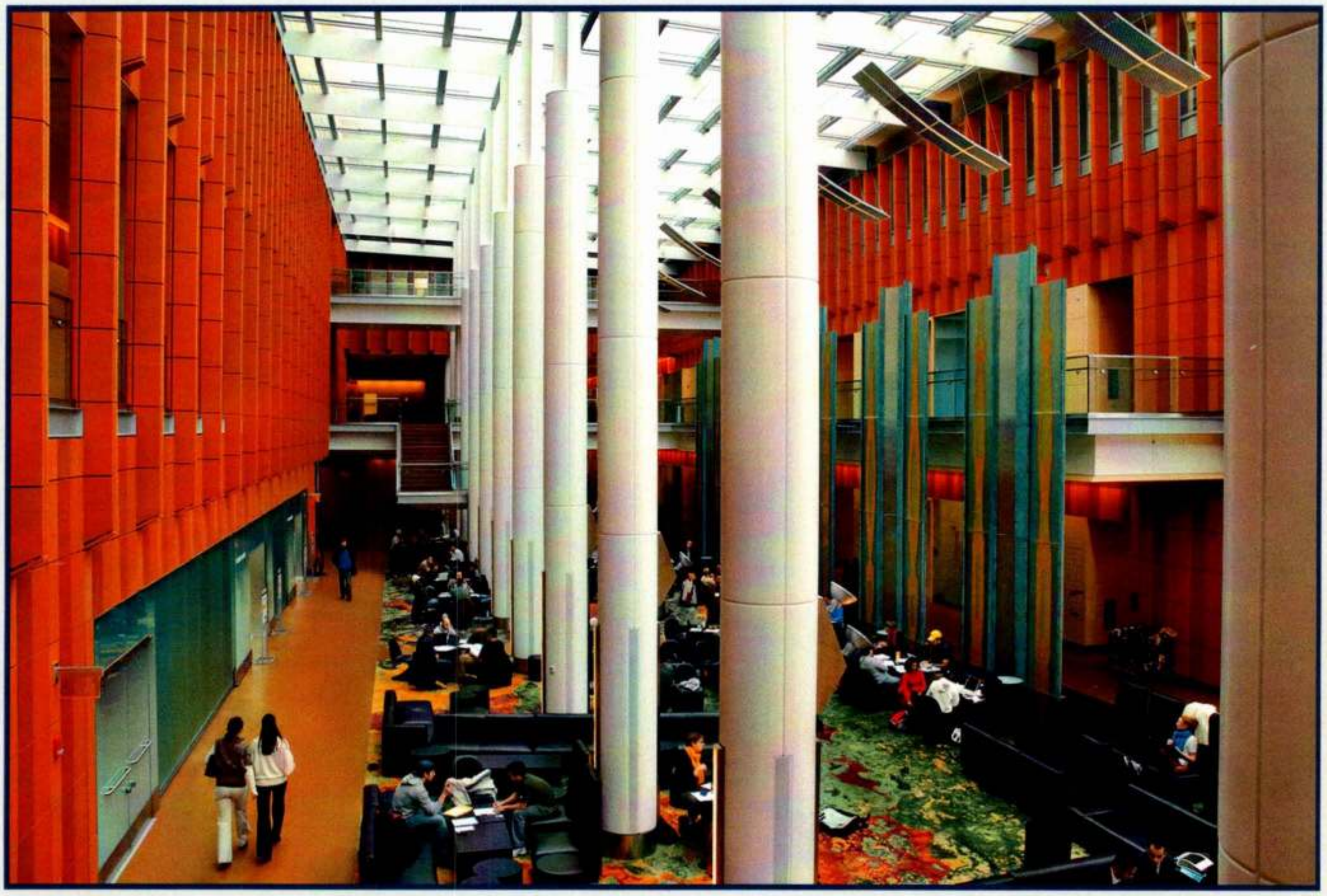
31st
Annual

informs® **Marketing Science Conference**



June 4-6, 2009 | Ann Arbor, MI USA

MICHIGAN
ROSS SCHOOL OF BUSINESS

Conference Organizing Committee

Welcome to the 31st Annual INFORMS Marketing Science Conference

Dear Colleagues,

Welcome to the 2009 INFORMS Marketing Science Conference! The Stephen M. Ross School of Business is delighted to host this year's annual meeting of the INFORMS Society for Marketing Science.

This year's conference will be held in the Ross School of Business' new home – a stunning 270,000 sq. ft. facility unveiled just this past January. Made possible by a generous gift from Stephen M. Ross (BBA, '62), the state-of-the-art classrooms, community-centric design, and advanced information technology provide a perfect venue for our Society's premier conference. Presentations will take place in 15 classrooms opening onto a central atrium that encourages friendly conversation and scholarly interaction.

The conference commences on Thursday, June 4th and runs through Saturday, June 6th, with our Gala Awards Dinner held Friday evening at the Henry Ford Museum in Dearborn. The ISMS Doctoral Consortium precedes the conference, on Wednesday, June 3rd, and the John D.C. Little Festschrift follows it, beginning with a reception on Saturday evening and concluding at 3PM on Sunday, June 7th.

We would like to gratefully acknowledge the tremendous support of the Dean's Office and staff of the Ross School of Business. We are especially appreciative of the enormous and inexhaustible effort of our administrative lead, Rena Worley, and both Jennifer Huntington and Diana Jhin, who collectively did the "heavy lifting" to make the conference as great as it could be.

We would also like to express our appreciation to Anocha Aribarg of the Ross Business School and Linda Salisbury of Boston College (RSB Ph.D. '06) for organizing the Meet-the-Editors sessions; Sridhar Moorthy for chairing the doctoral consortium; Dan Putler for lending his wiki wizardry to the Consortium and Gala scheduling; and to John Hauser, Glen Urban, the advisory committee, and to John Little himself for their work on behalf of the Festschrift. The conference would have been literally impossible without the endless support, advice, and seeming 24/7 availability of Terry Cryan and Paulette Bronis of INFORMS. The RSB Marketing faculty have also been a great resource, as have our doctoral students, who will be serving as informal ambassadors and general helpers throughout the conference (you'll see them in special garb, eager to answer any questions you may have).

Finally, our greatest thanks go to you, the conference participants, for your research contributions that will form the core of the proceedings over the next few days. We hope that you enjoy the conference and your visit to the Ross School of Business, the University of Michigan, and the quintessential college town of Ann Arbor.

Warm Regards,
Gene Anderson
Fred Feinberg

2009 INFORMS
Marketing Science Organizing Committee

Diana Jhin, Rena J. Worley and Jennifer Huntington
Fred Feinberg and Eugene W. Anderson

MICHIGAN
ROSS SCHOOL OF BUSINESS

Society of Marketing Science Board and Advisory Council

The Institute of Operations Research and Management Sciences (INFORMS) is an international, not-for-profit scientific society with 10,000 members, including Nobel laureates, dedicated to applying scientific methods to help improve decision-making, management, and operations. The Marketing Science Conference falls under the auspices of the INFORMS Society for Marketing Science (ISMS) sub-branch whose major purpose is to foster the development, dissemination, and implementation of knowledge, basic and applied-research, and science and technologies that improve the understanding and practice of marketing.

informs Marketing Science Conferences

1979 Stanford University
David B. Montgomery, Dick Wittink

1980 University of Texas, Austin
Robert Leone

1981 New York University
John Keon

1982 University of Pennsylvania
Vijay Mahajan, Yoram Wind

1983 University of Southern California
Fred Zufreyden

1984 University of Chicago
Steven Shugan

1985 Vanderbilt University
Russell Winer, Allan Shocker

1986 University of Texas, Dallas
Ram Rao

1987 HEC, France
Dominique Hanssens, Gilles Laurant

1988 University of Washington
Allan Shocker, Robert Jacobson

1989 Duke University
John McCann, Richard Staelin

1990 University of Illinois
S. Sudharshan

1991 University of Delaware/Dupont
Meryl Gardner, John Frey

1992 London Business School
Mark Uncles, Gerald Goodhardt

1993 Washington University
Chakravarti Narasimhan

1994 University of Arizona
Dipankar Chakravarthi, Ambar Rao

1995 University of New South Wales
John Roberts, Pamela Morrison

1996 University of Florida
Steven Shugan, Barton Weitz

1997 University of California, Berkeley
Tulin Erdem, Miguel Villas-Boas, Russell Winer

1998 INSEAD, France
Erin Anderson, Hubert Gatignon

1999 Syracuse University
Amiya Basu, T. Mazumdar, S. P. Raj

2000 University of California, Los Angeles
Randolph Bucklin, Donald Morrison

2001 University of Mainz
Oliver Heil

2002 University of Alberta
Peter T. L. Popkowski Leszczyc

2003 University of Maryland
Brian Ratchford, Roland Rust, Venky Shankar

2004 Erasmus University, Rotterdam
Stefan Stremersch

2005 Emory University
Sundar Bharadwaj, Douglas Bowman, Sandy Jap

2006 University of Pittsburgh
Rabi Chatterjee, Jeff Inman, R. Venkatesh

2007 Singapore Management University
Sundar Bharadwaj, Jin K. Han, David B. Montgomery, Chin Tiong Tan

2008 University of British Columbia
Charles B. Weinberg, Darren Dahl, Daniel Putler

2009 University of Michigan
Eugene Anderson, Fred Feinberg

2010 University of Cologne
Werner Reinartz, Karen Gedenk, Franziska Völckner

2011 Rice University
Richard R. Batsell

Summary Schedule

Wednesday, June 3, 2009		
8-10am	Doctoral Consortium Registration & Continental Breakfast	Davidson Winter Garden
10am-1:30pm	Conference Registration	Davidson Winter Garden
10am-12pm	Doctoral Consortium Plenary Session	Blau Auditorium
12-1:30pm	Doctoral Lunch	Davidson Winter Garden
1:30-3pm	Doctoral Consortium Breakouts	R1220 . R1230 . R1240
2-5pm	ISMS Pre Conference Workshop	R0220 and Lower Level Lobby
3-3:30pm	Doctoral Consortium PM Break	Davidson Winter Garden
3:30-5pm	Doctoral Consortium Breakouts	R1220 . R1230 . R1240
5-8pm	Doctoral Reception	Ross Colloquium
Thursday, June 4, 2009		
7am-5pm	Conference Registration	Davidson Winter Garden
7:30-8:30am	Continental Breakfast	Davidson Winter Garden
8:30-10am	Session 1	All Ross Building Classrooms
10-10:30am	AM Break	Davidson Winter Garden
10:30am-12pm	Session 2	All Ross Building Classrooms
12-1:30pm	Lunch	Davidson Winter Garden
1:30-3pm	Session 3	All Ross Building Classrooms
1:30-3pm	Meet the Editors	Blau Auditorium
3-3:30pm	PM Break	Davidson Winter Garden
3:30-5pm	Session 4	All Ross Building Classrooms
3:30-5pm	Meet the Editors	Blau Auditorium
5-8pm	Opening Reception	Davidson Winter Garden
TRANSPORTATION		
7:00-10am	Bus Shuttle Begins / 4 Buses	Round trip shuttle to Ross School from:
10am-5pm	Bus Shuttle / 1 Bus	Comfort Inn; Fairfield Inn;
5-6pm	Bus Shuttle / 2 Buses	Four Points by Sheraton;
6-8pm	Bus Shuttle / 4 Buses	Hampton Inn S.; Courtyard by Marriott
8-8:30pm	Bus Shuttle / 2 Buses	Last Shuttle Departs Ross School at 8:30pm
Friday, June 5, 2009		
7am-5pm	Conference Registration	Davidson Winter Garden
7:30-8:30am	Continental Breakfast	Davidson Winter Garden
8:30-10am	Session 5	All Ross Building Classrooms
10-10:30am	AM Break	Davidson Winter Garden
10:30am-12pm	Session 6	All Ross Building Classrooms
12-1:30pm	Lunch	Davidson Winter Garden
1:30-3pm	Session 7	All Ross Building Classrooms
3-3:30pm	PM Break	Davidson Winter Garden
TRANSPORTATION		
7:00-10am	Bus Shuttle Begins / 4 Buses	Roundtrip shuttle to Ross School from:
10am-5pm	Bus Shuttle / 1 Bus	Comfort Inn; Fairfield Inn; Four Points by
2-4:30pm	Bus Shuttle / 4 Buses	Sheraton; Hampton Inn S.; Marriott
3:30-4:30pm	Transportation from RSB to S. State St. Hotels. Dinner Departure Preparation	Last Shuttle Departs Ross School at 4:30pm

Summary Schedule

Friday, June 5, 2009 Continued		
5:30pm	Depart Ann Arbor for Dearborn	Buses depart from and return to: Comfort Inn; Fairfield Inn; Four Points by Sheraton; Hampton Inn S.; Courtyard by Marriott; Dahlmann Campus Inn; Mosher-Jordon; Ross School
6:30-7pm	Arrive at Henry Ford Museum	
7:45pm	Dinner Served	
10pm	Dinner Concludes Buses Depart Henry Ford for Ann Arbor	
Saturday, June 6, 2009		
7am-5pm	Conference Registration	Davidson Winter Garden
7:30-8:30am	Continental Breakfast	Davidson Winter Garden
8:30-10am	Session 8	All Ross Building Classrooms
10-10:30am	AM Break	Davidson Winter Garden
10:30am-12pm	Session 9	All Ross Building Classrooms
12-1:30pm	Lunch	Davidson Winter Garden
1:30-3pm	Session 10	All Ross Building Classrooms
3-3:30pm	PM Break	Davidson Winter Garden
3:30-5pm	Session 11	All Ross Building Classrooms
5pm	Conference Concludes	
TRANSPORTATION		
7:00-10am	Bus Shuttle Begins / 4 Buses	Roundtrip shuttle to Ross School from: Comfort Inn; Fairfield Inn; Four Points by Sheraton; Hampton Inn S.; Marriott
10am-3pm	Bus Shuttle / 1 Bus	
3-6:30pm	Bus Shuttle / 4 Buses	
John D.C. Little Festschrift Begins		
5:30-6:30pm	John D.C. Little Festschrift Reception	Ross Colloquium & Lobby
6:30-9pm	John D.C. Little Festschrift Banquet	Ross Colloquium
TRANSPORTATION		
6:30-9:30pm	Bus Shuttle / 1 Bus	Last Shuttle Departs Ross School at 9:30pm
Sunday, June 7, 2009		
7:30-8:30am	John D.C. Little Festschrift Continental Breakfast	R1210
8:30-10am	Session 1	R1210
10-10:30am	AM Break	R1210
10:30-12pm	Session 2	R1210
12-1:30pm	Lunch	Ross Colloquium
1:30-3pm	Session 3	R1210
3pm	Festschrift Concludes	
TRANSPORTATION		
7:00-9:30am	Bus Shuttle / 2 Buses	See Saturday Shuttle Hotel Information Last Shuttle Departs to Ross School at 9:30am
1-3:30pm	Bus Shuttle / 2 Buses	See Saturday Shuttle Hotel Information Last Shuttle Departs Ross School at 3:30pm

SPECIAL and INVITATIONAL Meetings		
Thur 4:30-6pm	Marketing Science Area Editors Meeting	R6320 . R6325
Fri 12-1:30pm	ISMS Board Meeting	Board Room
Sat 12-1:30pm	ISMS Fellows Meeting	R5020
Sat 3-3:30pm	Wharton Interactive Media	R1210

Public Hours and Bus Shuttle Schedule

OPEN HOURS	June 3 Wednesday	June 4 Thursday	June 5 Friday	June 6 Saturday
INFORMS Registration Desk	8:30am-1:30pm	7am-5pm	7am-5pm	7am-5pm
Exhibitors		12-5pm	7:30am-3:30pm	7:30am-3:30pm

Thursday, June 4, 2009		
7:00-10am	Bus Shuttle Begins / 4 Buses	Round trip shuttle to Ross School from:
10am-5pm	Bus Shuttle / 1 Bus	Comfort Inn; Fairfield Inn;
5-6pm	Bus Shuttle / 2 Buses	Four Points by Sheraton;
6-8pm	Bus Shuttle / 4 Buses	Hampton Inn S.; Courtyard by Marriott
8-8:30pm	Bus Shuttle / 2 Buses	Last Shuttle Departs Ross School at 8:30pm

Friday, June 5, 2009		
7:00-10am	Bus Shuttle Begins / 4 Buses	Roundtrip shuttle to Ross School from:
10am-5pm	Bus Shuttle / 1 Bus	Comfort Inn; Fairfield Inn;
2-4:30pm	Bus Shuttle / 4 Buses	Four Points by Sheraton;
3:30-4:30pm	Transportation from RSB to S. State St. Hotels. Dinner Departure Preparation	Hampton Inn S.; Courtyard by Marriott Last Shuttle Departs Ross School at 4:30pm
5:30pm	Buses Depart Ann Arbor for Dearborn	Buses depart from and return to:
6:30-7pm	Arrive at Henry Ford Museum	Comfort Inn; Fairfield Inn;
10pm	Dinner Concludes Buses Depart Henry Ford for Ann Arbor	Four Points by Sheraton; Hampton Inn S.; Courtyard by Marriott; Dahlmann Campus Inn; Mosher-Jordon; Ross School

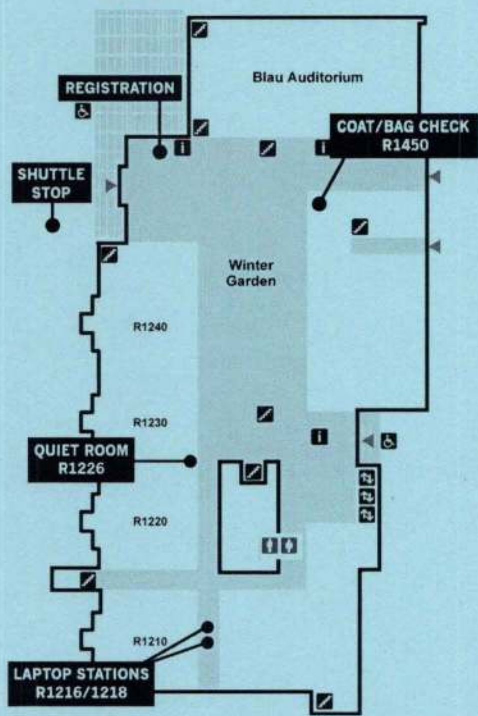
Saturday, June 6, 2009		
7:00-10am	Bus Shuttle Begins / 4 Buses	Roundtrip shuttle to Ross School from:
10am-3pm	Bus Shuttle / 1 Bus	Comfort Inn; Fairfield Inn; Four Points
3-6:30pm	Bus Shuttle / 4 Buses	by Sheraton; Hampton Inn S.; Marriott
6:30-9:30pm	Bus Shuttle / 1 Bus	Last Shuttle Departs Ross School at 9:30pm

Sunday, June 7, 2009		
7:00-9:30am	Bus Shuttle / 2 Buses	Roundtrip shuttle to Ross School from: Comfort Inn; Fairfield Inn; Four Points by Sheraton; Hampton Inn S.; Marriott Last Shuttle Departs to Ross School at 9:30am
1-3:30pm	Bus Shuttle / 2 Buses	Roundtrip shuttle to Ross School from: Comfort Inn; Fairfield Inn; Four Points by Sheraton; Hampton Inn S.; Marriott Last Shuttle Departs Ross School at 3:30pm

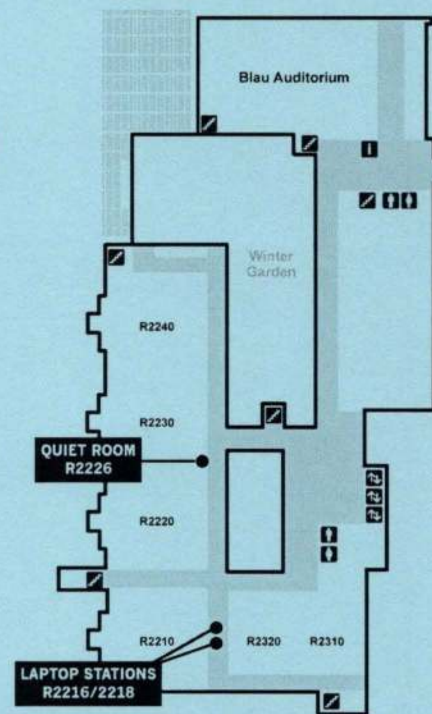
Ross Building Maps

Lower Level

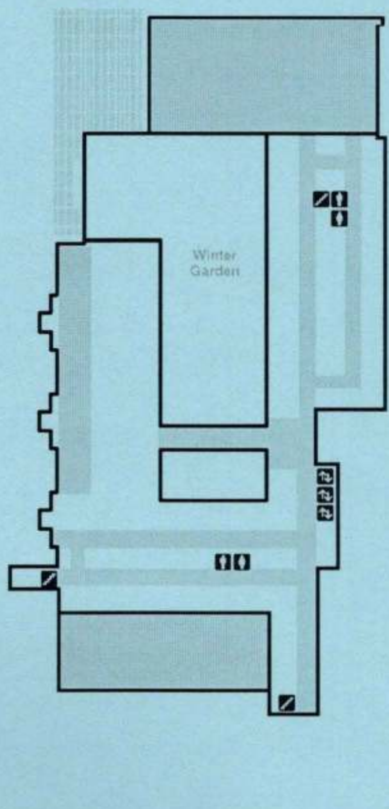
Level 1



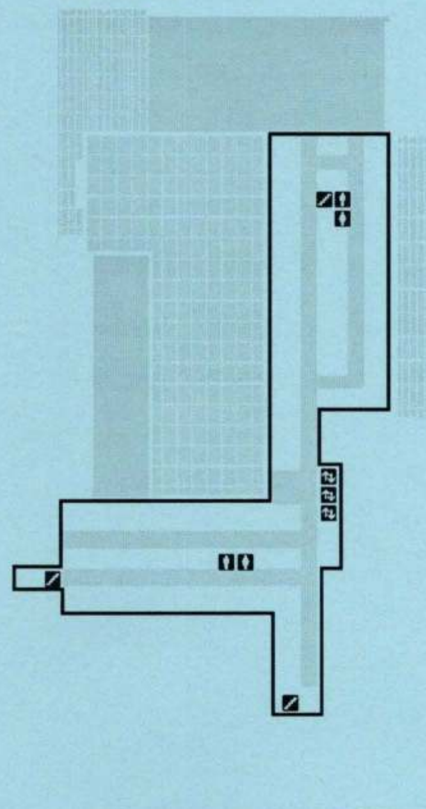
Level 2



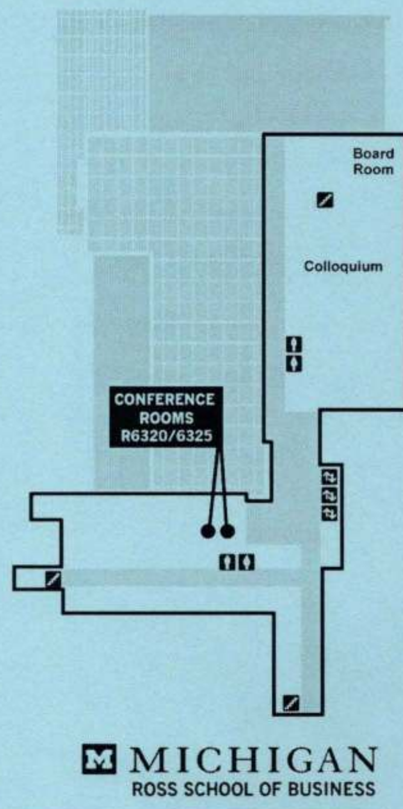
Lower 3



Level 4-5



Level 6



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2009 INFORMS Marketing Science Conference

Thursday, June 4th, 2009 8.30-10.00 (TA)

TA01 – R0210 **Technological Evolution and New Product Design** **Co-Chairs:** Ashish Sood, Gerard Tellis The Step and Wait Model for Predicting Technological Evolution *Ashish Sood, Gareth James, Gerard Tellis* Is Good Design Good Business? Rewards to Product Design Award Winners *Raji Srinivasan, Gary Lilien, Arvind Rangaswamy* Explaining Patterns in Foreign Market Launch *Corine Noordhoff, Rajesh Chandy, Paola Cillo, Om Narasimhan, Jaideep Prabhu*	**TA02 – R0220**	**TA03 – R0230** **Sales Force Compensation and Management Modeling** **Chair:** Anne Coughlan Design of Sales Hierarchies: The Role and Value of Sales Managers *Anne Coughlan, Kissan Joseph* Sales Force Incentive Compensation: A Framework for Researchers and Practitioners *Andris A. Zoltners, Chad Albrecht, Sally E Lorimer, Stephen Redden, Prabhakant Sinha* Sales Force Compensation with State Variables: The Case of Product-Information Detailing *Fabio Caldieraro, Anne Coughlan* Marketing Resource Allocation Decisions with Time-Varying Effectiveness: A Salesforce Application *Kalyan Raman, Murali K Mantrala, Shrihari Sridhar, Yihui (Elina) Tang*	**TA04 – R0240**
TA05 – R0320 **Consumer Behavior: Perception** **Chair:** Simon Blanchard Capturing Consumer Heterogeneity in the Unsupervised Categorization Process *Simon Blanchard, A. Selin Atalay, Wayne S. DeSarbo, Nukhet Harmancioglu* Influence of Contextual Components on Perceived Usability of Mobile Interactions: Theoretical Model *Margherita Pagani* How Consumers Manage Consumption Risks: The Impact of Type of Risks, Consumption Norms, and Purchase *Felix Tang, Vang Ing Tian, Judy Zaichkowsky*	**TA06 – R1210** **Interactive Marketing: Search** **Chair:** Young-Hoon Park Using Online Search Data to Forecast New Product Sales *Gauri Kulkarni, P.K. Kannan, Wendy Moe* Organic and Paid Search Advertising: Complements, Substitutes or Neither? *Anindya Ghose, Sha Yang* The Impact of Consumer Reviews on Consumer Search and Firm Profits *Dina Mayzlin, Wendy Moe* Modeling Bids and Clicks in Sponsored Search Advertising *Young-Hoon Park*	**TA07 – R01220** **Internet Marketing: Consumer Behavior** **Chair:** Polykarpos Pavlidis When Electronic Recommendation Agents Backfire: Negative Effects on Choice Satisfaction *Joseph Lajos, Amitava Chattopadhyay, Kishore Sengupta* The Relative Importance of Sensory and Non-sensory Attributes in Physical and Online Stores: An Evaluability Perspective *Maneesh Thakkar, Stephen Gould* Trusting or Not Online Sellers: Evidence From Neuromarketing *Angelika Dimoka* Managing the Diffusion of a Two-sided Online Service *Polykarpos Pavlidis, Paulo Albuquerque, Udi Chatow, Kay-Yut Chen, Zainab Jamal, Wei Koh*	**TA08 – R1230** **Structural Econometric Models** **Chair:** James Hess Counterfactual Prediction with Panel Data *Kanishka Misra, Benjamin Handel* How Do You Properly Diagnose Harmful Collinearity in Moderated Regressions? *James Hess, Pavan Chennamaneni, Raj Echambadi, Niladri Syam*

