

Quantitative Marketing and Economics

2004 Conference Schedule

November 13 – 14, 2004

Sponsored by
James M. Kilts Center for Marketing, GSB, University of Chicago
Kluwer Academic Press

All sessions are being held in McCullom 102.

Saturday, November 13

8:00 am – 8:45 am Breakfast

8:45 am – 9:00 am Welcome

9:00 am – 10:00 am Session 1

Advertising Dynamics and Competitive Advantage

Ulrich Doraszelski (Harvard) and Sarit Markovich (Tel Aviv)

Can advertising lead to a sustainable competitive advantage? To answer this question, we propose a dynamic model of advertising competition where firms repeatedly advertise, compete in the product market, and make entry as well as exit decisions. Within this dynamic framework, we study two different models of advertising: In the first model, advertising influences the goodwill consumers extend towards a firm (“goodwill advertising”), whereas in the second model it influences the share of consumers who are aware of the firm (“awareness advertising”). We show that asymmetries may arise and persist under goodwill as well as awareness advertising. The basis for a strategic advantage, however, differs greatly in the two models of advertising. We show that tighter regulation or an outright ban of advertising may have anticompetitive effects and discuss how firms use advertising to deter and accommodate entry and induce exit in a dynamic setting.

Discussant: Daniel Klapper (Christian-Albrechts Universitat Kiel)

10:00 am – 11:00 am Session 2

The Impact of Location of Prices: An Analysis in the Fast Food Industry

Raphael Thomadsen (Columbia)

This paper analyzes the empirical role that geographic differentiation has on prices in the fast food industry. After presenting descriptive regressions that demonstrate that outlet location impacts prices, I use price and location data, but not quantity data, to estimate a model of demand and supply that accounts for the exact market geography. I then run counterfactual experiments that illustrate the degree to which location affects prices. I find that consumers are willing to travel about $\frac{1}{3}$ miles to save \$1.00 on a meal, which implies that even small amounts of differentiation can lead to large increases in prices.

Discussant: K. Sudhir (Yale)

11:00 am – 11:30 am Break

11:30 am – 12:30 pm Session 3

Prices, Production and Inventories Over the Automobile Model Year

Adam Copeland (FRB), Wendy Dunn (FRB), and George Hall (Yale)

This paper studies the within-model year pricing and production of new automobiles. Using new monthly data on transaction prices we document that for the typical new vehicle, the retail price (net of rebates and financing incentives) falls 7 percent over the model year. Further, during the six months of each year that two model-years of the same make are selling simultaneously, the old vintage sells for about 7 percent less than the new vintage. We then formulate a market equilibrium model for new automobiles. On the demand side, we use our micro-level data to estimate aggregate demand curves for each vehicle and vintage. On the supply side, we solve a dynamic programming model of an automaker who may sell multiple vintages of the same product simultaneously. The demand curves we estimate are in line with previous studies, and the decision rules from the dynamic model are consistent with the pricing and production patterns observed in the data.

Discussant: Suzhou Huang (Ford Research Laboratory)

12:30 pm – 1:30 pm Lunch

1:30 pm – 2:30 pm Session 4

What Makes You Click: An Empirical Analysis of Online Dating

Dan Ariely (MIT), Günter J. Hitsch (Chicago), Ali Hortaçsu (Chicago)

