J. Haddad (1992). "Are estimates of calorie-income elasticities too high? : A recalibration of the plausible range." *Journal of Development Economics* 39(2): 333-364.
- Barten, A. P. 1977. "The Systems of Consumer Demand Functions Approach: A Review." *Econometrica* 45: 23-48.
- Barten, A. P. 1993. "Consumer Allocation Models: Choice of Functional Form." *Empirical Economics* 18: 129-158.
- Bresnahan, T.F. 1997. *The Apple-Cinnamon Cheerios War: Valuing New Goods, Identifying Market Power, and Economic Measurement Working Paper*, Department of Economics, Stanford University.
- Davis, D. D., & Holt, C. A. (1993). *Experimental economics*. Princeton university press.
- Deaton, A., and J. Muellbauer. 1980. "An Almost Ideal Demand System." *American Economic Review*. 70: 312-326.
- Eales, J.S., and L.J. Unnevehr. 1988. "Demand for beef and chicken: Separability and structural change". *American Journal of Agricultural Economics*. 70: 521-532.
- Eales, J.S., and L.J. Unnevehr. 1993. "Simultaneity and Structural Change in Meat Demand". *American Journal of Agricultural Economics*. 75: 259-268.
- Enders, W. (2008). *Applied econometric time series*. John Wiley & Sons.
- Fan, X., M.I. Gómez and T. Bjorkman (2016). "Are Consumers Willing to Pay Price Premiums for Newly Developed East Coast Broccoli Varieties? An Experiment Study" Working Paper.
- Gao, X. M. and T. Spreen. 1994. "A Microeconomic Analysis of the U.S. Meat Demand." *Canadian Journal of Agricultural Economics* 42: 397-412.
- Gómez, M.I. and M. Shapiro. 2014. "Customer Satisfaction and Sales Performance in Wine Tasting Rooms." *International Journal of Wine Business Research*, 26(1), 45-60.
- Gómez, M.I., McLaughlin, E.W. and Wittink, D.R. 2004 "Customer Satisfaction and Retail Sales Performance: An Empirical Investigation," *Journal of Retailing*, 80(4): 265-278.
- Gupta, S., E.W. McLaughlin and M.I. Gómez. 2007. "Guest Satisfaction and Restaurant Performance," *Cornell Hotel and Restaurant Administration Quarterly*, Vol. 48, No. 3, 284-298 .

- Gracia, Azucena, and Tiziana de Magistris. "The demand for organic foods in the South of Italy: A discrete choice model." *Food Policy* 33.5 (2008): 386-396.
- Gupta, S. 1988. "Impact of Sales Promotions on When, What, and How Much to Buy." *Journal of Marketing Research* 25: 342-355.
- Hess, J. D. and E. Gerstner. 1987. "Loss Leader Pricing and Rain Check Policy." *Marketing Science* 6: 358-374.
- Malhotra, N. K. (2010). *Marketing research: An applied orientation*, 6/e. Pearson Education, Upper Saddle River, NJ.
- Nevo, A. 2000. "Mergers with Differentiated Products: the Case of the Ready-to-Eat Cereal Industry." *RAND Journal of Economics* 31: 395-421.
- Pesendorfer, M. 2002. "Retail Sales: A Study of Pricing Behavior in Supermarkets." *Journal of Business* 75: 33-66.
- Pauwels, Koens, Dominique M. Hanssens and S. Siddarth (2002). *Journal of Marketing Research*, Vol. 39, No. 4 (Nov., 2002), pp. 421-439.
- Rao, V. (2014) *Applied Conjoint Analysis*. Springer, New York.
- Richards, T. J., P. M. Patterson, and A. Tegene. 2007. "Nutrient Consumption and Obesity: A Rational Addiction?" *Contemporary Economic Policy* 25: 309-324.
- Richards, T.J, M.I. Gómez and J. Lee. 2014. "Pass-Through and Consumer Search: An Empirical Analysis." *American Journal of Agricultural Economics*, 96 (4): 1049-1069.
- Richards, T. J., M. Gomez and G. Pofahl. "A Multiple / Discrete Model of Price Promotion." Working paper, Arizona State University. 2011.
- Richards, T. J. 2007. "A Nested Logit Model of Strategic Promotion." *Quantitative Marketing and Economics* 5: 63-91.
- Thomas, L., M.I. Gómez and A.K. Mansfield. 2014. "The Effect of Tasting Sheet Sensory Descriptors on Tasting Room Sales." *International Journal of Wine Business Research*, 26(1), 61-72.
- Varian, H. 1980. "A Model of Sales." *American Economic Review* 70: 651-659.
- Verteramo, L., J. Liaukonyte, M.I. Gómez and H.M. Kaiser (2016). "Socially Responsible Products: What Motivates Consumers to Pay a Premium?" Forthcoming, *Applied Economics*.