2009 INFORMS Marketing Science Conference

Thursday, June 4th, 2009 8.30-10.00 (TA)

TA09 – R1240

Purposive Games for Marketing Decision Support

Chair: Lynd Bacon

Measuring Consumer Preferences using Product Poker
Olivier Toubia, Martijn De Jong, Johann Fueller, Daniel Stieger

An Incentive-aligned Sleuthing Game for Survey Research
Min Ding, John Hauser

Performance-aligned, Collective Human Computing in Linguistic Games for Solving Hard Problems
Lynd Bacon,President, Ashwin Sridhar

Value Forecasts and Trading Intentions
Sheila Goins, Tom Gruca

TA10 – Blau Auditorium

TA11 – R2210

Choice Consistency and Consumer Preference

Chair: Vinay Kanetkar

Scale Adjusted Latent Class Analysis for Two New Product Categories
Juan Wang, Towhid Islam, Vinay Kanetkar

Preferences for Ethical and Social Features
Gail Leizerovici,Towhid Islam, Vinay Kanetkar

Television Advertising and Choice Consistency
Michael Clarke, Vinay Kanetkar

Latent Segmentation and Choice Consistency
Vinay Kanetkar, Towhid Islam

TA12 – R2220

Marketing and Finance

Chair: Andre Bonfrer

Measuring the Performance of Marketing-finance Integration within Firms
Roos Hoogeboom, J.M.E. Pennings

Customer-based Firm Valuation
Christian Schulze, Bernd Skiera, Thorsten Wiesel

Customer Satisfaction and Stock Prices: A Second Look
Kissan Joseph, Vladimir Ivanov, Jide Wintoki

Earnings Management and Advertising Expenditures
Andre Bonfrer, Sundar Bharadwaj, Michael Brandt, Mary Sullivan

TA13 – R2230

Entertainment Marketing

Chair: Enping Shirley Mai

An Empirical Exploration of Ticket Purchase Behavior for Consumer Forwards
Preethika Sainam, Sridhar Balasubramanian, Barry Bayus

Market Size and Investment Strategy in Major League Baseball
Yeujun Yoon, Michael Lewis

Network Size to the Inter-purchase Times and the Customer Equity: A Predictor?
Enping Shirley Mai, Jun Yang

TA14 – R2240

Marketing Strategy: Firm Performance

Chair: Aysegul Ozsomer

A Study on R&D- and Marketing Investments and Firm Performance
Henning Kreis, Lutz Hildebrandt

The Effects of Actual and Advertised Quality on Sales: A Longitudinal Study of the US Auto Market
Bharat Sud, Kersi Antia, Robert Fisher

Resource Efficiency or Slack: Firm Resource Management Strategies and Their Impact on Performance
Saurabh Mishra, Sachin Modi

The Role of Market Orientation and Organizational Learning in Managing Economic Crises
Aysegul Ozsomer

TA15 – R2320

Customer Lifetime Value

Chair: Rutger van Oest

The Impact of Customer-based Brand Equity on Customer Equity
Florian Stahl, Jan Kirenz

Customer Acquisition Strategies in Direct Marketing: Will Better Messages Always Mean Higher Value?
Arnaud De Bruyn

The Effectiveness of Affinity Programs in the Credit Cards Market
B.P.S. Murthi, Chakravarthi Narasimhan, Andrei Strijnev

The Impact of Complaints and Complaint-handling on Defection
Rutger van Oest, George Knox

2009 INFORMS Marketing Science Conference

Thursday, June 4th, 2009 10.00-12.00 (TB)

TB01 – R0210

Innovation: Strategy

Chair: David Godes

Innovation Beyond Firm Boundaries: The Capabilities of External Problem Solvers
Dominik Mahr, Aric Rindfleisch, Rebecca J. Slotegraaf

Don't Interfere with Your Customer: Creating Innovation-related Information in Virtual Communities
Annouk Lievens, Dominik Mahr

How Brand Substitution Differs across Local Markets
Paulo Albuquerque, Bart Bronnenberg

Too Much Information: The Strategic Management of Inter-customer Communication
David Godes

TB02 – R0220

Channels: Competition

Chair: Benaissa Chidmi

Maximum Selling Retail Price vs. Manufacturer Suggested Retail Price
Yuanfang Lin, Chakravarthi Narasimhan

Store Brand Quality and Retailer's Product Line Design
Eunkyu Lee, Hwan Chung

Brand-supermarket Prize Competition with Nested Logit Demand
Benaissa Chidmi

The Benefits of Upward Channel Decentralization
Rajeev Tyagi, Yunchuan Liu

TB03 – R0230

Sales Force

Chair: Madhu Viswanathan

Salesforce Incentives to Serve "Undesirable" Customers: An Agency Theory Perspective
Sumitro Banerjee, Alex Thevaranjan

A Dynamic Structural Model of Sales Force Response to a Quota Based Contract
K. Sudhir, Doug Chung, Thomas Steenburgh

Compensation and Peer Effects in Competing Sales Teams
Jia Li, Tat Chan, Lamar Pierce

Other-regarding Behavior and Contract Format Preferences in Principal-agent Dyads
Madhu Viswanathan, Tony Cui, Mrinal Ghosh, George John

TB04 – R0240

Pricing: Retailing

Chair: Lei Wang

The Benefits of Probabilistic Selling in Retailing
Scott Fay, Jinhong Xie

Warehouse Club Pricing and the Single Brand Strategy
Anthony Dukes, Tansev Geylani, Kannan Srinivasan

Improving Prepurchase Fit Through Demonstrations
Bruce McWilliams, Amir Heiman, David Zilberman

How Price Affects Returns? The Perceived Value and Incremental Customer Effects
Lei Wang, Eric Anderson, Karsten Hansen, Duncan Simester

TB05 – R0320

Consumer Behavior: Preferences

Chair: Rachel Shacham

On the Importance of Ignorance
Rachel Shacham, Peter Golder, Sha Yang

When More Choice is More: On the Impact of Attitude Strength on Decision Processes
Maria Aladjem, Ulf Bockenholt

The Effects of Website Design on Purchase Intention in Online Shopping: The Mediating Role of Trust and the Moderating Role of Culture
Satyabhusan Dash, Dianne Cyr, Boudhayan Ganguly, Milena Head

Are Capital and Operating Costs Weighted Equally in Durable Goods Purchases?
James Sawhill

TB06 – R1210

Interactive Marketing: Frontiers in Keyword Search Advertising

Co-Chairs: Preyas Desai, Ken Wilbur

The Race for Sponsored Links: A Model of Competition for Paid Placement on a Search Engine
Zsolt Katona

Search Advertising and Competition
Preyas Desai, Woochoel Shin

Offline Advertising and Online Search
Yi Zhu, Ken Wilbur, Sha Yang

Hybrid CPC/CPM Keyword Auctions
Ken Wilbur, Yi Zhu

TB07 – R01220

Internet Marketing: Search

Chair: Sungha Jang

Toward a Strategic Theory of Content and Link Creation in Web-Based Networks
William Rand, Chris Dellarocas

An Empirical Model of Consumer Search Costs for Information Goods
Junlin Du, Yacheng Sun

The Impact of a Non-transactional Website on Offline Customer Buying Behavior
Erjen van Nierop, Eelko Huizingh, Peter S.H. Leeflang, Marije Teerling

Searcher Types and Brand Choices in Automobile Purchase
Sungha Jang, Brian Ratchford

TB08 – R1230

Bayesian Econometrics: Applications

Chair: Hisashi Ishida

Regular and Irregular Purchase Timing Behaviors
Wei-Lin Wang, Li-Chung Jen, Demetrios Vakratsas

Are We 'Halos' or 'Formators'? - A Bayesian Mixture Model Analysis of Customer Satisfaction Data
Joachim Bueschken, Greg Allenby, Thomas Otter

Modeling Latent Geo-dependent Attitudes using Bayesian Spatial Factor Analysis
Stanislav Stakhovych, Tammo Bijmolt, Michel Wedel

Simultaneous Use Probability of Mobile Internet and Other Media by Multivariate Probit Model
Hisashi Ishida, Fumiyo Kondo

2009 INFORMS Marketing Science Conference

Thursday, June 4th, 2009 10.00-12.00 (TB)

TB09 – R1240

New Technologies for Eliciting Customer Preferences

Chair: Catherine Tucker

Second Choice Score (SCS): An Incentive-Aligned Loyalty Metric
Songting Dong, Min Ding, Ping Zhao

Empirical Test of Incentive-compatible Direct Elicitation of Heuristic Decision Rules
John Hauser, Min Ding, Songting Dong, Steven Gaskin, Daria Silinskaia, Chenting Su, Zhilin Yang

Morphing Websites in the Presence of Switching Costs
Gui Liberali, John Hauser, Erin MacDonald, Glen Urban

When do Markets Tip?
Avi Goldfarb, Ajay Agrawal

Privacy Protection and Technology Diffusion: The Case of Electronic Medical Records
Catherine Tucker, Amalia Miller

TB10 – Blau Auditorium

TB11 – R2210

Choice Models: Consumer Response

Chair: Sonika Singh

Building Store Traffic: What Drives the Smart Consumer into your Store?
Sonika Singh, Brian Ratchford, Andrei Strijnev

Heterogeneous Hyperbolic Response of Sticker Shock
Chul Kim, Duk Bin Jun

Consumer Knowledge, Stated Preference, and Revealed Choice
Ying Jin, Yuxin Chen, Meng Su

TB12 – R2220

Financial Market Consequences of Marketing Strategy

Chair: Natalie Mizik

The (Unappreciated) Value of Marketing
Isaac Dinner, Don Lehmann, Natalie Mizik

Firm Innovation and the Ratchet Effect: How Firms Trade Off Value Creation in Financial and Product Markets
Fredrika Spencer, Christine Moorman

Stock Market Valuation of Corporate Brand Strategy in Mergers and Acquisitions
Jonathan Knowles

Managing for the Moment: The Use and Performance Implications of Real Activities and Accounting Accruals Manipulation Earnings Management Strategies
Natalie Mizik

TB13 – R2230

Entertainment Marketing: Internet

Chair: Sebastiano Delre

Fun and Beyond Fun: An Investigation of Consumers' Participation in Online Gaming
Chong Guan, Sunanda Sangwan, Judy Siguaw

The World is Not Enough: A Social Influence Model Multigroup Analysis of Virtual World Behavior
Boris Blechschmidt, Klaus Backhaus, Alexander Freund

Simulating Cinema:How Cross-Cultural Differences in Social Influence Explain Box Office Distribution
Sebastiano Delre, Thijs Broekhuizen, Anna Torres

TB14 – R2240

Cause, Charity, and Not-for-Profit Marketing I

Chair: Yue Li

Success Factors of Cause-Related Marketing
Anne Julie Fries, Karen Gedenk, Franziska V'lckner

Cause Marketing: Spillover Effects of Cause-Related Products in a Product Portfolio
Aradhna Krishna, Uday Rajan

Price and Quality Decisions for Nonprofit Organizations Competing with Businesses
Charles Weinberg, Yong Liu

Corporate Philanthropy in China: The Case of 5.12 Wenchuan Earthquake
Yue Li

TB15 – R2320

Customer Lifetime Value: Strategy

Chair: Jaime Romero

Exploring Event Related Dependence Between Touch Point Outcomes and Customer Lifetime Value
Howard Dover

Modeling the Impact of Marketing Interventions on Mix of New Customers Drawn to a Firm
Shameek Sinha, Leigh McAlister

Assessing the Effects of Service Usage and Subscription on Customer Value
David Schweidel, Anita Elberse

Customer Portfolio Management
Jaime Romero, Martin Boehm Anna Downarowicz

2009 INFORMS Marketing Science Conference

Thursday, June 4th, 2009 1.30-3.00 (TC)

TC01 – R0210

Innovation

Chair: Dennis Herhausen

External Social Capital: A Risk Mitigating Resource of the Innovative Firm
William Baker, Amir Grinstein, Nukhet Harmancioglu

Innovating in the Age of Aesthetics: Do we Need a New Conceptualization of Innovation Capability
Gaia Rubera, Roger Calantone, Erkan Ozkaya

Uncertainty and Idea Generation in Open Innovation
Chander Velu, Tirthankar Charkarvarty, Michael Kitson

Marketing Innovations: Conceptualization, Antecedents and Consequences of Marketing Innovativeness
Dennis Herhausen, Marcus Schoegel

TC02 – R0220

Channels: Price Competition

Chair: Georges Zaccour

On the Proper Measure of Competition in Linear-demand Models of Distribution Channels
Charles Ingene, Sihem Taboubi, Georges Zaccour

Uniform Pricing for Digital Goods: Effects on Competition
Dinah Vernik, Preyas Desai, Debu Purohit

Sales Format in a Distribution Channel
Hyun-Soo Ahn, Goker Aydin, Chia-wei Kuo

The Dilemma of Pull and Push Price Promotions
Georges Zaccour, Guiomar Martín-Herrán, Simon-Pierre Sigué

TC03 – R0230

Promotion: Consumer Response

Chair: Yulia Nevskaya

Spending on the Fly: Mental Budgets, Promotions, and Spending Behavior
Jeff Inman, Karen Stilley, Kirk Wakefield

A Strategic Discrete Choice Model of Catalog Mailing and Response
Sangwoo Shin, Sanjog Misra

A Dynamic Model of the Effects of Cross- and up-selling Marketing Activities
Nino Hardt, Joachim Bueschken

Inferring Price Promotion Effects on Dynamic Consumer Behavior from Aggregate Data
Yulia Nevskaya, Paulo Albuquerque, Sanjog Misra

TC04 – R0240

Pricing: Competition I

Chair: Seungwon Jeon

Free In-network Pricing as Entry-deterrence Strategy
Tingting He, Dmitri Kuksov, Chakravarthi Narasimhan

A New Approach to Measure Price Elasticity: Comparing Price Elasticity across Industries and Firms
Wenzel Drechsler, Martin Natter, Bernd Skiera

Competitive Coupon Promotions and Targeting in Multi-product Duopolies
Seungwon Jeon

TC05 – R0320

Consumer Behavior: Learning

Chair: Tanuka Ghoshal

Tradeoffs in the Dark: The Effect of Experience on Extrapolated Consumer Preferences
Yanliu Huang, Robert Meyer

Quality, Expectations and Relationship Management: Athletic Performance and Alumni Donations
Hulya Karaman, Tat Chan, Michael Lewis

Uncovering the Coexistence of Assimilation and Contrast Effects in Hedonic Sequences
Tanuka Ghoshal, Peter Boatwright, Joseph Nunes, Eric Yorkston

TC06 – R1210

Interactive Marketing: Mobile

Chair: Russ Winer

Too Close to Call? The Effects of Closeness on the Referral Likelihood of Mobile Phone Users
Christian Barrot, Sonke Albers, Jan U. Becker, Arvind Rangaswamy

Modeling the Dynamics of Content Generation and Usage in Mobile Commerce
Anindya Ghose

Mobile Marketing: A Research Agenda
Russ Winer, Fareena Sultana

TC07 – R01220

Internet Marketing: Relationship Management

Chair: Zainab Jamal

Modeling Youngsters: Attitude Toward Using Future Electronic Identification Systems
Christine Balague

The Role of Interactivity in the Era of New Media and its Effect on Consumer-Brand Relationship
Verena Walter, Marcus Schoegel

Key Successful Factors of e-CRM Implementation in Service Industry of Taiwan.
Hui-I Yao, Cassey Lee Hong Kim

Impact on Customer Churn of Intensity of Sharing of User-generated Content at an Online Service
Zainab Jamal

TC08 – R1230

Empirical IO

Chair: Sergio Meza

When Pavarotti Meets Harry Potter at the Super Bowl
Ron Shachar, Shlomi Parizat

Entry in Markets with Indirect Network Externalities: The Case of Ethanol Fuel Retailers
Scott Shriver

Preference Evolution in the South Korean Cigarette Market
Sungho Park, Sachin Gupta

Multiple Adoptions in the Wireless Phone Market: Structural Demand with Dynamic Demographics
Sergio Meza, Max Rempel

2009 INFORMS Marketing Science Conference

Thursday, June 4th, 2009 1.30-3.00 (TC)

TC09 – R1240 **Agent-Based Modeling in Marketing** **Co-Chairs:** William Rand, Roland Rust Rigorous Agent-based Modeling in Marketing *Roland Rust, William Rand* Agent-based Modeling of the Diffusion of Alternative Fuel Vehicles *Rosanna Garcia, Ting Zhang* Issues in Validating Agent-based Models *Robert Marks, Daniel Klapper, David Midgley* Untangling Customer Social Equity via Agent Based Model *Renana Peres, Barak Libai, Eitan Muller*	**TC10 – Blau Auditorium** **Meet the Editors** **Chair:** Anocha Aribarg Marketing Science *Eric T. Bradlow* Management Science *Preyas Desai and Pradeep Chintagunta* Quantitative Marketing and Economics *Peter Rossi* Marketing Letters *Joe E.Urbany* Journal of the Academy of Marketing Science *Tomas Hult*	**TC11 – R2210** **Choice Models: Applications** **Chair:** Peter Oppenheim Market Segmentation for Multi-Feature Products: A Clusterwise Variable Selection Approach *Sunghoon Kim, Feng Liang, Jianfeng Xu* Multivariate Probit Model to Examine Synergies within a Firm's Channel Portfolio *Mahima Hada, Rajdeep Grewal, John Liechty* Using Water Service Delivery Attributes to Evaluate Pricing Policies *Peter Oppenheim, Gamini Herath* The Evolution of Internal Market Structure *Garrett Sonnier, Oliver Rutz*	**TC12 – R2220** **Marketing Investments, Financial Performance and Shareholder Value** **Chair:** Lopo Rego A Fundamental Signal from Advertising: Analyst Under-Reaction *Min-Chung Kim, Leigh McAlister* The Relationship between Web Chatter and Stock Price *Leigh McAlister, Tom Shively, Garrett Sonnier* Exploring the Risk-return Trade-offs of Brand Quality *Kapil Tuli, Sundar Bharadwaj* How Does Marketing Listen to Stock Markets: Implications of using Stock Market Movements to Guide Strategic Investments *Anindita Chakravarty, Rajdeep Grewal* Customer Relationship Management Capabilities and Shareholder Value *Lopo Rego, Neil Morgan*
TC13 – R2230 **Entertainment Marketing: Movies I** **Chair:** Ashish Sinha Empirical Analysis of Competition between Affiliate and Independent Theaters *O. Cem Ozturk, Sriram Venkataraman* International Product Launch: The Case of Motion Picture DVDs *Ashish Sinha, Renu Emile, Namwooon Kim* Impact of Media on Crime - Case of the Motion-picture Industry *Sriram Venkataraman, Sudheer Chava, Pradeep Chintagunta* Does the Sequence of Countries Matter in the International Rollout of New Products? *Reo Song, Sanjay Jain, Venkatesh Shankar*	**TC14 – R2240** **International Marketing II** **Chair:** Terry Elrod Assessing Biases in Cross-national Research on Consumer Innovativeness *Deepa Chandrasekaran, Gerard Tellis* Shaking Hands Across The National Divide: The Success of Foreign JVs in India *Joseph Johnson, Ram Krishnan, Krishna Prasanna, Gerard Tellis* The Role of Cultural Distance on Innovativeness in MNCs *Masoomeh Moharrer, Hooman Tahayori* Pride and Prejudice: Investigating the Symbolic Properties of Country of Origin in Asia *Terry Elrod, Giana Eckhardt, Luming Wang*	**TC15 – R2320** **Customer Lifetime Value: Metrics** **Chair:** Tanja Frischmann Customer Scoring and Competition - The Case of Retail Format Competition *Michael Jungbluth, Joachim Bueschken* Measuring Household Response in Database Marketing: A Latent Trait Approach *Gary Russell, Subom Rhee* Share of Wallet's Impact on Customer Value *Tanja Frischmann*	

2009 INFORMS Marketing Science Conference

Thursday, June 4th, 2009 3.30-5.00 (TD)

TD01 – R0210

Innovation: New Product Development and Design

Chair: Mark Kilgour

The Role of Alliance, Alliance Partner and Format Characteristics on the Market Acceptance of Formats
Sujan Dan, Alina Sorescu, Rajan Varadarajan

If Creative Thinking Techniques Are So Great, Why Aren't They Used More?: Actor-observer Difference
Mark Kilgour, Scott Koslow

The Origin of Innovations: Consumer, Inventor, or Technology?
Stav Rosenzweig, David Mazursky, Gerard Tellis

TD02 – R0220

Channels: Retail Competition

Chair: Tirtha Dhar

The Role of Quality in a Channel with Asymmetric Retailers
Tansev Geylani, Anthony Dukes, Yunchuan Liu

A Dominant Retailer's Impact on Manufacturers: Profits, Wholesale Prices, Shipments, Product Lines
Qingyi Huang ,Eric Anderson, Karsten Hansen, Vincent Nijs

Is the Robinson-Patman Act Dead?
Ryan Luchs, Anthony Dukes, Tansev Geylani, Kannan Srinivasan

Fixed Fee Payment and Two Part Tariff: Who Pays Whom
Tirtha Dhar

TD03 – R0230

Promotion: Sales Promotion

Chair: Aharon Hibshoosh

How Should Retailers Manage Organic and Conventional Products Across Categories?
Koen Pauwels, Ram Bezawada

Measuring the Effectiveness of Integrated Promotion Activities:The Case of Wine Marketing
Ram Bezawada, Tolga Akcura, Koen Pauwels

Consumer Welfare in Price Discrimination Schemes with Rationed and Non-rationed Deals under Leakage
Aharon Hibshoosh, Uri Ben-Zion, Uriel Spiegel

TD04 – R0240

Pricing: Competition II

Chair: Elie Ofek

Out-group Homogeneity Bias and Strategic Market Entry Decisions
Neil Bendle

When is it Optimal to Ignore the Threat of a Competitive Entry?
Olivier Rubel

Up-market or Down-market Stretch: Optimal Sequential Introduction of New Products
Mahmood Pedram, Subramanian Balachander

Complementary Goods: Creating and Competing for Value
Elie Ofek, Eyal Biyalogorsky, Oded Koenigsberg, Taylan Yalcin

TD05 – R0320

Consumer Behavior: Social Influence

Chair: Hiroshi Kumakura

The Role of Social Influence in Innovators Adoption Behavior
Dominik Papies, Michel Clement, Esther K. Papies

Family Groups Consuming Television: Do Shared Moments Breed Strong Interactions?
Jose-Domingo Mora, Jason Ho, Robert Krider

The Mechanism of Cyclical and Self-Organized Change of Choice Set Size: Discussion with Agent Based
Hiroshi Kumakura

TD06 – R1210

Interactive Marketing: Interactivity and Retailing

Chair: Sandy Jap

Do Multichannel Customers Really Outperform? Retention, Revenues, and Multichannel Usage
Sara Valentini, Elisa Montaguti, Scott Neslin

The Effect of Channel Elimination on Customer Metrics: Transition from Catalog Retailers to E-Tailers
Umut Konus, Scott Neslin, Peter Verhoef

Modeling Multichannel Media Consumption: Multitasking and the New Media
Sandy Jap, Chen Lin, Sriram Venkataraman

TD07 – R01220

Internet Marketing: Auctions

Chair: Sam Hui

An Analysis of Alternate Auction Policies for Search Advertisements
Subramanian Balachander, Karthik Kannan, David Schwartz

To Bundle or Not To Bundle: On the Profitability of Multi-item Auctions
Peter Popkowski , Gerald Haubl,University Yingtao Shen

The Impact of Promotional Messages during Auctions
Eric Greenleaf, Caroline Ducarroz, Sha Yang

Nonparametric Demand Estimation Using Online Auction Experiments: A Polya Tree Approach
Sam Hui, Edward George

TD08 – R1230

Empirical IO: Strategy

Chair: Sunil Kishore

The Effect of Changes in Local Market Structure on Product Line Decisions on Movie Theaters
Pradeep Chintagunta, Yesim Orhun, Sriram Venkataraman

Are Advertising and R&D Complements?
Georg von Graevenitz, Philipp Sandner

The Relative Impact of Marketing versus R&D Efforts on the Top-Line Growth of Leading Large Firms
Gautham Vadakkepatt, Venkatesh Shankar, Rajan Varadarajan

Brand Architecture - Boon or Bane?: A Two Sided Matching Model of Acquisitions
Sunil Kishore, George John,Professor, Om Narasimhan

2009 INFORMS Marketing Science Conference

Thursday, June 4th, 2009 3.30-5.00 (TD)

TD09 – R1240

Models and Measurement for Bundling Strategies

Chair: Vithala Rao

Bundling of Competing Products in a Retail Channel
Nanda Kumar, Vithala Rao

Modeling Preferences in Sequential Bundling
Manoj Agarwal, Kalpesh Desai, Vithala Rao

An Incentive-compatible Approach for Assessing Consumers: Reservation Prices for Bundles Under Uncertainty: Application and Implications
Rabikar Chatterjee, R. Venkatesh

Upgrading Methods for Bundle Choices
Ye Hu, Min Ding, Young-Hoon Vithala Rao

TD10 – Blau Auditorium

Meet the Editors

Chair: Linda Salisbury

Journal of Marketing Research
Tulin Erdem

Journal of Marketing
Ajay Kohli

Journal of Service Research
Kay Lemon

International Journal of Research in Marketing
Stefan Stremersch and Donald R. Lehmann

Journal of Interactive Marketing
Venky Shankar

TD11 – R2210

Choice Models: Methodology

Chair: Eric Schwartz

Multiple Constraint Choice Models with Interior Solutions
Takuya Satomura, Greg M Allenby, Jaehwan Kim

Random Utility Models and Rational Choice Behavior
Thomas Steenburgh, Andrew Ainslie

An Empirical Investigation of Consumer Adoption and Consumption of a Video on Demand Service
S Sriram, Pradeep Chintagunta, Puneet Manchanda

Incorporating Covariates in the Beta-binomial Model
Eric Schwartz, Peter Fader, Bruce Hardie

TD12 – R2220

Marketing Issues in the Startup and IPO Context

Co-Chairs: Jade DeKinder, Cem Bahadir

Transforming B2B Social Capital Into IPO Value: The Role of Absorptive Capacity
Guiyang Xiong, Sundar Bharadwaj

Not All Market Ties are Created Equal: The Timing and Strength of Market Ties in the Commercialization
Sundar Bharadwaj, Leslie Vincent

The Role of Marketing Information Availability and Complexity on Speed and Decision Making in the IPO Process
Jade DeKinder, Cem Bahadir

Marketing Strategy and Firms' Initial Public Offerings (IPOs)
Tien Wang, Xueming Luo

TD13 – R2230

Entertainment Marketing: Movies II

Chair: Xia (Angela) Liu

Determinants of Line Extension Success: An Investigation of Movie Franchises
Sanjay Sisodiya, Berna Devezer