This paper uses a novel data set obtained from a major online dating service to draw inferences on mate preferences and ultimately the match outcomes of the site users. The data set contains detailed information on the demographic and socioeconomic attributes of the users, as well as information on their religion, political inclination, etc. A measure of the physical attractiveness of the site members was obtained from looks ratings of their posted photographs, which we obtained in a laboratory setting. The data set contains a detailed record of all online activities of the users. In particular, we know which profiles a user browses, to whom a user sends an e-mail to, and which e-mails he or she replies to. We also have limited information on the contents of the exchanged e-mails; for example, we know whether any contact information was exchanged. A drawback of the data set is that we do not observe any "offline" activities. We first compare the reported demographic characteristics of site users to the characteristics of the population-at-large, and do not find large differences. We then use regression analysis to investigate how user attributes are related to "outcomes", for example the rate at which a user is approached by potential mates. We provide some conditions under which the results of these "outcome regressions" can be interpreted as preference estimates. Our empirical results indicate that both men and women care strongly about the physical appearance of their potential mates. While women's choices depend strongly on the income and education of men, there is much less evidence for the reverse. The site members "discriminate" strongly against members of a different ethnicity, and this effect is stronger for women than for men. Finally, we provide some preliminary evidence on observed "matches" among the site members, and compare these matches to the predictions from a simple matching model.

Discussant: David Bell (Wharton)

2:30 pm – 3:30 pm Session 5

Privacy, Property Rights & Efficiency: The Economics of Privacy as Secrecy

Michael Katz (Berkeley) and Benjamin E. Hermalin (Berkeley)

There is a long history of governmental efforts to protect personal privacy and strong debates about the merits of such policies. A central element of privacy is the ability to control the dissemination of personally identifiable data to private parties. Posner, Stigler, and others have argued that privacy comes at the expense of allocative efficiency. Others have argued that privacy issues are readily resolved by proper allocation of property rights to control information. Our central findings challenge both views. We find: (a) privacy can be efficient even when there is no “taste” for privacy per se, and (b) to be effective, a privacy policy may need to ban information transmission rather than simply assign individuals control rights to their personally identifiable data.

Discussant: Luc Wathieu (Harvard)

3:30 pm – 4:00 pm Break

4:00 pm – 5:00 pm Session 6

How Do Consumers Make Durable Good Consumption Decisions?

Judy Chevalier (Yale) and Austan Goolsbee (University of Chicago)

This paper examines durable goods issues in the college textbook industry. College textbooks have frequently been cited as an example of a market in which firms attempt to “kill off” the secondary market for their products by introducing new editions. We examine new edition introduction behavior, showing that much of the college textbook industry is on a fairly reliable 3-year revision cycle. We show that, contrary to the predictions of asset pricing theory, prices of new and used textbooks do not fall over the life of the book as the implicit asset value of the textbook falls. We estimate demand for textbooks by college students. Our estimates suggest that college students partially, but not fully, take into account the asset value of the textbook when making purchase decisions. Furthermore, our estimates suggest that students are sufficiently forward-looking that speeding up the revision cycle would not increase publisher revenues.

Discussant: Shantanu Dutta (Marshall School of Business)

5:00 pm – 6:00 pm Session 7

Decision Rights and Vertical Integration in the Movie Industry

Ricard Gil (UCSC)

In this paper I analyze how variation in firm boundaries affect economic outcomes in the movie industry. In this industry, a movie distributor contracts with different exhibitors to show its movie on their screens. Due to incompleteness in these contracts, specifying ownership of decision rights over screen use is important. Since I observe the same movie showing in the same period at different organizational forms in the Spanish movie industry, I exploit this variation to study differences in outcomes across organizational forms. The evidence presented here indicates that integrated theaters show their own movies two weeks longer than other movies. These differences in outcomes decrease with the amount of information previously available to the opening of the movie. The control that integrated firms have on their own theaters as distribution channels leads movies of uncertain quality to be shown at distributor-own theaters. As a consequence of this, integrated firms specialize in the distribution of this type of movies more than do non-integrated firms.

