QUANTITATIVE MARKETING AND ECONOMICS
2018 CONFERENCE SCHEDULE

AUGUST 24 - 25, 2018
THE UNIVERSITY OF CHICAGO BOOTH SCHOOL OF BUSINESS

FRIDAY, AUGUST 24TH  GLEACHER CENTER 450 CITYFRONT PLAZA DR CHICAGO, ILLINOIS 60611 – ROOM 100

12 – 12:45 p.m.  LUNCH

12:45 – 1:00 p.m.  OPENING REMARKS

Jean-Pierre Dubé - Sigmund E. Edelstone Professor of Marketing, Chicago Booth; Director, Kilts Center for Marketing

1 – 2 p.m.  SESSION 1

Promotion and Prices: Evidence from New Ads for Old Drugs

Michael Sinkinson (Yale), Amanda Starc (Northwestern)

This paper examines the impact of consumer promotion of drugs on the prices paid for prescription drugs. A rich but ambiguous theoretical literature links advertising to consumer behavior and prices in standard product markets. We first show that in the context of insured drugs, moral hazard reverses the traditional logic and that even purely informational advertising can lead to higher prices. We then exploit new advertising campaigns for existing drugs to measure the impact of promotion on prices. We find that promotion is associated with increased out-of-pocket payments for patients and decompose recent increases in total drug spending into parts attributable to promotion.

Presenter: Michael Sinkinson (Yale)
Discussant: Eric Anderson (Northwestern)

2 – 3 p.m.  SESSION 2

Large-scale Demand Estimation with Search Data

Tomomichi Amano (Columbia), Andrew Rhodes (Toulouse School of Economics), Stephan Seiler (Stanford)

Many online markets are characterized by sellers that stock large numbers of products and sell each product infrequently. At the same time, consumer browsing information is typically tracked by online retailers and is much more abundant than purchase data. We propose a demand model that caters to this type of setting. Our approach, which is based on search and purchase data, is computationally light and allows for flexible substitution patterns. We apply the model to a data set containing browsing and purchase information from a retailer stocking over 500 products, recover the elasticity matrix, and solve for optimal prices for the entire assortment.

Presenter: Tomomichi Amano (Columbia)
Discussant: Ella Honka (UCLA)
3 – 3:30 p.m.  Break

3:30 – 4:30 p.m.  SESSION 3

Session information temporarily unavailable

4:30 – 5:30 p.m.  SESSION 4

Certification, Reputation and Entry: An Empirical Analysis

Xiang Hui (Washington University), Maryam Saeedi (CMU), Giancarlo Spagnolo (Tor Vergata), Steve Tadelis (UC Berkeley)

Markets with asymmetric information will often employ third-party certification labels to distinguish between higher and lower quality transactions, yet little is known about the effects of certification policies on the evolution of markets. How does the stringency in quality certification affect the intensity and composition of entry, incumbents' reactions, and market outcomes? We use detailed administrative data and exploit a policy change on eBay to explore how a more selective certification policy affects entry and behavior across a rich set of online market segments. We find that after the policy change, entry increases and does so more intensely in markets where it is harder to become certified. The average quality of entrants also increases more in the more affected markets, while the quality distribution of entrants exhibits fatter tails ex post. Finally, some incumbents increase the quality of their service to maintain certification and deliver higher quality after the policy change. The results help inform the design of certification policies in electronic and other markets with asymmetric information.

Presenter: Xiang Hui (Washington University)
Discussant: Ryan McDevitt (Duke)

5:45 – 8:00 p.m.  DINNER AND DICK WITTINK AWARD GLEACHER CENTER – ROOM 621
Competitive Advertising on Brand Search: Traffic Stealing, Adverse Selection and Customer Confusion

Andrey Simonov (Columbia), Shawndra Hill (Microsoft)

We study the effectiveness of competitive advertising on brand search using a large-scale randomized ad allocation on Bing. Competitors can steal traffic from the focal brand, and they steal more (6-20%) if they occupy the top paid position on the results page than if a focal brand is advertising in the top paid position (1-3%). However, these “stolen” clicks are of low quality, with 42.6% of consumer returning to Bing in less than 30 seconds after clicking competitors’ ad (“quick back” event), compared to 3.6-6% quick back probability after a click on the focal brand’s link. This high quick back rate is due to both adverse selection of consumers (14.8 percentage points) and an incremental increase consistent with customer confusion (27.8 percentage points). More relevant competitors get more clicks with lower quick back probability. Using these results, we derive the implied costs of incremental traffic for focal brands, propose an exclusive ad placement mechanism for the platform, decompose the estimates to the effects of page position and link type on consumer choices, and discuss the degree of customer confusion and social costs imposed by competitive advertising.