Endogeneity of Ticket Availability and Moviegoer's Demand Restriction in the Movie Industry
Dong Soo Kim, Duk Bin Jun

Large Screens or More Shows: What Tilts the Balance in Scale-of-entry Decisions in the Movie Industry
Anita Rao

Dynamics of Star Power Effects beyond the Opening Week
Xia (Angela) Liu, Tridib Mazumdar

TD14 – R2240

International Marketing I

Chair: Ying Xiao

Cross-national Analysis of the Impact of Word-of -Mouth on Online Purchasing Behavior
Hsin-Chen Lin, Manohar Kalwani

Strategic Responses of Firms towards the Impact of National Culture on Innovativeness
Erik Mooi

Is the World Becoming Flat? Role of Globalization and Internet in Worldwide Consumption Convergence
Satheeshkumar Seenivasan, Debabrata Talukdar, Kamer Yildiz

Consumer and Producer Welfare in Gray Market
Ying Xiao, Udatta Palekar

TD15 – R2320

Customer Satisfaction

Chair: Feng Liu

Using Prediction Markets to Forecast Customer Satisfaction
James Lemieux, Koleman Strumpf

Which Satisfied Customers do Really Pay More? A Non-parametric Moderator Analysis
Maik Eisenbeiss, Klaus Backhaus, Markus Cornelissen, Wayne D. Hoyer

Traditional and User-generated Voice-of-customer Metrics and Financial Performance
Qiang Fei, Lopo Rego

Reflecting Mirrors: How Providers and Facilities Affect Customer Satisfaction with Each Other
Feng Liu, Purushottam Papatla

2009 INFORMS Marketing Science Conference

Friday, June 5th, 2009 8.30-10.00 (FA)

FA01 – R0210

New Products: Diffusion I

Chair: Brian Hartman

Optimal Dynamic Advertising in the Generalized Bass Model of New Product Diffusion
Christophe Van Den Bulte, Gila Fruchter

Seasonality Models for New Product Diffusions: Shrinking Seasonal Split and Product Mix Approaches
Evren Ozkaya, Pinar Keskinocak, John Vande Vate, Michael Waithe

Unconstrained Global Diffusion: The Case of Freeware
Guy Yogev, Barak Libai, Eitan Muller

Investigating Cross-country Interaction in New Product Diffusion
Brian Hartman, Bani Mallick, Debabrata Talukdar

FA02 – R0220

Channels: Governance I

Chair: Nicolas Pernet

The Role of Economic Rents and Supervision in Distribution Channels
Desmond (Ho-Fu) Lo, Mrinal Ghosh, Francine Lafontaine

Modeling the Risk of Increasing Supply Chain Length
Mark Vandenbosch, Stephen Sapp

Structural Estimation of Moral Hazard Models: An Application to the Design of Marketing Channels
Ranjan Banerjee, George John,Professor, Om Narasimhan

Managing Strategic Risks in the Context of Channel Management
Nicolas Pernet, Marcus Schoegel

FA03 – R0230

Advertising: Consumer Behavior

Chair: Deepa Pillai

Love at First Sight? Effects of Direct Mail Design on Consumer Response Behavior
Manfred Krafft, Sebastian Feld, Heiko Frenzen, Kay Peters

Comparative Advertising: Effects of Affective and Cognitive Information on Brand Evaluation
Ying Ho, Candy K. Y. Ho

Consumer Consumption Impulses: The Role of Sensory Stimuli
David J Moore, Sheila Sasser

Determinants of Attitudes towards Product Placement: A Structural Equation Modeling Approach
Deepa Pillai, Siva Balasubramanian, Pola Gupta

FA04 – R0240

Pricing: Willingness-to-Pay

Chair: Steven Huff

More Choice and the Polarization of Willingness to Pay
Luc Wathieu, Marco Bertini, Sheena Iyengar

Improving the Accuracy of Price Response Functions Using the Willingness-to-pay-as-a-Range Concept
Florian Dost, Robert Wilken

The Economic Value of a Star: The Effect of Superfluous Ratings on Willingness to Pay
Steven Huff, Teck Ho

FA05 – R0320

Decision Neuroscience: Progress, Opportunities and Challenges

Co-Chairs: Carolyn Yoon, Willem J.M.I. Verbeke

A Salesforce-Specific Theory of Mind Scale
Willem J.M.I. Verbeke, Roeland C. Dietvorst, Marion Smits, Aad van der Lugt, Carolyn Yoon

Asymmetries in Intertemporal Choice: Neural Systems and the Directional Evaluation of Immediate versus Future Rewards
Eric Johnson, Bernd Figner, Amy Krosch, Jason Steffener, Elke U. Weber

Delaying Gratification Engages the Brain's Default Network
Richard Gonzalez, Israel Liberzon, Luan Phan, Chandra Sekhar Sripa

Functional Imaging of Diminished Self-control
William Hedgcock, Akshay Rao, Kathleen Vohs

FA06 – R1210

Interactive Marketing: Customer Analytics

Chair: Alan Montgomery

A Model and Empirical Analysis for Managing Patient Compliance and Persistence in Pharmaceuticals
Scott Neslin, Edward Rhoads, Paul Wolfson

Customer Retention Dynamics in a Contractual Setting: The Paradox of Increasing Loyalty
Peter Fader, Bruce Hardie

Do Vendors Benefit from Program Induced Marketing Actions in A Multi-vendor Loyalty Program?
Matilda Dorotic, Tammo Bijmolt, Dennis Fok, Peter Verhoef

User Profiling using Web Browsing Data
Alan Montgomery

FA07 – R01220

Social Influence: Network Effects

Chair: Hee Mok Park

Who Are the Customer Evangelists? How Worthy are They? - A Network Model of Customer Referral Value
Guillermo Armelini Wilde, Erica Salvaj, Julian Villanueva

Peer Effects In Casino Gambling
Hee Mok Park, Puneet Manchanda

Judging Borrowers by the Company They Keep: Value of Social Networks in Online Peer-to-peer Lending
Mingfeng Lin, Nagpurnanand Prabhala, Siva Viswanathan

The Influence of Local Network on Innovation Adoption
Sangman Han, Jacob Goldenberg, Hyuk Lee, Don Lehmann, Kyng Young Ohk

FA08 – R1230

Decision-Making: Managerial

Chair: Oleg Urminsky

Values of VMI (Vendor-managed Inventory) for Different Demand Patterns
Bowon Kim, Chulsoon Park

Assessing the Value of Marketing Theory in Marketing Knowledge Acquisition: Stakeholder Perspectives
Scott Dacko

Cost /Benefit Considerations in Reducing Consumer Uncertainty
Joe Urbany, Bill Bearden

Almost on Target: Absolute vs. Relative Error in Subjective Assessment of Prediction Accuracy
Oleg Urminsky

2009 INFORMS Marketing Science Conference

Friday, June 5th, 2009 8.30-10.00 (FA)

FA09 – R1240	FA10 – Blau Auditorium	FA11 – R2210	FA12 – R2220
		Competition: Strategy **Chair:** Axel Stock Brand Extensions in Markets with Preference Based Segmentation Yogesh Joshi, David Reibstein, John Zhang Dynamic and Competitive Effects of Direct Mailings: A Charitable Giving Application Bas Donkers, Philip Hans Franses, Merel van Diepen Positioning and Pricing in Markets with Network Externality S Sajeesh, Jagmohan Raju Competition with Environmentally Friendly Products Axel Stock	
FA13 – R2230 **Brands and Branding: Brand Equity** **Chair:** Janell Townsend Consumer-based Brand Equity Measure: Bayesian Modeling of a Multi-facet Multi-dimensional Construct *Luming Wang, Adam Finn* The Point of No Return: Do Brands Recover Distribution? *Michael W Kruger* Advertising, Brand Equity, and the Generation of Financial Resources *Alexander Himme, Marc Fischer* Performance Implications of Brand Investments *Janell Townsend, Rajendra Srivastava, Sengun Yeniyurt*	**FA14 – R2240** **Marketing Strategy** **Chair:** Yang Liu 'Selling' Business Models of Internet Start-Ups - An Experimental Study of Exit-Strategies *Michel Clement, Jan U. Becker, Markus Noeth* Business Models and Radical Innovation *Chirag Patel, Christophe Haon* Concurrent Communications: Aligning Sales Training Programs & the Marketing Message *Natalie Clark Winter* Competition between Professionals and Amateurs: A Two-sided Market Story *Yang Liu*	**FA15 – R2320** **Customer Loyalty: Methodology** **Chair:** Kanghyun Yoon Targeting Prospective Customers Predicted to be Loyal Beyond a Threshold Time *Douglas MacLachlan, Joo Heon Park* Predicting Customer Churn: Towards a Marketing-Oriented Loss Function *Aurelie Lemmens, Christophe Croux* Differential Impacts of Brand Loyalty on Purchase Decisions of When, What, and How Much *Kanghyun Yoon, Kyuseop Kwak, Thanh Tran*	

2009 INFORMS Marketing Science Conference

Friday, June 5th, 2009 10.30-12.00 (FB)

FB01 – R0210

New Products: Diffusion II

Chair: Yuri Peers

The Effect of Online Word of Mouth on New Product Diffusion: An Example of Taiwan Box-Office of American Movies
Ching-I Chen, Kuo-Cheng Chang

An Agent-based Model for Incorporating the Effect of Consumer and Brand Interactions on Diffusion
Mary E. Schramm, Kevin J. Trainor

Social Identity and Multivariate Visual Diffusion
Blake McShane, Eric Bradlow, Jonah Berger

The Use of Mixed-frequency Data in Diffusion Models
Yuri Peers, Dennis Fok, Philip Hans Franses

FB02 – R0220

Channels: Governance II

Chair: Vishal Kashyap

Bundling of Equipment Sales and Technical Consulting Services Contracts in Industrial Markets
Sourav Ray, Mrinal Ghosh, Tirthankar Roy

When do Vendors Choose to Offer Systems versus Components
Kellilynn Frias-Gutierrez, Shantanu Dutta, Mrinal Ghosh

Contracts, Governance, and Channel Member Compliance
Vishal Kashyap, Kersi Antia, Gary Frazier

Brand Externalities and Intra-chain Pricing Variation: the Effect of Organizational Form
Arturs Kalnins

FB03 – R0230

Advertising: Consumer Response

Chair: Norris Bruce

A Bayesian Model of Treatment Effects in a Pre-post Study
Ling-Jing Kao

New and Enduring Empirical Generalizations on Advertising Elasticity
Raj Sethuraman, Gerard Tellis

Hierarchical Effects of Advertising: A Bayesian Approach
Huseyin Karaca, Richard Briesch, Lakshman Krishnamurthi

A Dynamic Factor Model for Understanding the Intermediate Effects of Advertising on Sales
Norris Bruce, Prasad Naik, Kay Peters

FB04 – R0240

Pricing: Perception

Chair: Jun Bum Kwon

Decoding Luxury
Daniel Langer, Oliver Heil

Reference Price Mechanisms and Gain-loss Effects at the Market Level
Jun Bum Kwon, Jean-Bernard Kazmierczak, Purushottam Papatla

Examining Reference Price in Repeated B2B Transactions.
Hernan Bruno, Hai Che, Shantanu Dutta

Price Expectations and Purchase Decisions: Evidence from an Online Store Experiment
Sudipt Roy, Tat Chan, Amar Cheema

FB05 – R0320

Consumer Behavior: Decision-Making I

Chair: Nevena Koukova

Account Aversion: When More Debt is Preferred to Less
Scott Rick, Cynthia Cryder

Situation Dependent Mental Representations of Consumer Decision Problems
Benedict G.C. Dellaert, Theo A. Arentze, Harry J.P. Timmermans

Being Hot or Being Cold: The Influence of Temperature on Judgment and Choice
Hee-Kyung Ahn

Fantasies and Expectations as Advertising Tools
Nevena Koukova, Shweta Oza

FB06 – R1210

Interactive Marketing: Product Reviews/WOM

Chair: Wendy Moe

A Framework for Linking the Dimensions of Online Word of Mouth to Firm Performance
Shyam Gopinath, Lakshman Krishnamurthi, Jacquelyn S. Thomas

eWOM and Risk Return in Online Markets: A Joint Study on Seller Review and Product Review
Jianan Wu, Jie Sun, Yinglu Wu, Yang Zhilin

Modeling the Helpfulness of Online Reviews
Susan Mudambi, David Schuff

How Much Does a Good Product Rating Help a Bad Product? Modeling the Role of Product Quality in the Relationship between Online Consumer Ratings and Sales
Wendy Moe

FB07 – R01220

Social Influence: Modeling

Chair: Gal Oestreicher-Singer

The Design of Web 2.0 Communities: Trading off Differentiation with Network Size
Kaifu Zhang, Miklos Sarvary

Modeling the Structure and Dynamics of Word-of-Mouth Dialogues
Kerimcan Ozcan, Venkatram Ramaswamy

Willingness to "Pay" to Social Media Websites: Theory and Evidence from an Online Radio Website
Gal Oestreicher-Singer, Lior Zalmanson

FB08 – R1230

Decision Support Systems I

Chair: Alan Dybvig

A Marketing Mix Decision System for a Consumer Good in a Cross-cultural Environment; a Fuzzy Goal Programming Approach
Debasis Pradhan, Bijay Krushna Mangaraj

Relative Importance of Predictors: Effectiveness of Random Forests vs. Johnson's Relative Weights
Dimitri Liakhovitski, Yegor Bryukhov

Next Generation Response Modeling: Mixed Integer and Linear Programming
Alan Dybvig

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Friday, June 5th, 2009 10.30-12.00 (FB)

FB09 – R1240

Forecasting

Chair: Stefan Hattula

Forecasting Television Ratings
Peter Danaher, Tracey Dagger, Mike Smith

Modeling Long-term Sport-related Success: Implications for Sponsorship Decisions
Stefan Hattula, Hans Bauer, Maik Hammerschmidt

Improving the Profitability of Direct Marketing: A Quantile Regression Approach
Xi Zhang, Geng Cui, Jian Zhou

FB10 – Blau Auditorium

FB11 – R2210

Competition: Competitive Response

Chair: Debabrata Talukdar

Immediate and Dynamic Competitive Reactions to Price Promotions
Wei Li, Dennis Fok

Acknowledging that an Entrant is a Close Competitor: Why Incumbents May Defer Defensive Responses?
Yu Wang, Nanda Kumar, Duncan Simester

Cointegration Analysis of Brand and Category Sales- Implications for Long Term Strategy
Purna Chandra Padhan, Debasis Pradhan

Effects of Multiple Line Extensions on Category Dynamics
Debabrata Talukdar, Sri Devi Duvvuri, Vijay Ganesh Hariharan

FB12 – R2220

The Marketing-Finance Interface I

Chair: Xueming Luo

New Product Alliances and Firm Stock Prices: Direct and Feedback Effects
Sudha Mani, Xueming Luo

The Impact of Marketing Alliances on Firm Value Creation: The Moderating Role of Network Characteristics
Vanitha Swaminathan, Christine Moorman

Brand Portfolio Strategies and Risk to Firm Value
Liwu Hsu, Susan Fournier, Shuba Srinivasan

Convexity and Abnormal Return
Alina Sorescu, Haipeng (Allan) Chen, Sorin Sorescu, Michael Tsiros

FB13 – R2230

Brands and Branding: Brand Extensions

Chair: Joseph Chang

Competitive Branding Strategy for Product Lines
Vineet Kumar, Tansev Geylani, John Hulland

Brand Hierarchies and Brand Performance
Douglas Bowman, Vijay Viswanathan

A Real Options Approach to Valuing Brand Leveraging Options: How Much is Starbucks Brand Worth?
Francesco Baldi, Lenos Trigeorgis

FB14 – R2240

Cause, Charity, and Not-for-Profit Marketing II

Chair: V. Mukundadas

Going Beyond Carrots and Sticks: The Effectiveness of Demarketing
Amir Grinstein, Udi Nisan

Optimizing Direct-marketing Strategies for a Public Broadcasting Institution: An Adaptive Control Application
Elizabeth Durango-Cohen, Pablo Durango-Cohen

Antecedents and Consequences of Corporate Societal Marketing: An Exploratory Study from India
V. Mukundadas, Saji K. B.

FB15 – R2320

Customer Loyalty: Metrics

Chair: Chen Lin

Like Lemmings to the Sea: An Investigation of Social Network *Effects in Customer Churn Behavior*
Michael Haenlein

Can Brand Equity Explain Excess Behavioral Loyalty?
Sang-Uk Jung, Tom Gruca, Lopo Rego

On the Relationship Between Risk Aversion and Cross-category Brand Loyalty
Lutz Hildebrandt, Nadja Silberhorn

The Impact of Loyalty Program Introduction on Retail Chain Performance
Chen Lin, Douglas Bowman

2009 INFORMS Marketing Science Conference

Friday, June 5th, 2009 1.30-3.00 (FC)

FC01 – R0210

New Products: Diffusion and Word-of-Mouth

Chair: Philip Stern

Social Interactions Over the Life Cycle: The Adoption of the Toyota Prius
Noriko Kakihara, Sridhar Narayanan, Harikesh Nair

Predictors of Viral Marketing: The Dominant Role of Behavioral Intention Over Source Credibility
Dave Bussiere

Factors Affect Use Diffusion of New Products with Network Externalities
Tomoko Kawakami, Kazuhiro Kishiya

Predicting the Innovator
Philip Stern
Malcolm Wright

FC02 – R0220

Channels: Strategy

Chair: Tae Kyun Kim

The Implications of Distribution Channel Structure for Product Information Disclosure
Hongyan Shi, Yunchuan Liu

Multi-brand Retailing and Comparison Shopping
Sridhar Moorthy
Yongmin Chen

The Relative Power of Manufacturers and Retailers in the Auto Industry: A Generalized Nash Bargaining
Tae Kyun Kim, Sivaramakrishna Siddarth, Jorge Silva-Risso

FC03 – R0230

Advertising: Internet

Chair: Makato Abe

The Effect of Advertising on Word-of-Mouth
Sarit Moldovan, Don Lehmann

Intent and Interest: The Attention Economy of Search and Web Advertisement
Alexander White, Kamal Jain

Diagnosing Websites and Analyzing Visitors' Navigation Patterns from Log files
Makoto Abe

FC04 – R0240

Pricing: Tariffs

Chair: Eva Ascarza

Demand Uncertainty and Three-Part Tariffs
Ping Xiao, Tat Chan, Chakravarthi Narasimhan

Doing More with Less: Price Discrimination with Three-Part versus Two-Part tariffs
Hemant Bhargava, Adib Bagh

Pricing Structure and Preferences: How does Tariff Structure Affect Consumption for Access Services?
Skander Esseghaier, Raghuram Iyengar, Kamel Jedidi, Peter Danaher

When Talk is Cheap: An Analysis of Subscriber Behavior under Two- and Three-Part Tariffs
Eva Ascarza, Anja Lambrecht, Naufel Vilcassim

FC05 – R0320

Consumer Behavior: Decision-Making II

Chair: Gerald Haubl

Consumer Information Search: A Meta-Analysis
Moutusi Maity,George Zinkhan

Ambiguity Effect in Small Probability Promotions: Roles of Purchase Value and Promotion Budget
Qing Yao, Rong Chen, Ping Zhao

Predicting Consumer Choices – An Explication of the Status Quo Bias
Hanna Roemer
Oliver Heil

Behavioral Effects in Models of Consumer Product Search: The Importance of Local Influences
Gerald Haubl, Benedict G.C. Dellaert, Bas Donkers

FC06 – R1210

Interactive Marketing: Social Contagion and Epidemics

Co-Chairs: Andrew Stephen, Jonah Berger

Virality
Jonah Berger, Katy Milkman

Contagion in Social Networks
Mark Newman

Tracing Social Influence Through Asset Transfers in a Virtual World
Lada Adamic, Brian Karrer, Eytan Bakshy

The Effect of Social Hubs on the Diffusion of Innovation
Danny Shapira, Jacob Goldenberg, Oded Lowengart

Competing for Conversation: Social Epidemics and the Spread of Culture
Andrew Stephen, Jonah Berger

FC07 – R01220

Social Influence: Consumer Behavior

Chair: Xing Pan

Using Influentials to Increase Health Campaign Efficacy
Kim Serota, Franklin Boster, Christopher Carpenter, Kyle Andrews

Perceived Awareness: A New Driver for Diffusion of Word-of-Mouth
Hikaru Yamamoto, Satoshi Nishida, Shinji Morioka, Shigetaka Yamakawa

Social Effects on Customer Retention
Irit Nitzan, Barak Libai, Eran Shir

Consumer Information Processing and Decision Making under the Influence of Online Word-of-Mouth: Experiments in a Virtual Art Gallery
Xing Pan, Thomas Novak

FC08 – R1230

Decision Support Systems II

Chair: Peter Boatwright

Little's Law: A Useful Tool in Marketing?
John D.C. Little

Where's the Beef? Estimating Inventory Position, Shrinkage, and Out-of-stocks
Peter Boatwright, Peter Stuettgen, Joseph B. Kadane, Sharad Borle

Marketing Management Support Systems: Help That is Not Recognized?
Niek Althuizen, Arnaud De Bruyn, Berend Wierenga, Gerrit Van Bruggen

2009 INFORMS Marketing Science Conference

Friday, June 5th, 2009 1.30-3.00 (FC)

FC09 – R1240 **Methodological Challenges: Statistical Validation** **Chair:** Dan Putler Determining the Type and Number of Clusters in Cluster Analysis: A New Approach *Dan Putler, Tieshan Li, Charles Weinberg* When Statistical Validation Fails *Steven Shugan* Merging Brand Equity and Product Feature Choice Experiments to Disentangle Variance Components *Christine Ebling, Jordan Louviere*	**FC10 – Blau Auditorium**	**FC11 – R2210** **Competition: Game Theory** **Chair:** Hejun Zhuang Strategic Entry in Dynamic Markets *J. Miguel Villas-Boas, Qiaowei Shen* Investigating Horizontal Information Disclosure *Zheyin (Jane) Gu, Ying Xie* Equilibria in a Hotelling Model: First-mover Advantage? *Amitash Sinha, Uday Rajan* The Effect of Online and Offline Distribution Strategies on Price Dispersion *Hejun Zhuang, Peter Popkowski Leszczyc, Yuanfang Lin*	**FC12 – R2220** **The Marketing-Finance Interface II** **Chair:** Xueming Luo Does Chatter Matter? Dynamics of Online Consumer Generated Content on Stock Performance of the Firm *Seshadri Tirunillai, Gerard Tellis* Individual Brand Equity Outcomes as an Explanation for Firm Value and Risk *Vijay Viswanathan, Douglas Bowman* To Make or Not to Make? Assessing Market Returns to Make or Buy Innovation *Abhishek Borah, Gerard Tellis* Panel Discussion: Marketing and Firm Value: State-of-the-art, Future Research Directions, and Wall Street Implications Xueming Luo (moderator), Raji Srinivasan, Gerard Tellis, Dominique M. Hanssens, Don Lehmann
FC13 – R2230 **Brands and Branding: Brand Identity** **Chair:** Joseph Chang Measuring the Impact of Inter-attitudinal Conflict on Consumer Evaluation of Foreign Products *Nittaya Wongtada, Gillian Rice, Subir Bandyopadhyay* Does Coffee Help You Sell Paper Towel? Cross-effects of Sister Brand's Success on Brand Performance *JianJun Zhu, Tom Gruca, Lopo Rego* Perceived Entitativity of Family Brands *Joseph Chang, Yung-Chien Lou*	**FC14 – R2240** **Marketing of Fast Decay Products** **Chair:** Ashish Sood Co-Chair: Douglas Bowman The Role of Software Sharing in Indirect Network Effect Markets: Evidence on Competing Video Game Consoles *Vardit Landsman, Stefan Stremersch* The Economic Value of Athlete Endorsers *Jeroen Verleun, Anita Elberse* Optimal Pre- and Post- release Advertising for Short Lifecycle New Products *Prasad Naik, Natasha Foutz, Kalyan Raman* Exploring Sales Patterns for Fast-Decay Product Categories *Douglas Bowman, Ashish Sood*	**FC15 – R2320** **Customer Loyalty: Programs** **Chair:** Andrea Godfrey Loyalty Program Time Horizon: Effects of Policy Change on Consumer Behavior *Yuping Liu, Els Breugelmans* Impact of Loyalty Program Enrollment on Consumer Purchasing Behavior *Martin Boehm, Alberto Maydeu Olivares* The Impact of Relational Marketing Contacts on Customer Repurchasing Behavior *Andrea Godfrey, Kathleen Seiders, Glenn Voss*	

2009 INFORMS Marketing Science Conference

Saturday, June 6th, 2009 8.30-10.00 (SA)

SA01 – R0210

New Products: Adoption

Chair: Bryan Bollinger

Cumulative Timed Intent: A New Predictive Tool for Technology Adoption
Koert Van Ittersum, Fred M. Feinberg

An Experimental Choice Study of the Introduction of a New Product Feature on Attribute Preferences
Harmen Oppewal, David Waller, Paul Wang, Mark Morrison

Green Technology Adoption: An Empirical Study of the Southern California Dry Cleaning Industry
Bryan Bollinger

New FMCG Adoption
Trichy Krishnan

SA02 – R0220

Channels: Consumer Behavior

Chair: Anita Basalingappa

Attitude of Shoppers and Retailers Towards Introducing a Common Market Identity
Anita Basalingappa

The Factory Outlet Channel: Opportunity or Threat
Gonca Soysal, Lakshman Krishnamurthi

What Drives Channel Choice in Grocery Shopping?
Junhong Chu, Javier Cebollada, Pradeep Chintagunta

Adding Physical Store and Customer Channel Migration: An Individual Level Analysis of Demand Change
Yantao Wang, Eric Anderson, Karsten Hansen

SA03 – R0230

Advertising: Strategy

Chair: Moon Young Kang

Portfolio Construction: The Efficient Diversification of Marketing Investments
Michael Haydock

On the Tradeoffs Between Brand and Product Advertising
Chuan He, Wilfred Amaldoss

Breaking Through Creativity Barriers: The Marketing Dilemma with Highly Creative Advertising
Scott Koslow, Sheila Sasser

Strategic Advertising In A Recession: A Business Cycle
Perspective, Astrid Keel

SA04 – R0240

Pricing

Chair: Aydin Alptekinoglu

Consumer Choice and Evaluation of Product versus Price Bundles
Rahul Sett, Abraham Koshy, Tathagata Bandyopadhyay

Managing Seasonal Peaks and Inventorying Customers
Aydin Alptekinoglu, Steven Shugan

Antique Roadshow Redux: Evaluating Consumers' Appraisals of Credence Qualities
Matthew Nagler, Bei Jiang, Fredi Kronenberg, Edward Kennelly

Optimal Hybrid Bundle Pricing Using Willingness-to-pay Measures from Conjoint Analysis
Jeff Meyer, Venkatesh Shankar