Discussant: Andrew Ainslie (UCLA)

6:00 pm Dinner - Kresge Boardroom

Sunday, November 14

8:00 am – 9:00 am Welcome

9:00 am – 10:00 am Session 1

Using the Compensation Scheme to Signal the Ease of a Task

David Godes (Harvard) and Dina Mayzlin (Yale)

The literature on principal-agent models has been mainly concerned with two aspects of the principal's problem: (a) choosing the optimal compensation scheme to motivate the agent to implement the "right" amount, or type, of effort in accordance with the principal's objectives; and (b) choosing the scheme that will "sort" the agents according to their underlying (and unobservable) ability. Basu, Lal, Srinivasan and Staelin (1985), Lal and Staelin (1986), Rao (1990), Lal and Srinivasan (1993), and Raju and Srinivasan (1996) have all looked at various aspects of these problems and have presented results with respect to the nature of the specific schemes that accomplish these goals. We depart from this by focusing on the firm's ability to hire agents by offering the right compensation scheme. We investigate the principal's problem of convincing the agent that she will earn significant compensation if she joined the firm. In particular, we focus on a context in which the firm has private knowledge about the marginal productivity of effort inside the firm. Thus, this is distinct from the adverse selection literature in which the agent is assumed to possess private information. We present results on the shape and power of the optimal compensation scheme in this context. We also discuss the extent to which the shape of the scheme can serve as a credible signal of the firm's underlying marginal productivity. Finally, we present results from a series of experiments which are consistent with the developed theory.

Discussant: Nanda Kumar (University of Texas)

10:00 am – 11:00 am Session 2

Incomplete Contracts and Renegotiation

Birger Wernerfelt (MIT)

The parties to a contract typically make a lot of decisions during the time it is in force, and the paper is based on the premise that it takes time to be involved in any one of these decisions. Attempts to economize on decision-making time then imply that the parties may write a contract in which each cedes some decision rights to the other. The cost of the arrangement is that the information and preferences of the uninvolved party are neglected. We find that decisions are more likely to be left out of contracts if only one player attaches significant weight to them and simultaneously is well informed. While the direct effect of this may be small, it is dramatically amplified if the decision-maker can be disciplined by the threat of renegotiation. We identify a set of conditions under which the possibility of renegotiation allows the parties to leave all non-price decisions out of the contract. By thus arguing that the threat of renegotiation allows contractual incompleteness, the paper reverses the direction of causality stressed by the literature.

Discussant: George John (Minnesota)

11:00 am – 11:30 am Break

11:30 am – 12:30 pm Session 3

Estimating the Effects of Brand Switching, Stockpiling and Flexible Consumption

Tat Chan (Washington University), Chakravarthi Narasimhan (Washington University),
Qin Zhang (University of Texas)

It is well known that in package goods categories a temporary price cut of a brand leads to increase in the sales of that brand in the current period. Under the assumption of stable consumption rate, previous literature has identified that the sources for the increase in sales are brand switching, purchase acceleration, and increase in quantity. However, there are very few studies that have formally modeled the impact of price promotions on consumption when consumption rate in a category is not constant. In this paper we offer a methodology to decompose the effects of price promotions into brand switching, stockpiling and change in consumption and explicitly allow for consumer heterogeneity in brand preferences and consumption needs. A dynamic structural model of a household that decides when, what, how much to buy as well as how much to consume to maximize its expected utility over an infinite horizon is developed. By making simplifying behavior assumptions we enable to reduce the dimensionality of the problem. We estimate the proposed model using scanner panel data of 1000 households on canned tuna purchases for 12 product alternatives over a two-year period. The results from the model shed insights on the decomposition of the price elasticity into its components that could help managers make inferences about for which brands and categories household stockpiling and consumption expansion occur as well as understand how temporary price cuts affect future sales. Contrary to previous literature, we find that brand switching is not a dominant force for brand sales increase. We also find that a household's brand preference has significant impact on its stockpiling and flexible consumption behavior. More specifically, we show that brand loyalists respond to a price promotion mainly with stockpiling for future consumption while brand switchers do not stockpile at all. We also find that heavy users stockpile more and increase less consumption than light users when there is a price promotion.

Discussant: Yuxin Chen (NYU)

12:30 pm Adjournment / Lunch