Presenter: Andrey Simonov (Columbia)
Discussant: Mitch Lovett (Rochester)


Duncan Simester (MIT), Artem Timoshenko (MIT), Spyros Zoumpoulis (INSEAD)

The gold standard for evaluating targeting policies is to evaluate them using an experiment. We present an approach to designing and analyzing these experiments that offers three important advantages over the standard methods. First, the proposed approach can be used to evaluate any policies, including policies designed after the experiment is implemented. Second, the comparison yields more efficient estimates of the difference in the performance of the policies. Third, the proposed approach offers opportunities to improve the policies. We illustrate these advantages using data from an actual field experiment. The findings confirm that the benefits of using the proposed approach rather than the standard approach can be substantial.

Presenter: Spyros Zoumpoulis (INSEAD)
Discussant: Garrett Johnson (Northwestern)
Increasingly, firms have the ability to make high quality, micro-level predictions of demand for their products which improves their ability to target advertising. However, firms may choose to target advertising at a higher level of aggregation than their predictions allow in order to benefit from the significant discounts that often accompany mass advertising purchases. In this paper, we argue that firms making such a choice generate a natural experiment which can be used to obtain consistent estimates of the response to advertising without the need for experimentation. We present the supply-side conditions which incentivize firms to generate this natural experiment as part of their optimization strategy, present an empirical model for exploiting the natural experiment, and apply the strategy to multiple product categories. Estimates from this “coarseness” strategy agree with recent literature which suggests that many standard approaches to estimating the response to advertising may produce biased results due to unobservables.

Presenter: Michael Thomas (Santa Clara University)
Discussant: Sarah Moshary (University of Chicago)

12:30 – 1:30 p.m. LUNCH AND PANEL DISCUSSION

Frontier research areas in quantitative marketing: an industry perspective

Randall Lewis, Economic Research Scientist at Netflix
Harikesh Nair, Chief Scientist for Business Strategy at JD.com
Chris Nosko, Senior Manager and Economist at Amazon.com
David Reiley, Principal Scientist at Pandora

1:30 – 2:30 p.m. SESSION 8

Prelaunch Demand Estimation

Xinyu Cao (NYU), Juanjuan Zhang (MIT)

Demand estimation is important for new-product strategies, but is challenging in the absence of actual sales data. We develop a cost-effective method to estimate the demand of new products based on incentive-aligned choice experiments. Our premise is that there exists a structural relationship between manifested demand and the probability of consumer choice being realized. We illustrate the mechanism using a theory model, in which consumers learn their product valuation through costly effort and their effort incentive depends on the realization probability. We run a large-scale field experiment on a mobile game platform, where we randomize the price and realization probability when selling a new product. The data support our theoretical prediction and the decision effort mechanism. We then estimate a structural model of consumer choice. The structural estimates allow us to infer actual demand with reasonable accuracy using inexpensive choice experiments with small to moderate realization probabilities.

Presenter: Xinyu Cao (NYU)
Discussant: John Howell (Penn State)

2:30 – 3:30 p.m. SESSION 9

Promoting Wellness or Waste? Evidence from Antidepressant Advertising

Bradley T. Shapiro (University of Chicago)

Direct-to-Consumer Advertising (DTCA) of prescription drugs is controversial. Even if drugs are efficacious, advertising may inappropriately select patients into treatment. Leveraging advertising variation driven by the borders of television markets, this paper provides the first quasi-experimental measurement of the effect of DTCA on an ex-post measure of consumer well-being. In particular, DTCA of antidepressants significantly decreases missed days of work, a primary outcome associated with depression. Back-of-the-envelope
calculations suggest that the wage benefit of a 10% increase in advertising is about $770 million per year while the total cost of the corresponding advertising-marginal prescriptions is about $32 million.

Presenter: Bradley T. Shapiro (University of Chicago)
Discussant: Jennifer Brown (University of Utah)

3:30 – 4 p.m.  BREAK

4 – 5 p.m.  SESSION 10

Incrementality Bidding & Attribution

Randall Lewis (Netflix), Jeffrey Wong (Netflix)

The causal effect of showing an ad to a potential customer versus not, commonly referred to as "incrementality," is the fundamental question of advertising effectiveness. In digital advertising three major puzzle pieces are central to rigorously quantifying advertising incrementality: ad buying/bidding/pricing, attribution, and experimentation. Building on the foundations of machine learning and causal econometrics, we propose a methodology that unifies these three concepts into a computationally viable model of both bidding and attribution which spans the randomization, training, cross validation, scoring, and conversion attribution of advertising's causal effects. Implementation of this approach is likely to secure a significant improvement in the return on investment of advertising.

Presenter: Jeffrey Wong (Netflix)
Discussant: Dean Eckles (MIT)