SA05 – R0320

Consumer Behavior: Non-Compensatory Choice

Chair: Ty Henderson

Efficient Choice Designs Under Non-Compensatory Models
Qing Liu, Neeraj Arora

Cognitive Simplicity and Consideration Sets
Rene Befurt, John R. Hauser, Olivier Toubia, Theodoros Evgeniou, Daria Silinskaia

An SKU-level Dynamic Screening Model
Lin Bao, Ty Henderson, Neeraj Arora

Non-compensatory Dyadic Choices
Ty Henderson, Neeraj Arora

SA06 – R1210

Interactive Marketing: Strategy / Measurement

Chair: Anita Elberse

What, When, and How Much to Cross-Sell? Optimizing Multicategory Catalog Mailing
Morris George, V Kumar, Dhruv Grewal

User Generated Content and Firm Stock Value During Financial Crisis
Xueming Luo

Bye Bye Bundles:The Impact of the Unbundling of Music in Digital Channels
Anita Elberse

SA07 – R01220

Social Influence: Internet I

Chair: Hiroshi Onishi

Firm-sponsored Social Communities: An Empirical Analysis Grant Packard
Adithya Pattabhiramaiah, Puneet Manchanda

Modeling the Development of Online Communities
Yuanping Ying, Dongling Huang

The Death of a Relationship
Asim Ansari, Oded Koenigsberg, Florian Stahl

Co-Evolution of Social Network Growth and Group Formation
Hiroshi Onishi, Puneet Manchanda

SA08 – R1230

Dynamic Models I

Chair: Andrew Ching

Exploring Revenue Concentration within the Firm Using an Agent Based Simulation
Keith Hermiz

Understanding The Value of Investments in Exploitation And Exploration Capabilities: Balance Versus Focus? A Dynamic Perspective
Matthew Sarkees, John Hulland

A Practitioner's Guide to Bayesian Estimation of Discrete Choice Dynamic Programming Models
Andrew Ching, Susumu Imai, Neelam Jain, Masakazu Ishihara

2009 INFORMS Marketing Science Conference

Saturday, June 6th, 2009 8.30-10.00 (SA)

SA09 – R1240

Theory Based Empirical Models I

Chair: Brett Gordon, Wesley *Hartmann, Gunter Hitsch*

Estimating Factors of Store Choice
Raphael Thomadsen, Jean-Pierre Dube, Tim Conley

When Demand Projections Are Too Optimistic: A Structural Model Of Product Line And Pricing Decisions
Andres Musalem, Woochoel Shin

Using Tracking Data in Estimating the Effect of Advertising on Sales
Michaela Draganska, Daniel Klapper

A Structural Model of Political Advertising
Brett Gordon, Wesley Hartmann

SA10 – Blau Auditorium

SA11 – R2210

Choice Models: Multiple Categories

Chair: Rex Du

Retail Chain Management and Frequency Reward Programs
Qiang Lu, Junji Xiao, Ji Tao

A Cross-country Analysis of Umbrella Branding for National and Store Brands
Sue Ryung Chang, Tulin Erdem, Ying Zhao

Developing a Media Basket: Using Simultaneous Two-way Clustering of Multiple Correspondence Analysis
Jonathan Lee, Heungsun Hwang, Pamela Miles Homer

Determining Shopper Innovativeness and Forecasting Trial Sales Using Frequent-Shopper Card Data
Rex Du, Piyush Kumar

SA12 – R2220

High-Tech Marketing

Chair: Hyun Shin

Does Online Buzz Impact Retail Prices?
Hyun Shin, Bharath Gajula, Dominique M. Hanssens

Survival in Markets with Network Effects: Product Compatibility and Order-of-Entry Effects
Qi Wang, Yubo Chen, Jinhong Xie

The Effect of Consumer Social Interaction: Designing and Marketing Techno-fashion Products
Jiong Sun, Jinhong Xie, Tao Chen

Leveraging Consumers in Concept Generation and Screening of Technology Products
Lan Luo, Olivier Toubia

SA13 – R2230

Brands and Branding: Brand Management

Chair: Vijay Ganesh Hariharan

Determinants of Brand Loyalty in Inflationary Times
Subir Bandyopadhyay, Orose Leelakulthanit

The Effects of Long-term Product Unavailability
Li Wang

The Interplay Between Private Label Quality, Store Image and Store Patronage
Salome Nies

Dynamic Effects of the Introduction of Cobranded Ingredient Extensions on Consumer Choice
Vijay Ganesh Hariharan, Ram Bezawada, Debabrata Talukdar

SA14 – R2240

Services

Chair: Fumiyo Kondo

The Impact of Team Interdependence on Service Performance: A Cross Level Approach
Yu-Li Lin, Hsiu-Wen Liu

Conceptualising the Customer-Perceived Value Model
Connie Chang, Sally Dibb

Counting (on) Recommendations: Explaining Top-performance in Customer Referral Programs
Kay Peters, Sebastian Feld, Manfred Krafft, Daniel Asselmann

Actual Use Behavior, Satisfaction and Continuous Use Intention
Fumiyo Kondo, Jiro Hirata

SA15 – R2320

Marketing of Life Sciences

Chair: Stefan Stremersch

Identifying Peer-to-Peer Networks Using Behavioral Data
Tulikaa Bhatia, Lei K. Wang

Global Market Segmentation: A Cross-national Empirical Analysis
Venkatesh Shankar

Where Do Patients Get What They Want? Heterogeneity in Prescription Response to Patient Requests
Stefan Stremersch, Vardit Landsman, Sriram Venkataraman

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SB01 – R0210

New Products: Development and Design

Chair: Bo Huang

How Serial Innovators Understand Customer Needs
Abbie Griffin, Bruce Vojak, Raymond Price

The Success of New Product Development: A Perspective of Social Networks
Jurui Zhang, Yong Liu, Yubo Chen

Does it Pay to Spend More Effort in New Product Development Projects? An Efficiency Perspective
M. Billur Akdeniz, Anthony Ross, Roger Calantone

Does Brand Value Affect New Product Positioning in Quality? Evidence From the Mobile Phone Industry
Bo Huang

SB02 – R0220

Channels: Relationship Management

Chair: Matilda Dorotic

Channel Coordination in Heterogeneous Markets
Salma Karray

Channel Coordination Under Financial Constraints
Yi Liao, Shan Feng

Understanding Dispute Initiation and Resolution in Franchise Relationships
Xu Zheng, Kersi Antia

SB03 – R0230

Advertising: Competition

Chair: Dan Horsky

Managing Advertising and Word of Mouth in a Competitive Setting
Jiwoong Shin, Dina Mayzlin

Persuasive Advertising with Asymmetric Firms
Mariana Roesner, Tobias Kretschmer

Assessment of the Optimal Decision on Advertising Format
Patrali Chakrabarty, Bibek Banerjee

Periodic Advertising Pulsing by Competitive Firms
Dan Horsky, Marshall Freimer

SB04 – R0240

Aggregate and Multi-Product Pricing

Chair: Kesha Coker

The Influence of Mood on Willingness-to-pay at the Point of Purchase
Robert Wilken, Helmut Schneider

Estimating and Explaining Immediate, Dynamic, and Long-run Cross-price Effects
Dennis Fok, Csilla Horvath

The Effects of Consumer Overestimation and Underestimation Biases on Pricing Plans
Sreya Kolay, Rajeev Tyagi

Analysis of US Automobile Market: Insights from Hedonic Regressions
Kesha Coker, Siva Balasubramanian

SB05 – R0320

Auctions: Bidding Behavior

Chair: Mayukh Dass

Drivers of Bidding Behavior In Electronic Reverse Auctions
Sengun Yeniyurt, Cynthia Stevens, Stevie Watson, Craig Carter

The Impact of Online Auction Duration
Ernan Haruvy, Peter Popkowski Leszczyc

The Democratization of Personal Consumer Loans: Evidence from Online Peer-to-peer Lending
Rick Andrews, Michal Herzenstein, Utpal Dholakia, Evgeny Lyandres

Loserís Curse? Effects of Losing an Auction on Bidding Behavior in Subsequent Auctions
Mayukh Dass, Srinivas K. Reddy

SB06 – R1210

Interactive Marketing: Network Structure/Process

Chair: Michael Trusov

Identifying Network Properties From Aggregate Data
Michael Trusov

Searching for "Something": The Role of Product Networks and Social Networks in Ill-defined Search in Online Environment
Shachar Reichman, Gal Oestreicher-Singer, Jacob Goldenberg

Not Invisible: Uncovering the Face of the Network
Yaniv Dover, Jacob Goldenberg, Danny Shapira

An Empirical Comparison of Drivers of Network Evolution in a Social Commerce Community
Don Lehmann, Olivier Toubia, Andrew Stephen

SB07 – R01220

Social Influence: Internet II

Chair: Monic Sun

Spreading the Oprah Effect: The Diffusion of Demand Shocks in a Recommendation Network
Eyal Carmi, Arun Sundararajan, Gal Oestreicher-Singer

How Does Variance of Product Ratings Matter?
Monic Sun

Consumer-driven Promotions Through Social Networks
Vineet Kumar, Baohong Sun, Ramayya Krishnan

SB08 – R1230

Dynamic Models II

Chair: Shuba Srinivasan

Dynamic Learning in Behavioral Games: A Hidden Markov Model Approach
Ricardo Montoya, Oded Netzer, Asim Ansari

Understanding Consumer Preference Evolution for Newer Attributes
Karthik Sridhar, Ram Bezawada, Minakshi Trivedi

Spatio-temporal Allocation of Advertising Budgets
Ashwin Aravindakshan, Kay Peters, Prasad Naik

Consumer Attitude Dynamics and Marketing Spending Rules
Shuba Srinivasan, Dominique M. Hanssens, Koen Pauwels, Marc Vanhuele

2009 INFORMS Marketing Science Conference

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SB09 – R1240

Theory Based Empirical Models II

Co-Chairs: Wesley Hartmann, Brett Gordon, Guenter Hitsch

Exploring Life-time Persistence in Brand Preferences
Bart Bronnenberg, Matthew Gentzko, Jean-Pierre Dube

Identifying Preferences From Almost Continuous Choice Sets
Sanjog Misra

An Empirical Analysis of Individual-Level Casino Gambling Behavior
Sridhar Narayanan, Puneet Manchanda

Non-parametric Estimation of Marketing Mix Effects Using a Regression Discontinuity Design
Harikesh Nair, Wesley Hartmann, Sridhar Narayanan

SB10 – Blau Auditorium

SB11 – R2210

Choice Models: Multiattribute Models

Chair: John Roberts

Design and Analysis of a Lexicographic Choice Model for Brand Tracking Research
Keith Chrzan

Preference Evolution Under Changing Choice-Set Composition: A Behavioral Perspective
Berk Ataman, Robert Rooderkerk

The Role of Reference-quality in a High-tech Driven Market
Wonjoon Kim, Jeong-Dong Lee, Subrata Sen, K. Sudhir

A Parsimonious Model for Testing Taste Formation Phenomena
John Roberts, Bruce Hardie, Mathew Chylinski

SB12 – R2220

B2B: Relationship Management

Chair: Sheila Sasser

On the Association Among Relationship Learning, Relationship Performance and Relationship Tensions
Chueh-An Hsieh, Yi-Chun Hsieh

Are Industrial Buyers Attached by Brands? Exploring the Influence of Attitude and Behavioral Control
Dorith Mayer, Ralf Reichwald

Mad Men Taking a Creative Risk
Sheila Sasser, Scott Koslow

SB13 – R2230

Reviving Brands

Chair: Catherine Tucker

Why Are Bad Products So Hard to Kill?
Juanjuan Zhang, Duncan Simester

Would You Consider a Buick Even if It Were #1 in JD Power?
Erin MacDonald, Glen Urban, John Hauser

Adaptive Profile Evaluation to Identify Heuristic Decision Rules in 'Large' Experimental Designs
Daria Silinskaia, Glen Urban, John Hauser

Continuous-time Markov-process with Misclassification: Modeling and Application to Auto Marketing
Glen Urban, Gui Lieberali, John Hauser

SB14 – R2240

Services: Strategy

Chair: Tolga Akcura

How are Determinants and Outcomes of B2B Service Innovations Different From Those of B2C?
Thomas Dotzel, Leonard L. Berry, Venkatesh Shankar

The Antecedent, Mediating and Moderating Factors of Service Brand Love GA Cross-Level Research
Hsiu-Wen Liu, Yu-Li Lin

Rethinking Revenue Generation: Cross-selling in Customer Service
Nita Umashankar, Raji Srinivasan

Strategic Adoption of Internet Agents
Tolga Akcura, Zafer Ozdemir, Mohammad Rahman

SB15 – R2320

Health Marketing

Chair: Wenbin Sun

The Effects of Information About Health Hazards in Food on Consumers' Choice Process
Amir Heiman

The Effect of Message Content on Sales Call Effectiveness in Pharmaceutical Markets
Eelco Kappe, Stefan Stremersch

Information about Health Hazards and Fast Food Selection
Oded Lowengart, Amir Heiman

Geographic Differences in the Consumption of Hedonic Products: What the Weather Tells the Marketer!
Wenbin Sun, Rahul Govind, Nitika Garg

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SC01 – R0210

New Products: Strategy

Chair: Jesheng Huang

The Marketing of Green Products: An Empirical Study of Consumer Preferences for Hybrid Cars
R. Venkatesh, Didem Kurt

Consequences of New Product Failure
Ronald Larson, Michael McCardle

The Role of Product Aesthetic Attributes in Consumer Purchase Decision: Buyer-choice Simulators
Jesheng Huang

SC02 – R0220

Retailing: Category Management

Chair: Upender Subramanian

Spatial Externalities in Item Arrangements on Shop-shelves - An Empirical Investigation
Sudhir Voleti

Explaining the Frequency of Out-of-stock Events Through Store Scanner Data
Gilles Laurent, Sandrine Mace

Measuring Retailersí Stockout Costs From Scanner Panel Data
Arne Schroder, Daniel Klapper, *Christine Ebling*

The Competitive Consequences of Category Captainship
Upender Subramanian

SC03 – R0230

Advertising: Models

Chair: Meltem Kiygi Calli

Advertising Allocation and Its Impact on Multi-product Sales
Moon Young Kang, David Schweidel, Neeraj Arora

Retail Proliferation and Cannibalization
Joseph Pancras, Sriram Srinvasaraghavan, V Kumar

A Group Decision Making Approach to Model TV Channel Choice
Lei Su, Kinnam Lau

Advertising Effectiveness under Time Aggregation
Meltem Kiygi Calli, Marcel Weverbergh, Philip Hans Franses

SC04 – R0240

Pricing Effects

Chair: Seungwon Jeon

Exploring Price Competition in Online Markets: Empirical Test of an Aggregate Level Model
Hasan Tolga Bilgicer, Amiya Basu, S. P. Raj

A Structural Model of Multiproduct Pricing, Advertising, and Capacity on the High Seas
Dinesh Gauri, Mingyu Joo, Ken Wilbur

What Matters for Price Negotiations: Evidence From the US Auto Retailing Industry
Jorge Silva-Risso, Florian Zettelmeyer, Fiona Scott Morton

Estimating Market Potential in Logit Models of Demand Using Aggregate Data
Dongling Huang, Christian Rojas

SC05 – R0320

Recent Progress on Best-Worst Scaling

Chair: Jordan Louviere

Recent Developments in BWS Case 1
Jordan Louviere, Tony Marley

Recent Developments in BWS Case 2
Terry Flynn, Jordan Louviere

Recent Developments in BWS Case 3
Tony Marley, David Pihlens

Less (or More) than Meets the Eye: A Comparison of Ways to Handle Error Variability Differences in Best-Worst Choices
Towhid Islam, Jordan Louviere, Siggi Gudergan, Kyuseop Kwak, Paul Wang

SC06 – R1210

Interactive Marketing: Interactivity and Consumer Behavior

Chair: Martin Spann

Consumer Responses to a Legal Alternative to File Sharing
Arvind Rangaswamy, Michel Clement, Srikant Vadali

Demystifying YouTube: An Analysis of the Drivers of User-Generated Online Video Consumption
Caroline Wiertz, Thorsten Hennig-Thurau, Bjoern Bohnenkamp, Michael Paul

Drivers of Viral Marketing Success
Gerrit Van Bruggen, Ralf van der Lans

The Validity of Decision Making in Virtual Worlds: An Experimental Test of Altruism, Fairness, and Presence
Martin Spann, Bernd Skiera, Oliver Hinz Il-Horn Hann

SC07 – R01220

Social Influence: Internet III

Chair: Laura Kornish

Incentivizing the Creation of Word-of-Mouth
Ying Xie, Chunhua Wu

The Role of Social Networks in the Diffusion of User-Generated Content
Mark Elsner, Oliver Heil, Atanu R. Sinha

Competitive Responses of Advertising and Promotion to Consumer Reviews
Bao-Jun Jiang, Kannan Srinivasan

Do Metareviews on User Review Sites Improve the Crowd's Wisdom?
Laura Kornish

SC08 – R1230

Marketing Metrics

Chair: Bruce Clark

Use of Non-parametric Methods to Improve Efficiency of a Marketing Mix Model in a Commercial Setting
Ingo Bentrott, Kyuseop Kwak, Inna Kolyshkina

Organizational Learning and CRM Success: A Model for Linking Organizational Practices, Data Quality, and Performance
Debra Zahay, James Peltier, Don Lehmann

Measurement Systems and the Market Research Function as Enablers of NPD Activities
Bruce Clark, Andrew Abela, Tim Ambler

2009 INFORMS Marketing Science Conference

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SC09 – R1240

Theory Based Empirical Models III

Co-Chairs: Guenter Hitsch, Wesley Hartmann, Brett Gordon

A Hybrid Discrete Choice Model of Differentiated Product Demand with An Application to PC
Minjae Song

Estimating a Dynamic Oligopolistic Game with Serially Correlated Unobserved Production Costs
Ahmed Khwaja, Han Hong, A. Ronald Gallant

Estimation of Dynamic Discrete Choice Models in Continuous Time
Paul Ellickson, Peter Arcidiacono, Patrick Bayer, Jason R. Blevins

Estimating Durable Goods Demand From Survey Data
Guenter Hitsch, Jean-Pierre Dube, Pranav Jindal

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SC10 – Blau Auditorium

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SC11 – R2210

Choice Models

Chair: Anocha Aribarg

A Bayesian Structural Model of Retailer Behavior Based on Spatial Correlation in Consumer Choice
Ohjin Kwon, Jorge Silva-Risso

A Probabilistic Lexicographic Model
Rajeev Kohli, Kamel Jedidi, Ricardo Montoya

Evolution of Consumer Brand Preference and Periodic Consumer Learning
Hai Che, Tulin Erdem, Sabri Oncu

Measuring Impact of Market Environment Change on Preference Using Conjoint
Anocha Aribarg

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SC12 – R2220

B2B: Relationship Management and Trust

Chair: Clara Agustin

Trust Building Process in Asymmetrical Buyer-Seller Relationships: An Experimental Study
Qiong Wang, Min Ding, Songting Dong, Chenting Su

Ensuring Trusting Supplier Working Relations
R. Mohan Pisharodi, John Henke, Ravi Parameswaran

Trustworthy Mechanisms and the Trust-control Dilemma
Clara Agustin, Maria Velez, Jose Manuel Sanchez

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SC13 – R2230

Brands and Branding: Metrics

Chair: Marta Olivia Rovedder de Oliveira

What Makes a Superstar? Investigating the Evolution of Athlete Brands
Yupin Yang, Avi Goldfarb, Mengze Shi

Brand Health Diagnostics: Comparison of Brand-usage Versus Brand Image Measures
Mukesh Bhargava, Kim Serota

Cognitive Knowledge Measurement toward ROI in Brand Management
Akihiro Inoue, Akihiro Nishimoto

Brand Value and Shareholder Value in the Brazilian Stock Exchange
Marta Olivia Rovedder de Oliveira Fernando Luce

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SC14 – R2240

Services: Customer Relationships

Chair: Regina McNally

Customer Relationship Management and Inventory Shortages
Xiaoqing Jing, Michael Lewis

Investigating Customer Churn with Bayesian Survival Analysis: A Study of Automotive Care Services
Lijun Zhang, Meng Su

Customers' Affective Experience: Evoked Emotions, Mood or Temperament?
Adam Finn

Mandatory Adoption of Customer Relationship Management Software: Impact in Attitude-Intention Models
Regina McNally, Abbie Griffin

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SC15 – R2320

Pharmaceutical Marketing I

Chair: Jens Keller

Managing Across Substitute Categories
Jens Keller, Koen Pauwels

Maybe Physicians are Getting it Right
Doug Walker

The Unique Role of Satisfaction, Recommendation, and Retention on the Pharmacy Market
Jaap E. Wieringa, Sara T.M. Kremer, Peter S.H. Leeflang

Product Line Extension in the Pharmaceutical Industry
Jun Yang, Charles Ingene, Yi Yang

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2009 INFORMS Marketing Science Conference

Saturday, June 6th, 2009 3.30-5.00 (SD)

SD01 – R0210

Product Policy

Chair: Ngan Chau

Minimizing Measurement Cost in Concept Tests With a Desirable Generalizability: A Trade Off Model
Xiaoning Guo, Xi Zhang, Ling Peng Chunyu Li

An Analysis of Short- and Long-term Effects of Marketing Signals in Surmounting Product Recalls
M. Berk Talay, M. Billur Akdeniz

Product Development and Introduction Strategies of Durable Goods Manufacturers
Ngan Chau, Ramarao Desiraju

SD02 – R0220

Retailing

Chair: Xiaoling Zhang

Picking Out the Buyers from the Browsers
Xiaoling Zhang, Shibo Li, Alex Leykin, Raymond Burke

The Moment of Truth: Understanding Consumers' Conduct at the PoS to Gain a Competitive Advantage
Shyda Valizade-Funder, Oliver Heil

'Clock Blocks' or 'Jugglers'? A Macro Study of UK Retail Shoppers Spatio-Temporal Orientations
Vishal Talwar, Syagnik Banerjee, Kadir Geyik, Kalyan Raman

Deviations from the Power Law for Market Shares
Younghan Bae

SD03 – R0230

Advertising: Metrics

Chair: Russ A Merz

Does Beauty Pay Off? On the Commercial Success of Award Winning Advertising
Werner Reinartz, Peter Saffert

Visual Self-representation in Avatar-Mediated Environments
Paul Messinger

Asymmetric Advertising Responses
Julien Schmitt, Ganaȋl Bascoul

Modeling a CCI Co-creation Index
Russ A Merz, Sheila Sasser

SD04 – R0240

Pricing: Consumer Response

Chair: Mike von Massow

A Multiple-Discrete Model of Retail Price Promotions
Miguel Gomez, Timothy Richards, Geoffrey Pofahl

Pricing Packs for Uncertain Consumption: Are Quantity Surcharges Possible in Consumer Non-durables?
Krishanu Rakshit, Srinivas Prakhya, Arnab Mukherji

Analyzing Pricing Strategy with Reference Price Models Including Thresholds
Mike von Massow, Elkafi Hassini

SD05 – R0320

Consumer Behavior: Methodology

Chair: Kyuseop Kwak

Evaluating the Suitability of Econometric Demand Models in Product Design for Market Systems
Katie Whitefoot, Bart Frischknecht, Panos Papalambros

More Valid and More Reliable: Tree Models for the Analysis of Self-Reports
Ulf Bockenholt

How to Identify Potential Attribute by Covariate Interactions in Discrete Choice Models?
Kyuseop Kwak, Paul Wang, Ingo Bentrott, Jordan Louviere, Siggi Gudergan

SD06 – R1210

Interactive Marketing: Network Influence

Chair: Raghuram Iyengar

The Weakness of Strong Ties: Homophily, Heterophily, and the Valence of Buzz
Debanjan Mitra, Peter Golder, Jinhong Xie

Censoring, Interdependence and Scalability with Social Networking Data
Michael Braun, Andre Bonfrer

Network versus Geography in Social Contagion
Raghuram Iyengar, Christophe Van Den Bulte, Jeonghye Choi

SD07 – R01220

Social Influence: Social Media

Chair: Prabirendra Chatterjee

P-to-P in B-to-B: The Role of Peer-to-Peer Social Networking in Need Recognition and Focused Search
Purushottam Papatla, Steven Smith

Peer-to-peer Advertising Through Social Networks – A Model of Stability and Efficiency Analysis
Prabirendra Chatterjee, Sumant Kumar Rai

Diffusion of an Innovation: Understanding Bloggers' Values Through a Marketing Lens
David McArthur, Ramendra Thakur

SD08 – R1230

2009 INFORMS Marketing Science Conference

Saturday, June 6th, 2009 3.30-5.00 (SD)

SD09 – R1240 **Marketing Impacts of Counterfeits** **Chair:** Yi Qian Impacts and Remedies of Counterfeiting *Yi Qian* Bayesian Model of Heterogeneous Effects of Counterfeiting *Hui Xie, Yi Qian* Advertising and Spillover Effects of a Low-quality Entrant *Eric Anderson, Yi Qian, Duncan Simester* Brand Enforcement and Quality Decisions *Qiang Gong, Yi Qian* Income Inequality and Counterfeiting *Derek Rucker, Yi Qian*	**SD10 – Blau Auditorium**	**SD11 – R2210** **Choice Models: Design, Pricing, and Retailing** **Chair:** Ashish Kumar Details and Full Pictures: Consumer use of Actual Prices and Price Images When Choosing a Store *Carlos Lourenao, Els Gijsbrechts* An Empirical Investigation of Consumer Purchases and Intertemporal Pricing of Retailers' *Extended Service Contracts* *Tao Chen, Baohong Sun* A Study of Differential Response Behavior across Store Formats *Ashish Kumar, Karthik Sridhar, Minakshi Trivedi*	**SD12 – R2220** **B2B** **Chair:** Xing Zhang Success Factors in Business Process Outsourcing *Sharmila Chatterjee, Gayathri Sundar, Paul Fouts* The Pricing Process as a Capability: Conceptualization, Measurement, and Impact on Performance *Sebastian Bonnemeier, Christoph Ihl, Ralf Reichwald* Modeling Inter-purchase Time when Customers Split Store Patronage *Amiya Basu* Analyzing Price Variation in B-to-B Market *Xing Zhang, Ying Xie, Tat Chan*
SD13 – R2230 **Brands and Branding** **Chair:** Margot Loewenberg Product Coolness: Dimensions, Antecedents and Strategic Implications *Gerard Tellis, Eden Yin* Rapid and Objective Brand Awareness Mapping *T. Bettina Cornwell, Emerald Quinn, Michael S. Humphreys, Andrew E. Smith* Does Endorsing Product Brands Through a Standardized Corporate Brand Pay Off? A Cross National Study *Markus Meierer, Bernhard Swoboda, Margot Loewenberg* Internal Corporate Brand Management - Analyzing Moderating Effects Across 30 Countries *Margot Loewenberg, Bernhard Swoboda, Markus Meierer*	**SD14 – R2240** **Political Marketing** **Chair:** Mitch Lovett When Kerry Met Sally: Political Segmentation of Demand for Movies *Jason Roos, Ron Shachar* When Do Own Views Bias Our Inferences About Other Voters? *Yesim Orhun, Oleg Urminsky* Integrated Marketing Communications in Political Marketing: An Empirical Study *Mitch Lovett, Ron Shachar*	**SD15 – R2320** **Pharmaceutical Marketing II** **Chair:** Ka Lok Lee To Listen or Not to Listen: Response to Unexpected Negative Information Release *Wei Zhang, Shibo Li, Ajay Kalra* Measuring the Informative and Persuasive Roles of Detailing on Prescribing Decisions *Masakazu Ishihara, Andrew Ching* Modeling Prescription Refill Behavior at Retail Pharmacies *Ka Lok Lee*	

How to Navigate the Technical Sessions

There are three primary resources to help you understand and navigate the Technical Sessions:

- This Technical Session listing, which provides the most detailed information. The listing is presented chronologically by day/time, showing each session and the papers/abstracts/authors within each session.
- The Session Chair, Author, and Session indices provide cross-reference assistance (pages 96-103).
- The Master Track Schedule is on the back cover. This is an overview of the tracks (general topic areas) and when/where they are scheduled.

Quickest Way to Find Your Own Session

Use the Author Index (pages 97-101) — the session code for your presentation(s) will be shown along with the track number. You can also refer to the full session listing for the room location of your session(s).

The Session Codes

SB01

Track number. Coordinates with the room locations shown in the Master Track Schedule. Room locations are also indicated in the listing for each session.

Time Block. Matches the time blocks shown in the Master Track Schedule.

The day of the week

Time Blocks

Thursday

A - 8:30am - 10:00am
B - 10:30am - 12:00pm
C - 1:30pm - 3:00pm
D - 3:30pm - 5:00pm

Friday

A - 8:30am - 10:00am
B - 10:30am - 12:00pm
C - 1:30pm - 3:00pm

Saturday

A - 8:30am - 10:00am
B - 10:30am - 12:00pm
C - 1:30pm - 3:00pm
D - 3:30pm - 5:00pm

Room Locations/Tracks

All session rooms are located at the Stephen M. Ross School of Business on the University of Michigan campus.

Thursday, 8:30am - 10:00am

■ TA01

Lower Level - Room 0210

Technological Evolution and New Product Design

Cluster: Innovation
Invited Session

Chair: Ashish Sood, Assistant Professor of Marketing, Emory University, 1300 Clifton Rd NE, Atlanta, GA, 30322, United States of America, ashish.sood@emory.edu

Co-Chair: Gerard Tellis, Marshall School of Business, University of Southern California, Los Angeles, CA, 90089, United States of America, tellis@marshall.usc.edu

1 - The Step and Wait Model for Predicting Technological Evolution

Ashish Sood, Assistant Professor of Marketing, Emory University, 1300 Clifton Rd NE, Atlanta, GA, 30322, United States of America, ashish.sood@emory.edu, Gareth James, Ji Zhu, Gerard Tellis

Recent research indicates that technological evolution follows a step function rather than a smooth curve (e.g. S-curve). Existing models of prediction do not perform well in predicting technological evolution in this scenario. The authors propose a new model which directly captures the step function of the technology evolution. We call our model Step and Wait (SAW). This paper compares the performance of SAW against six of the most commonly used technology prediction procedures, (S-Curves, Moore's Law, Kryder's Law, Gompertz' Law, Bass and Tobit II) on 23 platform innovations across six markets. The test provides four important results. First, SAW can easily incorporate time varying covariates for each technology for better prediction and managerial control. Second, SAW builds strength by combining information from multiple technologies. Third, in out of sample tests, SAW shows significantly superior future predictive accuracy to all six models. Fourth, SAW can easily make predictions for a brand new technology for which no current data is available.

2 - Is Good Design Good Business? Rewards to Product Design Award Winners

Raji Srinivasan, Associate Professor, University of Texas at Austin, 1 University Station, B6700, Austin, TX, 78712-0211, United States of America, raji.srinivasan@mail.utexas.edu, Gary Lilien, Arvind Rangaswamy

Superior product design is touted as a source of competitive advantage and rents. Yet, there are few insights on the nature and magnitude of performance rewards to superior product designs. We address the following questions: Are there rewards to superior design effort in products? Do these rewards vary by the characteristics of the product designs? We examine the product-level and firm-level rewards to superior product design efforts by studying the winners of the annual Business Week and Industrial Design Society of America's product design awards. Extending recent developments in the product design literature that a product's design consists of three design elementsófunctionality, aesthetics, and meaningówe develop hypotheses of the differential effects of the three design elements of the product design award winners on product-level survival and firm-level stock returns. At the product-level, we examine the duration of the product design award winners' survival in the market place. At the firm-level, we examine the short-term (immediate) and long-term shareholder value (one year following the design award) generated by these product design award winners.

3 - Explaining Patterns in Foreign Market Launch

Corine Noordhoff, Vrije Universiteit Amsterdam, De Boelelaan 1105, 1081 HV Amsterdam, Netherlands, cnoordhoff@feweb.vu.nl, Om Narasimhan, Paola Cillo, Jaideep Prabhu, Rajesh Chandy

Of all the decisions firms make, the choice of which market to serve is one of the most fundamental. This choice sets the direction for many subsequent marketing strategy decisions. Moreover, failure of the first launch of a product has important consequences for the ensuing longevity and performance of the product in question and the firm overall. But why is there so much variation in market launch choices across firms? Why do firms, when introducing new products, choose to launch their products in some geographic markets and not others? And why do different firms enter different markets even if they have similar resources? This research addresses these questions by focusing on the role of the managers leading the firm. We argue that top managers' work and educational experiences in foreign markets have a crucial impact on the product launch choices of the firms they lead. As such, we propose that even if firms have similar resources otherwise, they will not necessarily enter similar markets. The empirical analysis covers data from the pharmaceutical industry for the years 1990 - 2005 and includes country, firm, drug, and management level variables. The dataset integrates a wide array of databases, across a number of national contexts, to empirically examine entry across international markets. The research 1) suggests that there exist systematic patterns across firms in the choices of markets they enter, and 2) introduces a framework to examine the role of top managers in driving foreign launch decisions.

■ TA03

Lower Level - Room 0230

Sales Force Compensation and Management Modeling

Cluster: Sales Force

Invited Session

Chair: Anne Coughlan, Professor, Kellogg School of Management, Northwestern University, 2001 Sheridan Road, Evanston, IL, 60208, United States of America, a-coughlan@kellogg.northwestern.edu

1 - Design of Sales Hierarchies: The Role and Value of Sales Managers

Anne Coughlan, Professor, Kellogg School of Management, Northwestern University, 2001 Sheridan Road, Evanston, IL, 60208, United States of America, a-coughlan@kellogg.northwestern.edu, Kissan Joseph

In today's consultative selling environment, the sales function is likely to consist of multiple tasks (e.g., client selection and persuasive communication). In such contexts, it is important to ask what type of hierarchy most efficiently conducts these tasks. We consider two distinct hierarchies. In the first hierarchy (flat), all tasks are allocated to the salesperson. In the second hierarchy (vertical), we introduce another agent (i.e. a sales manager) who supervises the salesperson and is essentially responsible for the client selection task, leaving persuasive communication to the salesperson. In this setting, we find that a flat hierarchy limits the firm's ability to induce the "right" level of effort in the two activities. While the vertical hierarchy is an improvement on this dimension, it creates more agency costs due to the introduction of a sales manager. We show how these forces play out as a function of key model parameters in determining the optimal structure of sales hierarchies.

2 - Sales Force Incentive Compensation: A Framework for Researchers and Practitioners

Andris A. Zoltners, Northwestern University, 2001 Sheridan Road, Marketing Dept-Leverone Hall-4th Floor, Evanston, IL, United States of America, Andy.zoltners@zsassociates.com, Prabhakant Sinha, Sally E Lorimer, Chad Albrecht, Stephen Redden

Incentive compensation is a major expense for most sales organizations, costing companies more than $200 billion a year in the U.S. alone. Since incentive programs are highly visible and can have considerable short-term impact on sales, they are often one of the first levers that sales leaders turn to for enhancing sales force effectiveness. Significant opportunities exist for academic researchers to help practitioners who struggle to address the difficult challenge of designing and managing incentive plans. This paper presents a Sales Force Incentive Compensation Framework that organizes the many complexities of using incentives in sales forces and provides a holistic approach for understanding how incentives affect sales force effectiveness. Sales practitioners can use the framework to assess the quality of their current incentive compensation plans and to design new plans. Sales researchers can use the framework to discover ways to expand their research focus to benefit practitioners. The framework is supported with insights derived from designing incentive plans for over one hundred sales forces.

3 - Sales Force Compensation with State Variables: The Case of Product-Information Detailing

Fabio Caldieraro, Assistant Professor of Marketing, Foster School of Business, University of Washington, Mackenzie Hall #339, P.O. Box 353200, Seattle, WA, 98195, United States of America, cfabio@u.washington.edu, Anne Coughlan

This research investigates the compensation and incentive strategies of firms that employ a salesperson that does not sell products directly to end-users, but instead, works to influence (detail) another agent, the ultimate sales-driving agent, with whom the firm cannot legally contract. We develop a hierarchical game-theoretic model in which sales effort over time influences the state of product knowledge of this ultimate independent downstream agent; this knowledge, which can appreciate or depreciate over time, in turn influences the likelihood that the ultimate agent will drive sales. The dynamic evolution of the state of the system (the ultimate agent's knowledge) thus changes the likelihood of sales, and consequently endogenously affects the salesperson's motivation to continue (or not to continue) aggressive selling effort. One example of such a channel is a pharmaceutical firm employing a sales representative to detail physicians, who are the ultimate recommenders of a drug therapy to patients. Another example is the case of a firm that sells through a channel partner such as a value-added reseller, that may not be able to market products without proper training. Our results show that the salesperson's compensation influences the adoption of different optimal patterns of detailing, that may comprise repetitive cycles of detailing, or an all-or-nothing decision, where it is optimal either to intensively and continuously detail the ultimate agent, or never to conduct intensive detailing.

4 - Marketing Resource Allocation Decisions with Time-Varying Effectiveness - A Salesforce Application

Kalyan Raman, Northwestern University, Sheridan Road, Evanston, IL, United States of America, k-raman@northwestern.edu, Yihui (Elina) Tang, Shrihari Sridhar, Murali K Mantrala

Previous research has shown that sales force effectiveness a) can be enhanced by other marketing instruments, e.g., advertising and b) changes over the lifecycle of a product or business. While the marketing literature contains guidance on the joint optimization of sales force/other marketing efforts in the presence of interaction effects (e.g. Gatignon and Hanssens 1987, Gopalakrishna and Chatterjee 1992, Naik and Raman 2003), there is little or no research examining the same issue when effectiveness of personal selling and advertising is varying over time due to, e.g., aging of products or economic downturns. The latter issue is today of particular concern to sales managers (Miller 2006). In this research, we derive and investigate policies for profit-maximizing sales force and advertising spending considering their interactions as well as different patterns of varying effectiveness over time. We use optimal control theory to obtain the profit-maximizing levels of marketing spending for a finite planning horizon. We subsequently derive insights into optimal marketing-mix spending under some special cases of time-varying effectiveness (e.g. linear decay, linear growth, state dependence of effectiveness). Further, we empirically test our model predictions in the case of a large pharmaceutical drug. Our research findings establish the importance of considering time-varying effectiveness in sales force budgeting resource allocation decisions, especially in fluctuating economic conditions.

■ TA05

Lower Level - Room 0320

Consumer Behavior: Perception

Cluster: Buyer Behavior

Invited Session

Chair: Simon Blanchard, Pennsylvania State University, 447B Business Building, University Park PA 16802, United States of America, sxb975@psu.edu

1 - Capturing Consumer Heterogeneity in the Unsupervized Categorization Process

Simon Blanchard, Pennsylvania State University, 447B Business Building, University Park, PA, 16802, United States of America, sxb975@psu.edu, A. Selin Atalay, Wayne S. DeSarbo, Nukhet Harmancioglu

The study of categorization is often concerned with how well consumers learn existing product categories and successfully (or not) categorize new products as members of the correct categories. This is important as consumers categorize products to simplify their decision process, and marketers need to consider those categories in their product positioning. In many situations, however, there is no single correct way to categorize brands/products, and there exists a large number of ways that consumers can divide a small set of objects. Simply put, when given little supervision on what categories to use, consumers spontaneously divide the stimuli in very different categories. Indeed, existing literature suggests that the categories that we naturally use are highly dependent on our individual goals and states, and on the context in which we make such categorizations judgments. It is thus no surprise that there is a large amount of heterogeneity in which categories are formed by consumers. Although there exist methodologies that describe the categories that samples of consumers naturally form at the market level, none explicitly deals with the heterogeneity between consumers in how they naturally divide objects. We thus propose a non-spatial methodology that identifies segments of individuals that spontaneously divide the stimuli (e.g. brands/objects) in similar categories. The proposed methodology identifies the latent categories common to segment members, the graded structure of the categories, and how those categories relate to existing features of the stimuli. To illustrate the procedure, we present results from a sorting task data collection in which participants were able to divide a set of objects in as many/few categories as they wanted.

2 - Influence of Contextual Components on Perceived Usability of Mobile Interactions: Theoretical Model

Margherita Pagani, Assistant Professor, Universite Bocconi, via Roentgen, 1, Milan, 20136, Italy, margherita.pagani@unibocconi.it

The rapid development of mobile devices has introduced a broad range of new use contexts, which were not faced in the stationary PC environment. Thus, extant usability models need to be modified in order to capture this change. Purpose of this study is to analyze the influence of contextual components on perceived usability of mobile human-computer interactions. We propose a conceptual usability model which explores the role of mobile device in determining the importance of the various determinants of usability. In this study: (1) the relevant literature is reviewed, (2) a theoretical framework is built and hypotheses formulated, (3) the results of a two step field-evaluation designed to test these hypotheses are presented and, (4) it concludes with a number of recommendations for usability evaluation of mobile devices and presents avenues for further research. We first conducted an exploratory survey on a sample of 200 people in order to identify the main constructs influencing perceived usability before the adoption of the mobile device. In the second phase the emerging research model was tested on a sample of 550 people. Results were compared using structural equation models. Findings show that two groups of contextual factors related to device limitations and time/pressure convenience influence overall belief about usability and attitude toward the mobile phone. These contextual factors can serve as the basis for a sophisticated understanding of mobile usability dimensions. Finally, this study aims to provide an important alternative perspective relative to the psychological models typically employed in Information System literature that explore the role of intrinsic motivation, integrating control and emotion in the technology acceptance process.

3 - How Consumers Manage Consumption Risks: The Impact of Type of Risks, Consumption Norms, and Purchase

Felix Tang, Postdoc Fellow, The Chinese University of Hong Kong, Rm413, KKL Building, CUHK, Shatin, N.T., Hong Kong, China, felixtang@cuhk.edu.hk, Vang Ing Tian, Judy Zaichkowsky

Extant literature on perception of risk has focused on explaining how a consumer's perceived risk may influence a purchase decision. Meanwhile, it is equally important to understand how different types of risk may influence consumer's consumption patterns and post-consumption behaviors after the purchase. This paper examines how different types of risk (i.e., functional risk, financial risk, and social risk) may have different influences on consumer's purchase decision and their subsequent consumption patterns and post-consumption behaviors in the context of counterfeit consumption. This paper encompasses Albers-Miller's (1999) discussion of risk associated with purchasing counterfeits and extends to risks associated with consuming counterfeits. The first study consists of focus groups examining consumer purchase behavior, consumption pattern and post-consumption behavior regarding counterfeits. The findings suggest that consumers are aware of the different types of risk associated with counterfeit consumption and they adjust their consumption patterns and post-consumption behaviors depending on the type of risks involved, the social norm, the purchase situation, and the consumption norm. The second study is an experiment examining how type of risks involved (i.e., functional risk, financial risk, and social risk) may interacts with the purchase situation (planned vs. unplanned) and/or the consumption norm (public vs. private) on influencing consumers' consumption patterns (e.g., speed of consumption) and post-consumption behaviors (e.g., word-of-mouth). An interaction of type of risks involved and the consumption norm was found. The findings provide meaningful managerial implications on combating counterfeit consumption.

■ TA06

1st Floor - Room 1210

Search

Cluster: Special Track: Interactive Maketing

Invited Session

Chair: Young-Hoon Park, Associate Professor, Cornell University, 330 Sage Hall, Johnson Graduate School of Management, Ithaca, NY, 14853, United States of America, yp34@cornell.edu

1 - Using Online Search Data to Forecast New Product Sales

Gauri Kulkarni, Assistant Professor, Loyola College, 4501 N Charles St, Baltimore, MD, 21210, United States of America, gmkulkarni@loyola.edu, Wendy Moe, P.K. Kannan

Internet use is at an all-time high in the United States, and according to the Pew Internet and American Life Project, 91 percent of Internet users use search engines to find information. Consumers' choices of search terms are not well understood. However, it is reasonable to assume that people focus their searches on terms that are of interest to them. As such, data on the search terms used can provide valuable measures and indicators of consumer interest in a market. This can be particularly valuable to managers in search of tools to gauge potential interest in a new product launch. In this paper, we develop a model of pre-launch search activity. We find search term usage to follow rather predictable patterns in the pre-launch and post-launch periods. As such, we extend our pre-launch search model to link pre-release search behavior to release week sales - providing a very valuable forecasting tool. We illustrate this approach in the context of motion pictures and find that online search terms offer significant explanatory power in forecasting motion picture revenues.

2 - Organic and Paid Search Advertising: Complements, Substitutes or Neither?

Anindya Ghose, Stern School, New York University, 40 West 4th Street, New York, NY, 10012, aghose@stern.nyu, Sha Yang

The phenomenon of sponsored search advertising has now become the most predominant form of online advertising in the marketing world. However, we have little understanding of how consumers respond to sponsored search advertising on the Internet in the presence of organic listings of the same firms, and the effect of organic listings on paid search performance. In this paper, we model and estimate the inter-relationship between organic search listings and sponsored search advertisements using a unique panel dataset collected from a major nationwide retailer store chain that advertises on Google. In particular, we focus on understanding whether the presence of organic listings on a search engine complement, cannibalize or have no effect on the click-through rates of sponsored search advertisements and vice-versa. We build an integrative model to estimate the relationship between different metrics such as search volume, click-through rates, conversion rates, cost-per-click and keyword ranks. A hierarchical modeling framework is used and the model is estimated using Markov Chain Monte Carlo (MCMC) methods. This model suggests that the presence of organic listings has a complementary effect on paid search click-through rates and vice-versa. In addition, we find that this effect is asymmetric such that the effect of organic click on paid click is significantly stronger than vice-versa. Using counterfactual experiments, we show that on an average this complementary effect leads to an increase in expected profits for the firm ranging from 4.3% to 6.5% when compared to profits in the absence of this interdependence. We also present a field experiment which shows that total click-through rates, conversions rates and revenues in the presence of both paid and organic search listings is significantly higher than those in the absence of paid search advertisements. Given the increased spending on search engine based advertising, our analysis provides critical insights to managers in both traditional and Internet firms.

3 - The Impact of Consumer Reviews on Consumer Search and Firm Profits

Dina Mayzlin, Associate Professor, Yale University, 135 Prospect Street, New Haven, CT, 06520, United States of America, dina.mayzlin@yale.edu, Wendy Moe

A number of studies have demonstrated that customer reviews affect product sales. In particular, both the valence and the quantity of reviews influence sales on a product level. What has not been shown, to our knowledge, is the overall effect of customer reviews on company profits and category-level performance. This is the focus of the current study. Consider a retailer with multiple products that implements a review tool that allows customers to post feedback on its site. The reviews can serve as a matching tool that reduces consumer uncertainty about the products. This could have two possible effects: 1) Re-allocate sales across products within a category which may result in higher utility for the consumer but not in higher profits for the retailer in the short run, and/or 2) Raise the firm's profits by increasing the probability that the consumer purchases within a category and increasing her willingness to pay for the product. Here we look at the effect of consumer reviews on category sales and traffic within a site. We find that reviews impact both search and sales. Our results suggest that the ratings tool increases consumer willingness to pay.

4 - Modeling Bids and Clicks in Sponsored Search Advertising

Young-Hoon Park, Associate Professor, Cornell University, 330 Sage Hall, Johnson Graduate School of Management, Ithaca, NY, 14853, United States of America, yp34@cornell.edu

Sponsored search advertising is now one of the largest and fastest growing sources of revenue for Web search engines. Advertisers bid to position their text ads in response to keyword search from individual browsers. Top positions at sponsored search advertising are usually sold at higher prices as they are perceived to be more desirable in attracting click-through. To understand the impact of ad placement on click-through and the nature of competition among advertisers, it is important to model both bidding behavior from advertisers and search behavior from individual browsers. We use the database with bids and clicks of sponsored search advertising provided by one of the largest portals in Korea for our research. To model consumer search process, we use the click data of individual browsers which may involve clicking into multiple websites for information. To model competition among advertisers, we use the data of bids where the exercise of buy-it-now option for various positioning is commonly observed. By estimating these two models simultaneously, we are able to identify across advertisers the heterogeneities of website attractiveness and profit margins, and across potential consumers the heterogeneity of search behavior. Empirical results allow us to discuss how in an industry with product differentiation advertisers may compete through search advertising for consumers who are seeking product information.

■ TA07

1st Floor - Room 1220

Internet: Consumer Behavior

Cluster: Internet Marketing
Invited Session

Chair: Polykarpos Pavlidis,PhD Candidate in Marketing, Simon Graduate School of Business, Carol Simon Hall, University of Rochester, Rochester, NY, 14627, United States of America, pavlidisp2@simon.rochester.edu

1 - When Electronic Recommendation Agents Backfire: Negative Effects on Choice Satisfaction

Joseph Lajos, PhD Candidate, INSEAD, INSEAD Europe Campus, Boulevard de Constance, Fontainebleau, F77305, France, joseph.lajos@insead.edu, Kishore Sengupta, Amitava Chattopadhyay

The increasing breadth and complexity of information about product features available in the marketplace, especially online, has increased the difficulty of many purchase decisions. In order to assist consumers with these decisions, many websites provide electronic recommendation agents that ask users questions about individual factors and their preferences for product attributes and then rate and rank order the available products on the basis of their responses. In an era in which consumers often feel overwhelmed by the complexity of choice, previous research has hailed electronic recommendation agents as coming to the rescue by offering a quick and efficient means for consumers to form their consideration sets. However, in this article we report the results of an experiment in which use of an electronic recommendation agent negatively impacted participants' choice satisfaction, attitudes, and purchase intentions over a period of between one and two weeks. The data support our hypothesis that use of an electronic recommendation agent leads consumers to overweight utilitarian product attributes and underweight peripheral and trivial hedonic attributes in choice.

2 - The Relative Importance of Sensory and Non-sensory Attributes in Physical and Online Stores: An Evaluability Perspective

Maneesh Thakkar, Assistant Professor, Radford University, 613 Downey Street, Radford, VA, 24142, United States of America, mthakkar@radford.edu, Stephen Gould

This research investigates the effects of consumers' shopping environments on their decisions. We draw on the Evaluability Hypothesis (Hsee 1996) to show that consumers' attribute based product evaluations and subsequent choices vary depending on the attribute type and the shopping medium i.e. internet or physical. The basic idea of this research flows like this: The internet facilitates judging of non-sensory attributes (e.g. price) of products and limits one's ability to judge the sensory attributes (e.g. material feel). So, when the consumers make their choices in online environments they will experience greater difficulty in evaluating the sensory attributes and hence those attributes will be discounted in the product evaluations and choices. A series of three experiments were conducted to test the hypotheses. The findings show that evaluations of sensory attributes in online stores were systematically lower than those in physical stores. However, such differences were not found for non-sensory attributes. The second experiment demonstrates that the likelihood of consumers choosing products superior on sensory attributes is higher in physical stores as compared to in internet stores. Finally, the results of the third experiment support the mediating role of attribute evaluability in explicating the main effects of shopping medium on choice. Moreover, the third experiment also rules out need for touch as an alternate explanation strengthening the support for evaluability explanation. Apart from extending the prior research on price sensitivity in online environments, this research indicates that consumers may not appreciate a product's superiority on sensory attributes while making the evaluations on internet rather than in the physical stores.

3 - Trusting or Not Online Sellers: Evidence From Neuromarketing

Angelika Dimoka, Assistant Professor, Temple University, Alter Hall A510, 1801 Liakouras Walk, Philadelphia, PA, 19122, United States of America, angelika@temple.edu

Determining whom to trust is an important decision in impersonal online marketplaces. Toward materializing the recently identified potential of cognitive neuroscience for marketing research, this study demonstrates how functional neuroimaging tools can enhance our understanding of trustworthy behavior. Specifically, this study employs functional Magnetic Resonance Imaging (fMRI) tools to complement psychometric measures of trust, aiming to uncover the neural mechanisms that underlie trust by identifying the brain areas activated when users interact with sellers in eBay's online auctions that differ on their level of trustworthiness. The neural correlates of trust are identified when subjects interact with four experimentally manipulated seller profiles online. Given the importance of studying trust, our goal is to shed light on the nature, dimensionality, distinction and relationship, and relative effects of trust on economic outcomes in the context of impersonal exchanges between buyers and sellers in an online environment. The paper concludes by discussing the study's implications for underscoring the potential of functional neuroimaging for marketing research and the trust literature.

4 - Managing the Diffusion of a Two-sided Online Service

Polykarpos Pavlidis, PhD Candidate in Marketing, Simon Graduate School of Business, Carol Simon Hall, University of Rochester, Rochester, NY, 14627, United States of America, pavlidisp2@simon.rochester.edu, Udi Chatow, Kay-Yut Chen, Zainab Jamal, Wei Koh, Paulo Albuquerque

The market operation of web-based multi-sided platforms is often characterized by network externalities. These externalities are important factors in the diffusion of new web services and allocation of their marketing dollars in promotional activities. Our research focuses on the diffusion of web services with user-generated content. We investigate the impact of content creation and purchase, as well as actions of referring sites and marketing activities of the firm on demand for content. Our model quantifies the interplay between the different types of users in this market and measures the importance of each market participant to the overall adoption of the service. We apply our model to Hewlett-Packard's magazine publishing site, MagCloud, using Google Analytics data and data from marketing activities. Our research problem is unique because it simultaneously (1) models multiple decisions by heterogeneous users, (2) deals with a two-sided market, (3) analyzes the diffusion process of an online service from introduction, and (4) offers directions on firm resource allocation across content creators, users, and referring sites. Consumers' decisions are defined as a function of marketing activities and users' past behavior, allowing for the possibility of network effects. Our results show a significant positive network effect from adoption of content creators on both demand behavior of content purchasers and future content creators in earlier stages of the online service diffusion. We also find that online word-of-mouth appearances at sites outside MagCloud increase both site traffic and content purchase significantly. Both findings lead to recommendations of strong allocation of marketing investment in the generation of content and referring activities.

■ TA08

1st Floor - Room 1230

Structural Econometric Models

Cluster: Econometric Models
Invited Session

Chair: James Hess, Professor, University of Houston, C.T. Bauer College of Business, Universi, Department of Marketing, Houston, TX, 77204, United States of America, jhess@uh.edu

1 - Counterfactual Prediction with Panel Data

Kanishka Misra, PhD Candidate, Northwestern University, 2001 Sheridan Road, Evanston, IL, 60208, United States of America, k-misra@kellogg.northwestern.edu, Benjamin Handel

Structural econometric estimation of consumer preferences is a crucial component of many empirical economic analyses. Such models combine information on the choices observed in a study population with assumptions on decision rules in order to make predictions in counterfactual choice scenarios (e.g., generating a demand curve). The strength of maintained assumptions and the credibility of the resulting predictions are inversely related; as assumptions become stronger the implied predictions become less credible. This paper introduces a panel data discrete choice framework with conservative assumptions about the consumers' underlying utility formulation relative to the literature. These weaker assumptions increase the credibility of our predictions at the cost of only partially or set identifying consumer preference parameters and the resulting counterfactual predictions. Our framework combines aspects of the classical nonparametric Samuelsonian choice setup with components of the attribute based preference representation advocated by McFadden. Relative to a cross-sectional framework, panel data provides more information about the preferences of each customer while presenting the additional challenge of modeling intertemporal consumer decision making. We present four models that differ in how they treat the intertemporal stability of consumer preferences. Our base model uses only theoretical restrictions to partially identify bounds on demand while the other models account for potential variation in preferences over time and possible irrational decisions. In addition, we present a model that integrates aggregate purchase data with individual panel data in a setting where the panel is not fully representative of the population. We simulate in depth results for all models.

2 - How Do You Properly Diagnose Harmful Collinearity in Moderated Regressions?

James Hess, Professor, University of Houston, C.T. Bauer College of Business, Universi, Department of Marketing, Houston, TX, 77204, United States of America, jhess@uh.edu,
Pavan Chennamaneni, Raj Echambadi, Niladri Syam

Collinearity is inevitable in moderated regression models. Most marketing researchers diagnose collinearity using correlation-based metrics such as bivariate correlations and variance inflation factors, and then attempt to decrease the correlations between the simple effects and the multiplicative interactions to alleviate the collinearity problems. The rationale for the central role of correlations in any collinearity diagnosis and alleviation stems from the prevailing assumption that there is a one-to-one correspondence between the terms ëcollinearity' and ëcorrelation' such that low correlations automatically imply low collinearity. We demonstrate that it is possible to have highly collinear relationships, yet have negligible correlations among the individual variables. As such, collinearity diagnostics typically used are likely to misdiagnose the extent of collinearity problems in moderated models. More importantly, they do not accurately identify when collinearity is actually harmful to statistical inferences. We propose a new measure, C2, which diagnoses the extent of collinearity in moderated regression models. More importantly, this C2 measure, in conjunction with the given t-statistic of the non-significant coefficient, can indicate the adverse effects of collinearity in terms of distorting statistical inferences and how much collinearity would have to disappear to generate significant results. We illustrate its usefulness in a study of brand extensions.

■ TA09

1st Floor - Room 1240

Purposive Games for Marketing Decision Support

Cluster: Marketing Models

Invited Session

Chair: Lynd Bacon, President, Loma Buena Associates, P.O. Box 620960, Woodside, CA, 94062-0960, United States of America, lbacon@lba.com

1 - Measuring Consumer Preferences Using Product Poker

Olivier Toubia, Associate Professor, Columbia Business School, 522 Uris Hall, 3022 Broadway, New York, NY, 10027-6902, United States of America, ot2107@columbia.edu, Daniel Stieger, Johann Fueller, Martijn De Jong

In the recent years, researchers have shown that the performance of conjoint analysis may be greatly enhanced by using incentive-compatible questionnaires, in which respondents have to "live with" their choices. Incentive-compatible conjoint uses game theory to construct questionnaires in which it is a dominant strategy for rational consumers to reveal their true preferences. We explore whether "games" that provide a positive experience to respondents, beyond formal truth-telling incentives, have the potential to further enhance the performance of incentive-compatible conjoint analysis. We propose and test a preference measurement game adapted from poker. Formally, the data provided by this game is equivalent to that of a choice-based-conjoint (CBC) questionnaire. We compare the performance of the proposed game to that of an equivalent incentive-compatible CBC questionnaire, in order to explore the impact of enhancing the respondents' experience by embedding the task within a game.

2 - An Incentive-aligned Sleuthing Game for Survey Research

Min Ding, Associate Professor, Department of Marketing, Smeal College of Business, Penn State University, 408 Business Building, University Park, PA, 16802, United States of America, minding@psu.edu, John Hauser

Survey research plays a key role in a variety of managerial decisions including whether or not to launch a new product (pretest market analysis), how to design that product (voice of the customer), what features to include (conjoint analysis), or which advertising executions to run (copy testing). There has been significant research on question wording, question ordering, and question analysis, but all of this research assumes that the respondent has the incentives to think hard and answer truthfully. Recent research on conjoint analysis (Ding, Grewal, and Liechty 2005; Ding 2007; Ding, Park and Bradlow 2009) and information scoring (Prelec 2004) establish incentive alignment as critical to research design. We propose here a new incentive aligned mechanism, sleuthing game, which can be used for a broad array of surveys. A sleuthing game is a game of clues with the intended survey embedded. Respondents are rewarded based on the outcome of the game. In this game, some survey respondents (sleuths) will attempt to infer other respondent's (cluers) stated preferences for a real task, based on the clues supplied by the cluer. The payoffs for both types of respondents depend on the accuracy of the sleuth's inference. The game ensures it is in the best interest of cluers to provide helpful and truthful clues and the sleuths to think hard and infer accurately. An empirical study tests the feasibility of the sleuthing game, contrasting it with extant practice on relevant metrics.

3 - Performance-aligned, Collective Human Computing in Linguistic Games for Solving Hard Problems

Lynd Bacon, President, Loma Buena Associates, P.O. Box 620960, Woodside, CA, 94062-0960, United States of America, lbacon@lba.com, Ashwin Sridhar

Many important marketing decisions rely on solving hard problems that aren't amenable to closed form solutions and easily implemented algorithms. We have designed and implemented a method and games system for using the collective behavior of individuals to solve hard problems. In the primary game supported by this system, groups of individuals engage in discourse about a topic or issue where their interactions are based one game rules based on Searle's (1969) speech acts theory, which has been used elsewhere in information systems used previously for planning and decision support (e.g. Conklin & Begeman, 1988; Kunz & Rittel, 1970; Rittel, 1980). These discourse games use performance-aligned incentives similar to the approach described by Toubia (2006) that can be tuned to produce desired outcomes and behaviors on the part of players. The platform also supports complementary games that produce solution summaries and preference scores for them. We describe the design, deployment of this methodology and its supporting technology for commercial applications, the analysis of the "poorly structured" (in this case tree-structured, tagged text) but rich data it produces, and extensions to the system.

4 - Value Forecasts and Trading Intentions

Sheila Goins, University of Iowa, S322 John Pappajohn Business Building, Iowa City, IA, 52242, sheila-goins@uiowa.edu, Tom Gruca

Most research on predictive markets demonstrates how the accuracy level of trading activity exceeds those of polling and other forecasting methods. The underlying success of predictive markets relies upon participants actively engaging in a purposive game. As each individual trader attempts to profit or win, the predictive accuracy of the market as a whole improves. In our study, we disaggregate prediction markets to determine what influences individual level actions. Traders enter into the market with a perception of value and some degree of confidence in their perception and proceed to try to win given an unknown ultimate outcome. The data set consists of trading data from the Iowa Electronics Market (IEM), a small scale, real money Internet futures market operated for teaching and research purposes since 1988. In addition to trading activity, we have a trader survey that includes detailed box office revenue forecasts and self-assessments of confidence. The a priori forecasts enable us to know the traders' perceptions of value as they enter into the market. Our analysis of bid/ask level data enables us to evaluate trader intentions rather than just executed trades that occur only when two traders concur. We analyze initial trading intentions to understand how initial forecasts and confidence levels lead to buying or selling behavior, whether traders use market or limit orders and whether they trade in a consistent manner with their initial forecasts. Understanding how market participants act upon their perceptions of value given varying levels of confidence reveals the mechanics of fundamental market processes and helps explain how individuals acting upon their own interests in a purpose game can generate accurate market level outcomes.

■ TA11

2nd Floor - Room 2210

Choice Consistency and Consumer Preference

Cluster: Choice

Invited Session

Chair: Vinay Kanetkar, Department of Marketing and Consumer Studies, University of Guelph, University of Guelph, Guelph, ON, N1L1B1, Canada, vkanetka@uoguelph.ca

1 - Scale Adjusted Latent Class Analysis for Two New Product Categories

Juan Wang, Department of Marketing and Consumer Studies, University of Guelph, Guelph, ONT, Canada, jwang@uoguelph.ca, Vinay Kanetkar, Towhid Islam

Exploring consumers' choice consistency has great managerial insights because most marketers wish to reveal the real choice preferences of consumers before implementing marketing mix strategies. This is especially true for the innovations, which, compared to existing products, consist of more risky new attributes. If consumers' product choices vary across attitudinal constructs, the effects of the expected marketing mix could be much lower. This study focuses on investigating whether attitudinal constructs will influence scale (i.e. choice consistency), preferences or both. Two product categories were selected as the research contexts. For new healthy breakfast menu, attitudinal constructs such as personal innovativeness, reference price, health consciousness are explored, and for micro-generation technologies (solar energy and wind power),technology awareness, attitudes toward energy conservation are used. Multiple product categories generalize the external validity of our research findings.

2 - Preferences for Ethical and Social Features

Gail Leizerovici, Department of Marketing and Consumer Studies, University of Guelph, Guelph, ONT, Canada, gleizero@uoguelph.ca, Towhid Islam, Vinay Kanetkar

This study looks at consumer preferences for ethical and social product features within the body soap product category. The objective is to determine whether personal values and product information content influence scale (i.e. choice consistency), preferences or both. Product information is presented in two different formats, one describing only the functional features, while the second includes both functional and social product features. A sample of 250 university students and multiple data collection methods (Discrete Choice and Best Worst Scaling) are used to elicit consumer preferences. This study hopes to extend previous research on ethical consumerism by addressing methodological issues pertaining to the "attitude-behaviour" gap. Multiple elicitation methods with the same body soap product features provide the added validity of our research findings.

3 - Television Advertising and Choice Consistency

Michael Clarke, Market Analyst, Research in Motion, Waterloo, ONT, mclarke@rim.com, Vinay Kanetkar

This study examines whether television advertising influences choice consistency as well as consumer utility. The rationalization of consumption (Ritzer 2006) via an unequal firm-consumer relationship, and the diffusion of technology, which acts as a culture changing force, emerges at the purchase decision level. The media richness theory, self serving biases in service contract settings, and empirical findings relating to the research of advertising, e-commerce, and text based communications, combine to support the idea that entire economies are becoming increasingly characterized by the rationalization of consumption through change driven by efficiency, predictability, calculability and artificial control. Concerning the retail purchase of a mobile phone, consumers are found to be positively impacted by less rich advertising medium (print) compared to television advertising, efficient monetary transactions usage based pricing, and non- testimonial/non-personal style advertising.

4 - Latent Segmentation and Choice Consistency

Vinay Kanetkar, Department of Marketing and Consumer Studies, University of Guelph, University of Guelph, Guelph, ON, N1L1B1, Canada, vkanetka@uoguelph.ca, Towhid Islam

Kamakura and Russell (1989) presented a latent segment model to capture consumer heterogeneity in choice models. This model not only allows one to estimate brand specific parameters to vary by segment but also provide flexibility to estimate marketing variables' responsiveness across segments. There have been numbers of refinements (Krishnamurthi and Raj, 1991; Gupta and Dillon, 1996), extensions and re-interpretation (Chintangunta, Jain and Vilcassim, 1994) of the original model. When there are two or more segments in data, it is possible to estimate variance of residuals in a choice model (Swait and Louviere, 1993) and the estimated variances are called scale parameters. We propose a latent segment model, where brand specific parameters vary by segments and constrain marketing variables' responsiveness according to scale parameters. Our model, generally contain fewer parameters than the usual latent segment model. Empirically we compared our model with that of Kamakura and Russell. We found that for discrete choice data, our parameterization is simpler, parsimonious and statistically preferred to latent segment model. For scanner panel data, our model also outperformed latent segment parameterization. These results suggest that latent segment model may be capturing consumer response variability.

■ TA12

2nd Floor - Room 2220

Marketing and Finance

Cluster: Marketing and Finance

Invited Session

Chair: Andre Bonfrer, Associate Professor, Singapore Management University, 50 Stamford Rd, Singapore, 178899, Singapore, andrebonfrer@smu.edu.sg

1 - Measuring the Performance of Marketing-finance Integration Within Firms

Roos Hoogeboom, PhD Candidate, Maastricht University, Tongersestraat 53, Maastricht, 6211LM, Netherlands, r.hoogeboom@mw.unimaas.nl, J.M.E. Pennings

The M-F interface received a lot of attention recently. This raises the question whether interdepartmental integration of marketing and finance within an organization contributes to business performance. Our objectives are to examine whether relational characteristics and aspects of organizational structure drive M-F integration; and, to examine whether the extent of integration drives business performance. We develop a conceptual framework that integrates relational and organizational structure variables to identify the drivers of M-F integration. We hypothesize that relational characteristics (i.e. goal congruency, interdependency, trust, commitment) and aspects of organizational structure drive M-F integration. We hypothesize that M-F integration is positively related to business performance. If a gap exists between perceived and actual integration, we hypothesize that (under the condition of low actual integration) the larger the gap between perceived and actual integration, the lower the business performance. To test our framework we develop a research design that allows us, amongst others, to measure perceptual and actual M-F integration as well as financial measures from a dyadic perspective. We develop a survey to collect data from both marketing and finance managers from The Netherlands, U.K., Belgium, Germany and the U.S. Accounting data is collected to measure business performance and M-F integration. Since data collection will be done globally and across industries, country and industry differences will be explored. The results will help top management when (re)-designing their organizations, since it increases their understanding about how and to what extent they can and need to integrate the marketing and finance departments.

2 - Customer-based Firm Valuation

Christian Schulze, Goethe University Frankfurt, Grüneburgplatz 1, House of Finance, E-Finance Lab, Frankfurt, 60629, Germany, info@christian-schulze.de, Bernd Skiera, Thorsten Wiesel

It is more and more accepted in marketing that customers are one of the most important assets of firms and that the value of a firm's customer base (i.e., Customer Equity) shall be used to assess the firm's Shareholder Value. Different from the well-known discounted cash flow models in finance, in our model we treat cohorts of customers instead of periods as the cash-generating source. As we show, this difference allows for better capturing the important value drivers for "customer-intensive" firms and evaluating high-growth firms even with negative earnings. Our research enhances existing aggregate models for firms with contractual customer relationships by accounting for the firms' capital structure, creating a complete link between customer metrics and Shareholder Value (SHV). The relative importance of Customer Equity compared to SHV we then capture via a newly introduced ratio. By consistently applying our model to evaluate a firm over a period of five years, we are able to show that the prediction of future customers is a much stronger driver of SHV than e.g. retention rate. This raises questions about suitable prediction mechanisms on the one hand and highlights the importance of accounting for uncertainty in future developments on the other. Through Monte Carlo simulations, we account for uncertainty and determine confidence levels for our SHV calculations. We then compare our results to other ratio-based valuation mechanisms as well as to actual stock market valuations of the firm. Overall, we are able to show that customer-based firm valuation is feasible as an addition or even substitute for existing valuation methods.

3 - Customer Satisfaction and Stock Prices: A Second Look

Kissan Joseph, Associate Professor, University of Kansas, 345H Summerfield Hall, 1300 Sunnyside Avenue, Lawrence, KS, 66045, United States of America, kjoseph@ku.edu, Vladimir Ivanov, Jide Wintoki

Recently, Fornell, Mithas, Morgeson, and Krishnan (2006) report that composing a portfolio of firms based on customer satisfaction can lead to excess stock market returns. In this paper, we take a second look at this assertion. In particular, following the arguments in Fornell et al. (2006), we posit that firms will choose their desired level of customer satisfaction by comparing the benefits and costs associated with this investment. Given natural heterogeneity in benefits and costs, different firms will thus optimally choose different levels of customer satisfaction. Moreover, the level of customer satisfaction per se should have no impact on stock prices. We test this modified perspective by developing hypotheses that characterize firms that may choose higher or lower levels of customer satisfaction. We also assess the performance of a portfolio of stocks selected on the basis of customer satisfaction. In contrast to Fornell et al. (2006), we employ specifications suggested in Fama and French (1993) and Carhart (1997) to compose our benchmarks. In our empirical work, we find that the realized levels of customer satisfaction vary as hypothesized. In addition, we find no abnormal returns associated with a portfolio of firms selected on the basis of customer satisfaction. While these latter findings diverge from those reported in Fornell et al. (2006), they are quite consistent with their conceptualization of customer satisfaction as well as their null findings pertaining to customer satisfaction announcements (event-study). Overall, we thus believe that the work of Fornell, Mithas, Morgeson, and Krishnan (2006) as well the current research advances the process of scientific inquiry on the topic of customer satisfaction and stock prices.

4 - Earnings Management and Advertising Expenditures

Andre Bonfrer, Associate Professor, Singapore Management University, 50 Stamford Rd, Singapore, 178899, Singapore, andrebonfrer@smu.edu.sg, Sundar Bharadwaj, Michael Brandt, Mary Sullivan

Senior managers of many publicly listed firms are under constant pressure to meet earnings targets. Their compensation is often linked to earnings either directly through bonuses, or indirectly via stock options. Shareholders reward companies that report favorable earnings and punish companies that do not, respectively, by buying and selling the shares of the company. The accounting and finance literatures have been actively examining a phenomenon called "earnings management"whereby managers will use accounting manipulation or operational changes to enable the reporting of favorable earnings position. We study the use of a mechanism for earnings management that is close to marketers' hearts - the use of advertising. We also examine what type of advertising (spot purchased, scatter market, advertising versus up-front purchased network advertising) is more likely to be used to manage earnings and study what impact this tool for earnings management may have on market response.

■ TA13

2nd Floor - Room 2230

Entertainment Marketing

Cluster: Entertainment Marketing
Invited Session

Chair: Enping Shirley Mai, Assistant Professor, East Carolina University, College of Business, Greenville, NC, 27858, United States of America, maie@ecu.edu

1 - An Empirical Exploration of Ticket Purchase Behavior for Consumer Forwards

Preethika Sainam, Indiana University, E 10th Street, Bloomington, IN, 47405, United States of America, preesesh@indiana.edu, Barry Bayus, Sridhar Balasubramanian

Most sports markets feature elimination-style tournaments. Though there is uncertainty regarding the teams that will ultimately participate in the event, currently tickets to these games are sold in advance. Therefore, fans who want to wait and buy tickets after they know which teams are playing need to head to scalpers. However, scalpers charge exorbitant prices - this suggests that the leagues are leaving money on the table. Fans are also irate at the leagues for this situation. Thus, both sports leagues and fans are unhappy with current practice. Recently firms have introduced ëconsumer forwards' to help consumers minimize their risk in sports markets. Buying a forward confers a right, and an obligation, on the buyer. If consumers choose to buy a forward, they pay a forward price before the uncertainty is resolved. Later, once the final outcome is known and if the team they have purchased the forward for makes it to the final game, consumers are required to pay an exercise price. If the team does not make it through to the final, the forward expires. We study panel data from a firm that sells consumer forwards for the NCAA Men's Final Four tournament. This firm operates a proprietary forward trading market that fans can access at any time from the forward purchase to when uncertainty is resolved. In this paper, we empirically explore fan behavior in this market. The most closely related literature to the consumer forwards market is that of individual investors mitigating portfolio risk in financial markets. However, given that consumer markets and financial markets are different, we study whether conventional wisdom on risk management in financial markets applies to consumer markets. Our research provides insights into how consumer forward markets work.

2 - Market Size and Investment Strategy in Major League Baseball

Yeujun Yoon, Olin Business School, Washington University in St. Louis, Campus Box 1133, St. louis, MO, 63130, United States of America, yoony@wustl.edu, Michael Lewis

Professional sports are at heart an entertainment industry. However, a unique element of professional sports is that events are jointly produced by the two teams that are in direct competition. This structure means that sports leagues are alliances in which firms simultaneously compete and cooperate. The existence of joint production and simultaneous cooperation and competition is important because the success of the league (alliance) depends on the long-term viability of all teams. A further complication is that there tends to be significant structural differences between teams as some clubs are located in large media markets while others are located in much smaller metropolitan markets. This has important consequences since large market teams may have far greater financial resources. In this paper we analyze event level attendance data from Major League Baseball (MLB) in an effort to better understand the factors that drive attendance at games. In particular, we focus on factors related to competitive balance, service quality and entertainments aspects. The results have implications for guiding the strategic decision making of teams in different types of markets.

3 - Network Size to the Inter-purchase Times and the Customer Equity: A Predictor?

Enping Shirley Mai, Assistant Professor, East Carolina University, College of Business, Greenville, NC, 27858, United States of America, maie@ecu.edu, Jun Yang

Indirect network externalities (INE) occur when there is interdependency between the focal product and its complementary products. They exist in many industries and are particularly crucial in the entertainment industries. Many empirical studies have tested the existence of INE in various industries. Few researchers, however, have adopted this important construct to predict customer equity. This paper proposes a framework to examine INE impact on the inter-purchase times and the customer equity. The authors have compiled a unique dataset in the video game industry, which includes the transaction data of virtual goods for different games. The empirical results confirm the importance of INE as an important predictor of customer equity. Managerial implications are discussed.

■ TA14

2nd Floor - Room 2240

Marketing Strategy: Firm Performance

Cluster: Marketing Strategy
Invited Session

Chair: Aysegul Ozsomer, Koc University, Rumeli Feneri Yolu, Sariyer, Istanbul, 34450, Turkey, aozsomer@umich.edu

1 - A Study on R&D and Marketing Investments and Firm Performance

Henning Kreis, Freie Universitat Berlin, Otto-von-Simson-Str. 19, Berlin, 14195, Germany, henning.kreis@fu-berlin.de, Lutz Hildebrandt

Research and Development (R&D) is one of the most important activities of a firm. The increased growth in R&D intensive industries has stimulated new interest towards the benefits of R&D and the role of marketing expenditures (Srinivasan et al., 2009; Chan et al., 2001). It is widely accepted that R&D is essential for companies in order to reach for new competitive advantages to enhance firm performance. However, gaining returns from R&D investment, is a challenging task. Although empirical work on R&D expenditures has shown that R&D creates benefits in the future (see, e.g; Lev & Sougiannis, 1999), such investments also involve a certain amount of uncertainty about when and how much return of such investments can be realized, especially when firms operate in competitive industries (Teece, 1996; Kothari et al., 2002). Marketing is an eligible instrument for solving this problem of appropriability (Geroski, 1995, p. 91ff.). Marketing spending may thus be seen as an investment in complementary activity with the purpose to support the success of an innovation strategy and firm performance. The paper focuses on the relationship between investments in R&D, marketing and firm performance as well as the ability of marketing to support the realization of rents of R&D investment. In an empirical study we apply a series of panel models to longitudinal data of manufacturing companies. The results emphasize the importance of marketing instruments like advertising and sales force activities as an essential factor in the realization of R&D payoff. The panel study explicitly controls for various types of unobservable variables. Intangibles such as the quality of management or the know-how of a company have an impact on the relationships of the key variables being studied.

2 - The Effects of Actual and Advertised Quality on Sales: A Longitudinal Study of the US Auto Market

Bharat Sud, Richard Ivey School of Business, University of Western Ontario, 1151 Richmond Street North, London, ON, N6A 3K7, Canada, bsud.mba2001@ivey.ca, Robert Fisher, Kersi Antia

Whereas the disconfirmation (gap) model of customer satisfaction indicates that firms should advertise less quality than they actually deliver to create a positive contrast, a Bayesian updating model posits consumers to assimilate rather than contrast new information, and calls for firms to claim more quality than they deliver. We track the actual quality and corresponding quality claims by each of 22 brands in the US minivan market from its inception over a 21-year period, to examine which perspective best describes the monthly sales of a major consumer durable. Integrating data from six different sources on (1) monthly unit sales, price and distribution intensity, (2) 1,912 placements of 672 print advertisements, (3) three different objective quality ratings, and (4) monthly advertising budgets, we find that, consistent with a Bayesian updating perspective, brand sales are enhanced by stronger claims of superior quality in all cases except when objective quality is significantly (i.e., two standard deviations) below the category mean. Also consistent with a Bayesian perspective we find that the effects of objective and advertised quality on monthly sales are cumulative rather than contemporaneous or short term. The results suggest that consumers rely heavily on their prior beliefs in their choices of a major consumer durable, and that consumers integrate information within a window of approximately three years. The results from this study have important implications for the management of quality for consumer durables, and emphasize the need for a long-term orientation toward quality decisions.

3 - Resource Efficiency or Slack: Firm Resource Management Strategies and Their Impact on Performance

Saurabh Mishra, Assistant Professor, McGill University, 1001 Sherbrooke O, Room 481, Montreal, QC, H3A1G5, Canada, saurabh.mishra@mcgill.ca, Sachin Modi

Firms often face the dilemma of choosing between efficiency and slack when making important resource allocation decisions. Extant research in marketing, strategic management, and operations management provides divergent, and often conflicting, insights on this key issue. While one set of studies argues in favor of resource use efficiency, other studies extol the virtues of maintaining resource slack. In this research the authors provide a theoretical framework that attempts to integrate these divergent views and predict the relative influence of the two opposite resource use strategies on firm financial performance. The authors evaluate the theoretical predictions by constructing a dataset that consists of all manufacturing-related firms in the United States across a 19 year period (i.e., 1986-2004) for which information was available from secondary sources. The longitudinal analysis focusing on the influence of firms' marketing and operations resource management strategies on their market value and stock returns reveals interesting insights. The authors build on these insights to provide important managerial and theoretical implications.

4 - The Role of Market Orientation and Organizational Learning in Managing Economic Crises

Aysegul Ozsomer, Koc University, Rumeli Feneri Yolu, Sariyer, Istanbul, 34450, Turkey, aozsomer@umich.edu

The literature reflects little effort to develop a framework for understanding capabilities for managing economic crises. The global economic downturn that started in October 2008 and the localized crises in the late 1990s in Asia, Argentina, Russia, and Turkey demonstrate that economic crises are unavoidable. They create high levels of uncertainty and are potential threats to the viability of organizations. We investigate the role of market orientation (Jaworski and Kohli 1993) and organizational learning in helping firms in Turkey manage through the economic crises. Results are based on data collected from the largest 412 firms in 2003 and again from 242 firms in November-December 2008. Probit tests (Heckman, 1976, 1979) reveal no selection bias problems for the 2003 and 2008 data. We also control for a firm's performance before crisis and its dependence on international customers. Results demonstrate the need to study market orientation at the sub-dimension level, because of asymmetric influences of responsiveness on performance after crisis(measured as relative Market share and ROI). Only the responsiveness dimension of MO is useful in managing crises. Particularly, time and resources spent in disseminating intelligence, seems useless. Perhaps, this is because pre-crises assumptions and information lose their value as they are communicated through departments and as the environment changes rapidly. Similarly, when organizational learning is investigated as the type of knowledge created through exploration and exploitation, exploration is found to have a positive effect on performance. Managers are well advised to emphasize exploration and allocate more resources to this type of learning when they are going through economic crises.

■ TA15

2nd Floor - Room 2320

Customer Lifetime Value

Cluster: Customer Satisfaction, Loyaly, and Lifetime Value
Invited Session

Chair: Rutger van Oest, Assistant Professor, Tilburg University, Warandelaan 2, Tilburg, 5000LE, Netherlands, r.d.vanoest@uvt.nl

1 - The Impact of Customer-based Brand Equity on Customer Equity

Florian Stahl, Assistant Professor of Quant. Marketing, University of Zurich, Plattenstrasse 14, Zurich, 8032, Switzerland, stahl@isu.uzh.ch, Jan Kirenz

Although brand equity and customer equity are two of the most important topics to academic researchers and practitioners (Leone et al. 2006), so far little is known about the relationship between these two concepts (e.g., Berger et al. 2006; Kumar, Lemon and Parasuraman 2006). A better understanding on how customer equity is affected by changes in customer mindset is important, as it enables firms to influence key drivers of customer lifetime value and allows them to anticipate customer behavior changes before they occur. Furthermore, investments in branding could be directly linked to customer value. In our paper we model the influence of customer-based brand equity on customer acquisition and retention rates following the brand equity framework of Keller (1993) and an extension of the customer valuation model of Gupta, Lehmann and Stuart (2004). We test our model empirically on a sample of ten major automobile brands in the largest European economy, Germany, and provide evidence about the multifarious impact of customer mindset on customer equity. Using customer perceptions data provided by Young & Rubicam's Brand Asset Valuator model, the results show that high brand familiarity combined with a set of positive and unique brand associations has an effect on customer acquisition, whereas our brand attitude measure has a strong impact on customer retention. The empirical insights into the relationship between brand equity and customer equity help managers to quantify the return on marketing investment and to enhance the productivity and effectiveness of advertising campaigns. Thus, our research findings enable firms to initiate marketing actions that will help to build and maximize customer equity and thereby shareholder value.

2 - Customer Acquisition Strategies in Direct Marketing: Will Better Messages Always Mean Higher Value?

Arnaud De Bruyn, Associate Professor, ESSEC Business School, Av. Bernard Hirsch, Cergy, 95000, France, debruyn@essec.fr

New customers' acquisitions are costly, and usually reimbursed only over delayed revenues. This is where customer lifetime value becomes a key metric in the manager's toolbox. Yet, acquisition strategies are usually driven by short term economic performance. Which message worked best to acquire customers? Which list had the immediate best returns? In the industry, there is a shared belief that the message used to acquire customers will not influence their lifetime value, and that the best lists to acquire new customers will remain the most profitable in the long term. In this paper, we show that the later is barely true, and that higher-impact messages will usually mean lower customers' lifetime value. We show an example from the nonprofit sector, and discuss managerial implications.

3 - The Effectiveness of Affinity Programs in the Credit Cards Market

B.P.S. Murthi, Associate Professor, The University of Texas at Dallas, Sm 32 School of Management, 800 Campbell Road, Richardson, TX, 75080, United States of America, murthi@utdallas.edu, Andrei Strijnev, Chakravarthi Narasimhan

Credit card firms use affinity card programs to help them in their acquisition and retention efforts of their valuable customers. However, there is very little research on the effectiveness of this program. Using a large dataset from the credit card industry, we present a model and empirical results on the effectiveness of affinity cards on customer profitability, lifetime, and customer risk factors such as probability of default. We also investigate whether different types of affinity card programs affect customers differently. We find that affinity cards do not generate either higher profits or higher transaction amounts. These card holders also do not necessarily stay longer with the firm. However, these cards provide customers who have significantly lower risk factors and thus help the firm manage the overall risk of its portfolio.

4 - The Impact of Complaints and Complaint-handling on Defection

Rutger van Oest, Assistant Professor, Tilburg University, Warandelaan 2, Tilburg, 5000LE, Netherlands, r.d.vanoest@uvt.nl, George Knox

In this study, we connect two important databases - individual purchase and complaint data - for a multichannel retailer. We develop a model that links complaints and the corresponding firm responses to customer defection in a non-contractual setting. We distinguish among several different complaint types including those due to the ordering process, the product itself, and the delivery. Additionally we observe the firm's response to the complaints, and we examine how the firm's recovery strategy moderates the impact of the complaint on defection. Relevant questions we address are (i) what is the firm's response strategy with regard to different complaint types and their timing?, (ii) which complaint types are most likely to result in defection?, (iii) how effective is compensation in preventing the customer from defecting?, and (iv) can a satisfactory firm response to a complaint incidence actually reduce the defection probability relative to the no-complaint situation? In so doing, we attempt to integrate complaint types and firm responses into customer base analysis.

Thursday, 10:30am - 12:00pm

■ TB01

Lower Level - Room 0210

Innovation: Strategy

Cluster: Innovation
Invited Session

Chair: David Godes,Harvard University, Morgan 165, Soldiers Field, Boston, MA, 02163, United States of America, dgodes@hbs.edu

1 - Innovation Beyond Firm Boundaries: The Capabilities of External Problem Solvers

Dominik Mahr, University of Wisconsin-Madison, 975 University Avenue, Madison, WI, United States of America, dmahr@bus.wisc.edu, Aric Rindfleisch, Rebecca J. Slotegraaf

Innovation is increasingly occurring beyond the boundaries of a firm, forming a paradigm shift from a closed to an open innovation model. One form of this trend involves the use of external experts who possess valuable capabilities to help firms solve innovation-related problems. This externalization of innovation may provide advantages, such as increased creativity and reduced development time. However, it also poses considerable challenges because external expertise is scarce and rooted in geographically dispersed individuals, which are hard to locate. Moreover, these individuals possess limited information about the problem's broader context or the identity of the seeking firm. Our research addresses these challenges by identifying the critical capabilities of external problem solvers and the types of innovation problems suitable for externalization. We employ a conceptual foundation that synthesizes research on resources and capabilities from marketing strategy and on expertise from consumer behavior. Our conceptualization argues that two key capabilities are essential for successful external problems solving: problem sensing and seizing, and offers a series of hypotheses regarding their effects. We test this conceptualization using a survey of over a thousand external problems solvers who are members of a major innovation solver network. We combine this survey data of solver capabilities with archival records of solver performance. Results highlight the value of external problem solvers and their characteristics. Consequently, our research facilitates identification of valuable external solvers and of problems most suitable for externalization. Our research thus contributes to understand how capabilities beyond the scope of a firm play a role in open innovation.

2 - "Don't Interfere with Your Customer" - Creating Innovation-related Information in Virtual Communities

Annouk Lievens, University Antwerp, Prinsstraat 13, Antwerp, Belgium, annouk.lievens@ua.ac.be, Dominik Mahr

Companies such as Microsoft or Nokia augment their product offerings by virtual communities to create valuable information for new products. The firm learns for its innovation process by following the interactions between the virtual community members and extracting new ideas and improvements for its products. As the value of the created information depends on the number of visits and the quality of the posts, the firm tries to steer and motivate members to enhance their contributions. Past research suggests that members are willing to provide information to other members for altruistic reasons but might be more reluctant when the information is used for commercial purposes. Even worse, members might feel abused and leave the community. Our research examines motivations of content co-creation under different levels of firm involvement in virtual communities. We empirically assess the motivations and behaviors of highly involved members of virtual communities hosted by gaming firms. The results indicate that members visit and post for reasons related to altruism or acknowledgement by other members. The members do not primarily participate to seek for information or to support the host firm e.g. providing feedback on products. Moreover, our results suggest that firms' passive extracting of information does not effect members' contributions, while active involvement on the part of the firm e.g. steering the discussion has a strong negative effect. Our results provide managers with guidance on fostering or potentially harming members' contribution in firm hosted virtual communities. Through the study we contribute to the recent phenomenon of customer co-creation by identifying antecedents that increase the creation of information relevant for new product development.

3 - How Brand Substitution Differs Across Local Markets

Paulo Albuquerque, Assistant Professor of Marketing, University of Rochester, Carol Simon Hall, 3110 R, Rochester, NY, 14627, United States of America, paulo.albuquerque@simon.rochester.edu, Bart Bronnenberg

We investigate patterns of consumer switching to a new product in a consumer package goods (CPG) category across markets. We use an individual demand model estimated with market-level data on shares, distribution of purchase set size, and penetration of brands to obtain estimates of switching that control for changes in marketing activities, temporal variation in the outside option, and endogeneity of prices. The objective of the analysis is to explore differences in brand substitution, brand switching, and the origins of new product demand across local markets. To this end, we allow local brand switching to depend on market, firm, and consumer characteristics. We empirically apply our model to the local introduction of DiGiorno in the frozen pizza category. We find that in the majority of markets, cannibalization was small and a significant portion of consumers came from outside of the category. We find significant regional differences in the market reaction to the introduction of new products. Surprisingly, little of the brand switching variation is explained by product characteristics. Instead, market structure at the time of new product launch and marketing strategy as measured by marketing mix variables explain larger portions of variation. We use our approach to measure the success of the introduction of a new product, net of cannibalization of the company's incumbent brands.

4 - Too Much Information: The Strategic Management of Inter-customer Communication

David Godes, Harvard University, Morgan 165, Soldiers Field, Boston, MA, 02163, United States of America, dgodes@hbs.edu

Firms in business markets often benefit from encouraging references from their past customers to new prospects. The willingness of early adopters to share information about the product's value can result in a significant increase in later adopters' willingness to pay. However, in facilitating the expansion of its customers' networks in this way, the firm may also foster the flow of other information that may reduce the firm's leverage in its customer relationships. Example include prices or costs. In this study, we investigate the tension facing the firm as it seeks to foster the flow of information that increases its power while inhibiting the flow of information that decreases its power.

■ TB02

Lower Level - Room 0220

Channels: Competition

Cluster: Channels

Invited Session

Chair: Benaissa Chidmi, Assistant Professor, Texas Tech University, Mail Stop 42132, Texas Tech University, Lubbock, TX, 79409, United States of America, benaissa.chidmi@ttu.edu

1 - Maximum Selling Retail Price vs. Manufacturer Suggested Retail Price

Yuanfang Lin, Assistant Professor, School of Business, University of Alberta, 3-23L Business Building, University of Alberta, Edmonton, AB, T6G 2R6, Canada, yuanfang.lin@ualberta.ca, Chakravarthi Narasimhan

The manufacturer suggested retail price (MSRP) is the price the manufacturer recommends that the retailer sells its product for. It is a widely adopted pricing practice observed in the retail markets of automobile, consumer electronics, grocery products, etc with a general expectation that the actual retail prices to be below such MSRP levels. There is, however, some latest developments in retail pricing (e.g. retail grocery sector in India, Canadian apparel retailer Northern Group Retail Ltd) that seems to suggest that it will benefit the retailers and probably the entire marketing channel if those prices suggested by manufacturers are literally implemented. The main objective of this paper is to understand the strategic trade offs in implementing MSRP when there is competition at the manufacturing level or/ and at the retail level. When is it better for the manufacturers to lobby for this? Is the MSRP policy hurting the retailers? With or without MSRP policy, how would a retailer adjust its marketing mix such as promotion or service level? We build an analytical framework to investigate the equilibrium channel strategy in terms of MSRP implementation, service and product differentiation under market competition and derive market and firm conditions under which implementation of MSRP policy becomes the equilibrium strategies in competition and investigate the corresponding profit implication for different channel members involved. The analytical findings will be empirically tested using data on MSRP, degrees of service, and retail sales price and quantities collected from various industries in North America retail markets.

2 - Store Brand Quality and Retailer's Product Line Design

Eunkyu Lee, Associate Professor, Syracuse University, 721 University Ave, Syracuse, NY, 13244, United States of America, elee06@syr.edu, Hwan Chung

In contrast to previous studies of manufacturers' product quality and product line design decisions, this study analyzes a retailer's store brand quality decision in vertically differentiated product categories, which has become an important strategic issue with the growth of store brands in general and the increasing number of retailers carrying multiple store brands within the same category. We analyze the problem with a game theoretic model composed of one or two national brand manufacturers and a retailer, who strategically chooses the quality level(s) of its store brand(s) relative to the established national brand position(s) for its category profit maximization. The model analysis reveals that the nature of a retailer's store brand quality positioning is quite different from the manufacturer's national brand positioning decision. In particular, the retailer's store brand quality decision is shaped by three key strategic forces-the market expansion force, the retail margin force, and the consumer profitability force. The relative magnitudes of these forces vary depending on the distribution of consumers' quality consciousness and, therefore, lead to different optimal product line design for store brands across categories. We present empirical evidence supporting the theoretical findings using simple observation, conjoint analysis, and scanner panel data analysis.

3 - Brand-supermarket Prize Competition with Nested Logit Demand

Benaissa Chidmi, Assistant Professor, Texas Tech University, Mail Stop 42132, Texas Tech University, Lubbock, TX, 79409, United States of America, benaissa.chidmi@ttu.edu

This paper uses the Information Resource Inc. (IRI) supermarket chains weekly data on processed cheese to analyze and estimate the market power of supermarket chains in setting retail prices for processed cheese in Houston Metropolitan area. First, a brand-supermarket demand is estimated using a nested logit model and the substitution pattern computed. Second, the demand results are used to estimate the price cost margins for alternative competition scenarios, namely the Bertrand and the leader-follower or Stackelberg games. The study proceeds in two steps. In the first step, a nested logit demand is estimated and the price responses are derived. In the second step, the price responses are used in order to compute the price-cost margins or Lerner index for each brand and supermarket chain for alternative pricing conducts. The alternative games are then tested against each other to retain the one that fits better the data at hand. The computed price-cost margins are used to shed light on the behavior of the retail chains in setting the retail prices and their eventual exercise of market power.

4 - The Benefits of Upward Channel Decentralization

Rajeev Tyagi, Professor, University of California, Irvine, Irvine, CA, 92697, United States of America, rktyagi@uci.edu, Yunchuan Liu

Upward channel decentralization occurs when firms choose to not manufacture products by themselves, and procure products from upstream suppliers. This important decision appears in many managerial contexts, e.g., in the issue of production outsourcing, make-or-but decisions, and in the decision by a retailer to choose to either stay a retailer and leave the manufacturing to an upstream manufacturer, or become both a manufacturer. One of the most commonly given rationale for a firm choosing upward channel decentralization is that an upstream supplier may have a production cost advantage over this firm. This paper provides a strategic reason for why upward channel decentralization can benefit firms even when the upstream suppliers do not have any production cost advantage. In particular, we show that when product positioning is endogenous, upward channel decentralization incentivizes firms to differentiate their products more. With more differentiated products, the competition is softened at the downstream level, benefiting the downstream firms. We also show how upward channel decentralization by firms can hurt consumer welfare and social welfare. Finally, we show that decentralized channels can outperform centralized channels when product positioning is endogenous.

■ TB03

Lower Level - Room 0230

Sales Force

Cluster: Sales Force

Invited Session

Chair: Madhu Viswanathan,University of Minnesota, 321 Nineteenth Avenue South, Suite 3-150, Minneapolis, MN, 55455, United States of America, viswa022@umn.edu

1 - Salesforce Incentives to Serve "Undesirable" Customers: An Agency Theory Perspective

Sumitro Banerjee, Assistant Professor of Marketing, ESMT European School of Management and Technology GmbH, Schlossplatz 1, Berlin, 10178, Germany, sumitro.banerjee@esmt.org, Alex Thevaranjan

We examine how firms provide incentives to sales persons in a market consisting of high valuation (desirable) and low valuation (undesirable) customers who cannot be identified by their type but value the service provided by sales persons. Using a principal-agent model, we show that presence of undesirable customers affects the sales incentives and type of customers who buy the product. When the quality of the product is below a threshold, a firm cannot offer a wage contract to its sales persons which prevents the undesirable customers from entering the market. Under such conditions, a firm may be better off if it provides incentives to sales persons to accommodate (i.e., serve) the undesirable customers who enter the market. Only when the quality is higher than a threshold, a firm can offer a wage contract whereby the undesirable customers do not enter the market. Our analysis suggests an interaction between sales incentives, price and product quality on the profitability and the type of customers served by the firms.

2 - A Dynamic Structural Model of Sales Force Response to a Quota Based Contract

K. Sudhir, Professor of Marketing, Yale University, 135 Prospect St., P.O. Box 208200, New Haven, CT, 06520-8200, United States of America, k.sudhir@yale.edu, Thomas Steenburgh, Doug Chung

Using data on individual sales performance over a 3 year period at a Fortune 500 firm, we propose and estimate a structural model of the dynamic sales force behavior in response to a rich quota-based compensation structure. We combine Arcidiacono and Miller's new EM algorithm approach within a two step conditional choice probability (CCP) estimator to allow for sale force response heterogeneity, while preserving the computational advantage of the CCP estimators. We find that quota-bonus + commission plan used by the firm increases sales by 16% relative to a pure compensation based plan with same commission rates. Even adjusting commission rates to allow for the same total compensation cost still provides 4% higher revenues. A combination of quarterly and annual quotas outperform either one alone. Interestingly, short-term quarterly targets serve to increase effort by providing incentives to ensure that realized sales are within reasonable range of accomplishing annual targets. Overall, we conclude that a well-designed quota structure can take advantage of sales force dynamic response to maximize sales force effort and firm profits, justifying the widespread use of quotas in practice.

3 - Compensation and Peer Effects in Competing Sales Teams

Jia Li, Washington University in St. Louis, Campus Box 1133, One Brookings Drive, Saint Louis, MO, 63130, United States of America, JLi26@WUSTL.EDU, Tat Chan, Lamar Pierce

The literature has established that co-located workers significantly impact one another's productivity. Recent work empirically demonstrates peer effects in single-firm work settings under one compensation structure, but these studies leave important questions unanswered. First, the direction and magnitude of peer effects may depend on the firm's compensation system. Second, peer effects may extend beyond firm boundaries to inter-firm competition, with individual productivity also influenced by peers outside the firm. We address these questions using a three-year dataset of cosmetic sales, examining how compensation and firm boundaries influence worker productivity spillovers. We use a nested non-linear least squares algorithm to simultaneously estimate permanent worker productivity and the same-day peer effect on concurrently-scheduled salespeople's revenue, unit sales, discounting, and customer and product mix. We demonstrate two important new sets of findings. First, we find that the direction and magnitude of peer effects depend on compensation system. Second, we find that peer effects exist across firm boundaries, with high-ability peers at competing counters hurting productivity more heavily for workers at individual compensation counters. This paper provides a unique contribution to personnel economics and marketing literature by being the first to simultaneously estimate peer effects both within and across firms under multiple compensation systems. It is also the first to study peer effects under discretionary pricing, and provides important implications for managerial decisions on staffing, compensation, location, and pricing discretion. Finally, the paper implements improved methodology that generates more efficient estimators than those in previous studies.

4 - Other-regarding Behavior and Contract Format Preferences in Principal-agent Dyads

Madhu Viswanathan, University of Minnesota, 321 Nineteenth Avenue South, Suite 3-150, Minneapolis, MN, 55455, United States of America, viswa022@umn.edu, Tony Cui, George John, Mrinal Ghosh

Experimental work offers mixed support to the basic incentive-insurance trade-off espoused in principal-agent models. For instance, Ghosh and John (2000) find support for the predicted decrease in incentive pay as uncertainty increases under unobservable effort; however, flat wage contracts were almost never chosen even when they were the optimal (least-cost) choice. In this paper, we employ the Quantal Response Equilibrium (QRE) approach to investigate reasons for flat wage contracts not being selected by utility maximizing subjects in the Ghosh and John (2000) study. One possibility is that principals behave in an "other-regarding" fashion, and that they dislike flat wage plans because agents' payoffs do not increase as output increases (through agent effort and/or nature). Another possibility is that agents have a bias against flat wage plans and that principals are aware of this, and factor this bias while making their choices. Our analysis shows that both principals and agents are concerned about the expected utility of their actions (choice of plans and effort levels respectively). However, we find that agents have differential preferences for compensation plan formats (flat wage versus mixed versus incentive-only), and that flat wage plans are the least preferred. Principals know this, and act accordingly in their choice of contracts. However, adding inequity-aversion to principals' preferences does not explain their contract choices better. We conclude that there is no evidence that other-regarding preferences are needed to explain the deviation from classic principal-agent models found in this experiment.

■ TB04

Lower Level - Room 0240

Pricing: Retailing

Cluster: Pricing

Invited Session

Chair: Lei Wang,Rutgers Business School, 180 University Ave, Ackerson 301, Newark, NJ, 08830, United States of America, lei-wang@business.rutgers.edu

1 - The Benefits of Probabilistic Selling in Retailing

Scott Fay, Assistant Professor, Syracuse University, 721 University Avenue, Martin J. Whitman School of Management, Syracuse, NY, 13244-2450, United States of America, scfay@syr.edu, Jinhong Xie

Uncertainty about future demand for a retailer's products or services makes it difficult to set prices optimally and to manage inventories properly, thus undermining a retailer's profits. In this paper, we show that retailers could mitigate many of these problems by introducing probabilistic products. A probabilistic good is not a concrete good but is an offer involving a probability of getting any one of a set of multiple distinct items. For example, a retailer selling two different colors of sweaters, red and green, may offer an additional "probabilistic sweater," which can be either the red or green sweater. We show that offering probabilistic products can increase margins on customers with strong preferences, induce customers to purchase earlier in the season when their valuations are higher, reduce the size of markdowns required to sell less popular items, allow a retailer to maintain the "full" price for a longer period, reduce the number of units of less popular items that need to be liquidated, and retain a larger number of more popular items later into the season. Furthermore, using both an analytical model and a simulated market, we compare the profitability of probabilistic selling to the standard retailing practice of marking down merchandise over time, exploring the factors which affect the relative profitability of these two retail strategies. Finally, we argue that understanding this innovative retailing strategy of probabilistic selling is timely because recent advances in technology are creating opportunities to implement probabilistic selling efficiently.

2 - Warehouse Club Pricing and the Single Brand Strategy

Anthony Dukes, Assistant Professor, University of Southern California, Marshall School of Business HOH 623, University of Southern California, Los Angeles, CA, 90089, United States of America, dukes@marshall.usc.edu, Tansev Geylani, Kannan Srinivasan

Warehouse clubs such as BJ's, Costco, and Sam's Club charge their customers an annual fee for the right to shop in their stores at unit prices typically lower than at most other stores. In addition, these retailers sell narrow assortments consisting of few national brands. We investigate the link between these assortment and pricing strategies. We find that retailers, which target heavy-buyer segments, benefit more from scale economies than traditional retailers do. This creates incentives for suppliers to offer quantity discounts to the warehouse club. Our model predicts that as consumers' inventory and transportation costs decrease, the warehouse club format arises in equilibrium. This prediction is in line with the trend in house and automobile sizes in the US and the growth of this retail format during 80's and 90's.

3 - Improving Prepurchase Fit Through Demonstrations

Bruce McWilliams, Professor, Instituto Tecnologico Autonomo de Mexico (ITAM), RIo Hondo No 1, Col. Progreso Tizapan, Mexico, DF, 01080, Mexico, bruce@itam.mx, David Zilberman, Amir Heiman

This paper investigates the relationship between MBGs and product demonstrations as marketing tools to reduce risk for consumers that are heterogeneous in their uncertainty about product fit. We examine under what conditions these two marketing tools will be offered together, when retailers will offer only one, and when neither. We analyze a profit-maximizing monopolist retailer's decision to utilize MBGs and demonstrations and the benefits conferred by them. Compared with as-is sales, both MBGs and demonstrations can be used to expand the retailer's market and/or increase price, but will be adopted only if these benefits more than offset lost sales from customers identifying a non-fit. In contrast, when demonstrations are added to an existing MBG policy, there are no additional sales losses and a major benefit to the retailer is the elimination of expensive MBG return costs as consumers improve prepurchase information. The conditions under which such a strategy is desirable are identified. We also demonstrate that when offering an MBG, a retailer can lower the price below the as-is price if there are a large number of consumers with low likelihood of fit that can be reached with the combination of lower price and MBG.

4 - How Price Affects Returns? The Perceived Value and Incremental Customer Effects

Lei Wang, Rutgers Business School, 180 University Ave, Ackerson 301, Newark, NJ, 08830, United States of America, lei-wang@business.rutgers.edu, Eric Anderson, Karsten Hansen, Duncan Simester

Consumer product returns are enormously costly to retailers. To manage these costs, retailers rely on inventory management models which assume that a constant proportion of items will be returned. In this paper, we provide empirical evidence that rejects this straw-man model. We show theoretically how price changes influence consumer returns through two different mechanisms. First, consumers are less likely to return discounted items, which we refer to as the perceived value effect. Second, the distribution of customer types may change when a product is discounted, which we refer to as the incremental customer effect. We show both theoretically and empirically that the impact of this incremental customer effect on returns can be either positive or negative. A large-scale, cross-category analysis demonstrates that these effects can have a substantial impact on product returns. The results not only have implications for theoretical models of consumer returns, but also provide managerial insights into integrating marketing (i.e. pricing) and operations management (i.e., returns) functions.

■ TB05

Lower Level - Room 0320

Consumer Behavior: Preferences

Cluster: Buyer Behavior

Invited Session

Chair: Rachel Shacham,Doctoral Candidate, NYU Stern, rshacham@stern.nyu.edu

1 - On the Importance of Ignorance

Rachel Shacham, Doctoral Candidate, NYU Stern, rshacham@stern.nyu.edu, Peter Golder, Sha Yang

Research on new products has not yet considered the role of individuals awareness on subsequent consideration and adoption decisions. But focusing only on individuals who are already aware or ignoring this stage altogether may result in biased estimates and conclusions. To address this gap, we extend the sample selection model to allow for panel data with discrete outcomes and multiple selection paths over time. To understand how the role of each factor changes before, during, and after introduction, we estimate the model using longitudinal, individual-level data on a short life cycle category (motion pictures). By doing so, we are able to identify the factors affecting consumers probability of traversing the awareness, consideration, and purchase stages of the adoption process.

2 - When More Choice is More: On the Impact of Attitude Strength on Decision Processes

Maria Aladjem, McGill, 1001 Sherbrooke Street West, Montreal, Canada, maria.aladjem@mcgill.ca, Ulf Bockenholt

There is increasing agreement in the choice and decision-making literature that subjective experiences of difficulty, in their many facets, can impede choice. Greater choice, for instance, although initially believed to benefit consumers, may lower their willingness to choose and weaken their preferences since comparing many options is experienced as more difficult and frustrating than comparing a few options. Similar effects are observed in complex versus simplified product customization tasks. Although seemingly well-established, we revisit this difficulty effect in search and choice processes by considering attitude strength towards a product category as a moderator variable. The main question we investigate is whether consumers with strong attitudes are prone to similar difficulty experiences in their information search and choice, or whether intrinsic motivation and involvement resulting from the interaction with a well-liked category offset the effects of experienced difficulty and facilitate choice instead. The conclusions emerging from four experiments have clear implications for marketers and brand managers, since our results show that consumers with strong and weak prior attitudes appear to experience rather differently the same choice tasks, choice environments and product customization processes. Whereas difficulty is found consistently to affect negatively judgment and choice when prior attitudes are weak, we obtain opposite effects for consumers with strong attitudes. They arrive at more positive product evaluations and create bigger shopping baskets when choosing from a large choice set.

3 - The Effects of Website Design on Purchase Intention in Online Shopping: The Mediating Role of Trust and the Moderating Role of Culture

Satyabhusan Dash, Indian Institute of Management, Prabandh Nagar, Off Sitapur Road, India, satya@iiml.ac.in, Dianne Cyr, Boudhayan Ganguly, Milena Head

Lack of trust in online transactions has been cited, by past scholars, as the main reason for the abhorrence of online shopping. This paper proposes a model and provides empirical evidence on the impact of the website design factors on purchase intention in online transactions across customers of different cultural values. In the first phase, a causal model is developed in which the relative importance attached to the different website design factors on purchase intention in online shopping are identified. In the next phase, we propose a set of models that focus on the customers' cultural values—that moderate the relationship between the website design factors and trust and also that between trust and purchase intention. Data were collected through surveys from USA, India and Canada.Our empirical model has resulted in several meaningful conclusions. We have tested the mediating role of trust in online transactions. The present study provides empirical evidence that the online trust represents the generic mechanism through which the focal independent variables (Visual design, navigational design, and information design) are able to positively influence intention to transact online, and reduce the perceived risk of online transaction. For the first time in the context of online shopping we have demonstrated the moderating effect of culture in the relationship between the website design factors and trust and also between trust and purchase intention (and perceived risk). The model offers insights in the relative importance of website design factors contributing to trust in online shopping across customers of varying cultural values.

4 - Are Capital and Operating Costs Weighted Equally in Durable Goods Purchases?

James Sawhill, UC Berkeley, 545 Student Services Bldg #1900, Haas School of Business UC Berkeley, Berkeley, CA, 94720, United States of America, sawhill@haas.berkeley.edu

This paper explores whether consumers behave as if they are optimally trading off capital and operating costs when purchasing a durable good. It answers this question by developing a choice model for the US Automobile industry. The model includes forward looking consumer behavior with respect to gasoline prices which accounts for uncertainty in future operating costs. By applying this research to the critical automotive and energy sectors, this research provides insight into the important public policy issue of how the US can curb gasoline consumption. This paper also provides a market-based empirical test of the theories of present-biased preferences and hyperbolic discounting. According to these theories, consumers should underweight future (operating)costs relative to present (capital) costs when purchasing durable goods. However, based on the results of this analysis, we find no evidence to support theories that consumers systematically underweight the cost of future events in real market settings. However, we find significant evidence that large portions of the population are not making the trade-off optimally. Conservatively, at least 30% of the population is either drastically underweighting or overweighting operating costs when purchasing a new car.

■ TB06

1st Floor - Room 1210

Frontiers in Keyword Search Advertising

Cluster: Special Track: Interactive Maketing
Invited Session

Chair: Preyas Desai,Duke University, Fuqua School of Business, Durham, United States of America, desai@duke.edu

Co-Chair: Ken Wilbur, Assistant Professor of Marketing, USC Marshall School of Business, 3660 Trousdale Parkway, ACC 306E, Los Angeles, CA, 90089, United States of America, kennethcwilbur@gmail.com

1 - The Race for Sponsored Links: A Model of Competition for Paid Placement on a Search Engine

Zsolt Katona, Assistant Professor, Haas School of Business, UC Berkeley #1900, Berkeley, CA, 94720, United States of America, zskatona@haas.berkeley.edu

Paid placements on search engines reached sales of about $10 billion and represent the most rapidly growing form of online advertising today. In its classic form, a search engine sets up an auction for each search word in which competing web sites bid for their sponsored links to be displayed next to the search results. We model this advertising market focusing on two of its key characteristics: (i) the interaction between the list of search results and the list of sponsored links on the search page and, (ii) the inherent differences in click-through rates between sites. We find that both of these special aspects of search advertising have a significant effect on sites' bidding behavior and the equilibrium prices of sponsored links. In three extensions, we also explore (i) the endogenous choice of the number of sponsored links that the search engine sells, (ii) the case when sites bid for sponsored links in multiple search contexts and, (iii) a dynamic model where websites' bidding behavior is a function of their previous positions on the sponsored list. Our results shed light on the seemingly random order of sites on search engines' list of sponsored links as well as their variation over time. They also provide normative insights for both buyers and sellers of search advertising.

2 - Search Advertising and Competition

Preyas Desai, Duke University, Fuqua School of Business, Durham, United States of America, desai@duke.edu, Woochoel Shin

Keyword search advertising has grown to be a very important form of advertising. Its importance is expected to grow further in the current economic downturn. In spite of Google's dominance in this market, other search engines do command respectable market shares. We examine the effects of competition between search engines on the advertisers' bidding strategies and choice of search engine. We develop a model in which advertisers can choose from two competing two search engines, each offering multiple advertising slots. To sell these slots, each search engine holds a distinct position auction. In the position auction, both search engines rank advertisers by the order of the product of relevance and bid amount, as is the case in practice. Each search engine also chooses the minimum bid for its auction. Given these mechanisms, advertisers choose which position auction to participate in and how much to bid. We derive a Symmetric Nash Equilibrium (Varian 2007) where advertisers do not have an incentive to switch their position with any other advertiser. Our results on the advertiser strategy and the search engine strategy shed light on more realistic description and understanding of the phenomenon in the increasingly competitive search advertising market.

3 - Offline Advertising and Online Search

Yi Zhu, USC Marshall School of Business, 3660 Trousdale Parkway, ACC 306E, Los Angeles, CA, 90089, United States of America, zhuy@usc.edu, Ken Wilbur, Sha Yang

The internet has both lowered search costs and made available field data on consumer search. Traditional thinking about search advertising ignores the impact of offline advertising in generating branded and generic searches and in shaping user search behavior. We consider how advertising through traditional media affects organic consumer search by combining two large datasets on online search queries by consumers and offline advertising expenditures by brands. The questions we seek to answer are: in what categories, at what times, through what media, and for what types of consumers does offline advertising maximally impact online information gathering? Conditional on search, how is consumers' clicking behavior affected? Our results emphasize the need to balance push and pull marketing tactics and manage cross-media advertising synergies.

4 - Hybrid CPC/CPM Keyword Auctions

Ken Wilbur, Assistant Professor of Marketing, USC Marshall School of Business, 3660 Trousdale Parkway, ACC 306E, Los Angeles, CA, 90089, United States of America, kennethcwilbur@gmail.com, Yi Zhu

Cost-per-thousand (CPM) bidding is the dominant ad cost metric used in traditional media and is generally preferred by brand advertisers (e.g. Coca-Cola). Cost-per-click (CPC) bidding is the dominant ad cost metric used in keyword advertising and is generally preferred by direct response advertisers (e.g. Amazon.com). Websites like Facebook and Google are increasingly allowing advertisers to compete for ad space by entering either a CPM or a CPC bid. We ask how this new hybrid auction market affects advertisers' incentives. We model advertisers that may choose bid type, bid level, and click-through rate. We find that the website's expectations play a critical role. If the website fails to anticipate a correlation between bid type and click-through rate, then brand advertisers will always enter CPC bids with minimal click-through rates, and and direct response advertisers will always enter CPM bids with maximal click-through rates, reversing the conventional thinking. However, if the website anticipates the correlation between click-through rate and bid type, the incentive to "game the system" is removed and in equilibrium advertisers have no incentive to prefer a CPM bid over a CPC bid or vice versa.

■ TB07

1st Floor - Room 1220

Internet: Search

Cluster: Internet Marketing
Invited Session

Chair: Sungha Jang, PhD Student, The University of Texas at Dallas, P.O. Box 830688, SM 32, Richardson, TX, 75083, United States of America, sxj054000@utdallas.edu

1 - Toward a Strategic Theory of Content and Link Creation in Web-Based Networks

William Rand, Assistant Professor, University of Maryland, 3457 Van Munching Hall, College Park, MD, 20742, United States of America, wrand@umd.edu, Chris Dellarocas

Organizations that derive economic value from the creation and distribution of content (e.g. news and entertainment) are realizing that the volume and quality of Web traffic they attract increasingly depends not only on content they create themselves but also on links to external content that they choose to include at their websites. The trade-off between content creation and developing links to content produced by different organizations is a novel aspect of Web-based networks that entails complex consequences for all parties involved. For example, placing links to related content at a website can reduce the burden of content creation, allowing an organization to focus on the topics it understands best. At the same time, links acquaint readers with alternative sources of content and thus might result in traffic losses to competitors. Moreover, identifying good link targets incurs search costs that could perhaps be better spent on improving a site's content. As a result, content creation, search, and linking to third-party content form an ensemble of interdependent activities that organizations aiming to attract and monetize Web traffic must learn how to use strategically and combine effectively to survive and thrive in this new competitive environment that is often referred to as the "link economy". Using a combination of game theory and agent-based modeling we explore (a) how organizations can strategically combine content creation, search and linking to optimize traffic and revenue in dynamic settings, (b) what are the properties of content networks that emerge when some or all organizations are acting strategically, (c) what are the properties (quality, breadth, diversity etc.) of the content that becomes available to society in such networks.

2 - An Empirical Model of Consumer Search Costs for Information Goods

Junlin Du, PhD, Kelley School of Business, Indiana University, 2451 E 10 Street, 616, Bloomington, IN, 47408, United States of America, duj@indiana.edu, Yacheng Sun

Information goods require consumers to incur search costs to identify their candidates of consumption. While companies have invested in various ways, such as improving their web page designs and building better recommendation systems, to reduce such costs, it remains unclear to what extent are their investments justified. Our paper answers this question in the setting of subscription-based information goods, by providing a way that quantifies the magnitude of consumer search costs and the impact of such costs on customer lifetime value (CLV). We first conduct numerical experiments to show that search costs can be retrieved from simulated data. We then apply our model to a real dataset from an online DVD rental company. Our structural model, which explicitly recognizes the importance of consumer search in addition to their consumption, produces much better predictions of customer retention and customer lifetime value than a model with consumption alone. We also find it important to account for forward-looking consumers. Based on estimation results we conduct simulations to derive the optimal search cost reduction (OSCR) policy for the company. Our major findings include (1) a reduction of consumers' search costs translates into higher consumption rate and consequently, higher customer retention rate and customer lifetime value; (2) the OSCR must consider consumers' heterogeneity in their consumption utility, search costs and sizes of preference pools; (3) forward-looking consumers, together with the specific pricing strategy used by the company, have non-trivial implications on OSCR. Our study generates insights into consumers' search for information goods. Substantively, we offer policy recommendations for practitioners who have the means to influence consumers' search.

3 - The Impact of a Non-transactional Website on Offline Customer Buying Behavior

Erjen van Nierop, University of Groningen, Department of Marketing, P.O. Box 800, 9700 AV, Groningen, Netherlands, j.e.m.van.nierop@rug.nl, Marije Teerling, Peter S.H. Leeflang, Eelko Huizingh

We study the effects of the use of a non-transactional (i.e. purely informational) website on offline customer buying behavior for a large national retailer. We model the effects of individual online behavior on category-specific offline buying behavior. The model is calibrated through the estimation of Tobit-II model (monthly amount spent per category), with effect parameters that are allowed to vary across individuals. Data about online and offline behavior are collected among customers at a large retailer in the Netherlands. The results show that non-transactional websites may entail more bad than good news, because the majority of website visitors appear to become more efficient in their offline shopping; that is, they engage in fewer shopping trips and spend less in all categories. We compare shoppers who exhibit negative website effects with the few who show positive effects.

4 - Searcher Types and Brand Choices in Automobile Purchase

Sungha Jang, PhD Student, The University of Texas at Dallas, P.O. Box 830688, SM 32, Richardson, TX, 75083, United States of America, sxj054000@utdallas.edu, Brian Ratchford

We classify new automobile buyers in U.S. into searcher types based on time spent with various information sources including friends, manufacturers, dealers, etc. We especially notice the role of internal search and the Internet search as it is observed that buyers do not search long (the median of search time is six hours) and that half of buyers do not use the Internet for search. We further investigate whether searcher types are related to country level brand choice and brand switch. The results show that 1) searcher types consist of internal/Internet, internal/non-Internet, external/Internet, external/non-Internet, heavy, and dealer depending searchers, 2) internal searchers are likely to choose American brands while external searchers are likely to choose foreign brands (Japanese, European, and Korean), and 3) internal searchers are likely to choose familiar brands while external searchers are likely to try new brands. Our findings will give an insight on automobile buyer types and provide auto makers a guideline for targeted advertising and promotion based on information sources which buyers use.

■ TB08

1st Floor - Room 1230

Bayesian Econometrics: Applications

Cluster: Econometric Models

Invited Session

Chair: Hisashi Ishida, Student, University of Tsukuba, Tsukuba, Japan, ishida50@sk.tsukuba.ac.jp

1 - Regular and Irregular Purchase Timing Behaviors

Wei-Lin Wang, National Taiwan University, No. 1, Sec. 4, Roosevelt Rd., Taipei, Taiwan - ROC, f94724014@ntu.edu.tw, Li-Chung Jen, Demetrios Vakratsas

Regularity in purchase timing has been widely discussed in the literature. Many researchers have found that individual consumers seem to follow predictable purchasing schedules, but occasionally they may deviate from their stable patterns. Such regular and irregular purchase timing behaviors at an individual level, however, have not been systematically examined. From an aggregate level, some researchers proposed that consumers are characterized as either "regular" or "random" in terms of the relative degree of regularity of their purchasing timing behaviors. Other researchers from the individual level questioned the classification, modeling the purchase timing behaviors as a distribution. Yet such a model specification could neither capture the irregular purchasing behaviors nor estimate the occurrence probability of the irregularity. This paper applied a component mixture model to investigate individual household's regular and irregular purchasing timing behaviors. Specifically, the paper treated the classification of an individual household's regular and irregular purchase behaviors and the estimation of the household's propensity to engage in irregular purchase. An empirical application to sugar and margarine datasets suggested that regularity could account for most households' purchasing behaviors, while some households did engage in irregular purchases. Two modes of irregular purchase timing behaviors were detected: "emergency" purchasing behavior (irregularly accelerating inter-purchase times) and "slack" purchasing behavior (irregularly prolonging inter-purchase times). These two types of irregular behaviors have managerial implications that could help marketer to monitor the customer relationship and to formulate marketing activities.

2 - Are We "Halos" or "Formators"? - A Bayesian Mixture Model Analysis of Customer Satisfaction Data

Joachim Bueschken, Catholic University, Auf der Schanz 49, Ingolstadt, 85049, Germany, jb@wfi.edu, Thomas Otter, Greg Allenby

We propose a Bayesian finite mixture model for the analysis of Customer Satisfaction (CS) data that allows for differentiation of consumers with regard to their CS evaluation process. We propose that consumers are one of two types: "formators" or "halos". "Formators" evaluate their satisfaction with attributes of a service or product first and then combine such evalua-tions to global satisfaction in a formative way. Alternatively, we may assume that global CS determines partial CS scores. This "halo" model implies that customers form global or over-all CS first, which then effects partial CS evaluations. Whether consumers are halos or formators is typically not ob-served. We incorporate the possibility that different customers can be different types by a finite mixture modeling approach, in which the individual consumer's type of CS evaluation is a latent state. We first test our model with simulated data and show that it identifies group membership and other model pa-rameters well. We then apply the Bayesian mixture model to a real-life categorical CS data set. The observed categorical CS data is assumed to arise from latent continuous CS evalua-tions. It is demonstrated that ignoring the mixture of types has a significant and possibly detrimental impact on the empirical analysis of CS data. Implications and directions for future research are discussed.

3 - Modeling Latent Geo-dependent Attitudes Using Bayesian Spatial Factor Analysis

Stanislav Stakhovych, Marketing Department, University of Groningen, P.O. Box 800, Groningen, 9700AV, Netherlands, s.stakhovych@rug.nl, Tammo Bijmolt, Michel Wedel

Spatial variation in attitudes plays an important role in decisions on geographical marketing efforts, such as targeting of direct mail campaigns and scheduling of sales representatives. Similarly, it is important for financial institutions to optimally assign their financial planners across servable geographical regions. This spatial assigning is justified by different specialization of planners and by spatial heterogeneity of customers. Under planners' specialization we mean their major activities such as insurance, mortgage, investment, retirement, etc. Regarding spatial heterogeneity we mean that consumer preferences and attitudes towards financial products are not evenly distributed across space. In other words, there are certain underlying unobserved latent factors which could be spatially correlated and knowing them will allow financial institution to operate more efficient on this market. Unfortunately, because of unobservable nature of these factors, it is difficult to pursue this goal. The proposed spatial factor analytical model allows extracting unobserved spatially correlated latent factors, which will help assigning financial planners more efficient. The model is implemented in Bayesian framework and its performance is evaluated on artificial data. Finally, it is applied to real data with demonstration of its applicability to solve real-life tasks.

4 - Simultaneous Use Probability of Mobile Internet and Other Media by Multivariate Probit Model

Hisashi Ishida, Student, University of Tsukuba, 1-1-1, Tennoudai, Tsukuba, Japan, ishida50@sk.tsukuba.ac.jp, Fumiyo Kondo

According to a report of 2008 Japanese government, the percentage of the contracts of mobile phones in Japan has reached 85.6%, which shows a popularity of accessing to information anytime, anywhere by Japanese people. Under these circumstances, marketing vehicle to approach consumers via multiple media such as a combination of TV and mobile Internet is getting very popular in Japan. The purpose of our research is to find out factors to influence on simultaneous use of mobile internet with 11 kinds of media especially focusing on "amusement service"and "study information services" that were chosen among 21 kinds of mobile information services. Those services have mostly penetration rates of around 70% except "E-mail with pictures" and there are still possibilities of further market expansion in the near future. A simultaneous use probability of mobile Internet and other media is estimated by using Bayesian Multivariate Probit Model that is suitable for the analysis on individual users' behavioral patterns. The results provide efficient approaches to the consumers of mobile information services and will contribute to further expansion of mobile information service market. The results of our research have shown which explanatory variables of potential customers have influence on which simultaneous use of mobile internet with other medium in which direction. By using appropriate pair-wise advertisement vehicles, improvements of accessibility to potential customers can be achieved. Moreover, since it became obvious that customers have a variety of information service needs and diversities of simultaneous use of a pair of media among customers were observed, customer segmentation by needs as well as by simultaneous media uses appears to be necessary.

■ TB09

1st Floor - Room 1240

New Technologies for Eliciting Customer Preferences

Cluster: Marketing Models

Invited Session

Chair: Catherine Tucker,MIT Sloan School of Management, 1 Amherst St, Cambridge, MA, 02142, United States of America, cetucker@MIT.EDU

1 - Second Choice Score (SCS): An Incentive-Aligned Loyalty Metric

Songting Dong, Tsinghua University, School of Economics and Management, Beijing, 100084, China, dongst@sem.tsinghua.edu.cn, Min Ding, Ping Zhao

Loyalty metrics such as customer satisfaction and repurchase intention have been widely adopted by practitioners to, among other objectives, infer a firm's future performance. The utility of these metrics, however, is controversial among both academics and practitioners. Despite its intuitive appeal, it is a major concern that the survey questions used to construct these metrics are hypothetical in nature, and focus on attitude and intention instead of behavior. We propose an incentive-aligned metric, Second Chance Score (SCS), as an alternative to the traditional loyalty metrics. Instead of responding to satisfaction/loyalty survey, a respondent in SCS is offered the opportunity to sell his/her currently owned product back to us for its market price, and then purchase an alternative product from a comprehensive set of competing products currently in market. He/she also has the option of keeping his/her current product. A respondent in SCS is incentivized to reveal his/her true post-purchase preference/loyalty, and it provides a practitioner with a behavioral measure instead of an attitudinal/intention measure. The responses in SCS can be used for at least two purposes, (1) the percentage of respondents who choose to keep their current product is a direct measure of loyalty among a firm's existing customers; and (2) the actual selections of competing products from the set, by those who choose to do so, will reveal the preference changes for specific product features after respondents have experienced their current product. SCS is not meant as a replacement for the traditional loyalty measures, but rather a complement. We validate this new metric in a contrast experiment against traditional loyalty measures.

2 - Empirical Test of Incentive-compatible Direct Elicitation of Heuristic Decision Rules

John Hauser, Kirin Professor of Marketing, MIT, 1 Amherst Street, Cambridge, MA, 02142, United States of America, jhauser@mit.edu, Steven Gaskin, Daria Silinskaia, Songting Dong, Zhilin Yang, Min Ding, Chenting Su

When faced with a large number of features and/or profiles, consumers often use heuristic decision rules to decide which products to consider further and, ultimately, to choose. Recently, a variety of decompositional methods have been proposed and tested to estimate such heuristic decision rules from observations of consideration sets and/or choice. However, because these methods require respondents to evaluate an experimental design of profiles, they do not scale well to large numbers of features or profiles. We investigate a method in which respondents are given incentives to think hard and respond truthfully when they describe the rules (compensatory and non-compensatory) that they use to (1) consider products for further evaluation and (2) choose from within the consideration set. In particular, respondents are asked to instruct an agent who will act in their stead to select a prize for them should they win a lottery. The lottery is real and the agents are audited enforcing incentive compatibility throughout the system. In a Hong Kong-based experiment with mobile phones, we compare "teaching agents to choose (TAC)" with existing compensatory, non-compensatory, and mixed decompositional methods. (An initial validation task occurs in the survey; a second validation task six weeks later.) TAC does at least as well as existing methods on both consideration and choice demonstrating the feasibility of incentive-compatible direct elicitation. Furthermore, we present evidence that TAC is easier for the respondent and scales better to large numbers of features and profiles.

3 - Morphing Websites in the Presence of Switching Costs

Gui Liberali, Visiting Scholar, MIT Sloan School of Management, E40-179, One Amherst Street, Cambridge, MA, 02142, United States of America, liberali@mit.edu, Erin MacDonald, Glen Urban, John Hauser

Recent research suggests that there are, potentially, significant revenue increases (~20%) when the look and feel of a website is "morphed" to match a visitor's cognitive style. Recognizing that too many changes could be onerous to visitors, existing methods limit changes to one morph per visitor. Morphing engines could do better if they explicitly modeled switching costs. For example, a Netflix.com Bayesian engine might decide a visitor is analytic, visual, and impulsive and morph the website to become detailed and graphical, but focused on a few recommendations. Suppose though, with additional clicks, the Bayesian engine updates so that a different cognitive style is more likely. Should the website morph a second time? It clearly depends upon the cognitive costs (reduced probability of purchasing) induced by multiple morphs. Morphing engines now use expected Gittins' indices and assume independence among morphs. However, switching costs impose interdependence because the value of a morph depends upon the number of previous morphs. With switching costs, the "bandit" problem is no longer indexable and cannot be solved optimally without modification. We propose a bi-index strategy to balance exploration, exploitation, and switching costs. (Exploration is learning how morphing affects purchase probabilities; exploitation maximizes short-term sales.) This strategy, which solves two related dynamic programs, produces a near-optimal solution. One dynamic program is for continuing with the same morph; the other for switching. We demonstrate feasibility by benchmarking the system against one-time morphing, and illustrate our results with an experiment using a multiple morphing website developed for Suruga Bank where morphing occurs across cognitive and cultural states.

4 - When Do Markets Tip?

Avi Goldfarb, University of Toronto, Rotman School of Management, 105 St George St, Toronto, ON, M5M1N8, Canada, Avi.Goldfarb@Rotman.Utoronto.Ca, Ajay Agrawal

In this study, we explore a new way that products can fund their launch online. Specifically, we examine behavior on Sellaband, an online marketplace for music. In this marketplace, thousands of artists have posted songs and information in an attempt to attract "believers" (investors). Thousands of believers search the database and buy shares in the artists' future work. When an artist receives $50,000 in investments from believers they produce an album. We look for the timing and determinants of the inflection point where it becomes clear that an artist will eventually generate enough believers to produce an album. We find that once artists achieve a surprisingly small fraction of the total $50,000, the likelihood of eventually achieving the full amount rises substantially (to over 90%). We further explore how artist characteristics and marketing efforts influence the timing and the size of the inflection point.

5 - Privacy Protection and Technology Diffusion: The Case of Electronic Medical Records

Catherine Tucker, MIT Sloan School of Management, 1 Amherst St, Cambridge, MA, 02142, United States of America, cetucker@MIT.EDU, Amalia Miller

This paper quantifies the effect of state privacy regulation on the diffusion of Electronic Medical Record technology (EMR). EMR allows medical providers to store and exchange patient information using computers rather than paper records. Hospitals may be more likely to adopt EMR if they can reassure patients that their confidentiality is legally protected. Alternatively, privacy protection may inhibit adoption if hospitals cannot benefit from easily exchanging patient information with one another. We find that state privacy regulation restricting hospital release of health information reduces aggregate Enterprise EMR adoption by hospitals by more than 24 percent. We present evidence that suggests that this is due to suppression of network externalities.

■ TB11

2nd Floor - Room 2210

Choice Models: Consumer Response

Cluster: Choice
Invited Session

Chair: Sonika Singh, PhD Candidate, University of Texas at Dallas, SM 32 School Of Management, P.O. Box 830688, Richardson, 75080, United States of America, sxs067000@utd.edu

1 - Building Store Traffic: What Drives the Smart Consumer Into Your Store?

Sonika Singh, PhD Candidate, University of Texas at Dallas, SM 32 School Of Management, P.O. Box 830688, Richardson, 75080, United States of America, sxs067000@utd.edu, Andrei Strijnev, Brian Ratchford

Retailers use sales promotions to build store traffic and maximize category and store profits. Extant research has observed that most consumers tend to shop at two to five different stores and consumers are routinely targeted with price information from different retailers. This information serves as the basis for households to form price expectations about the same product category in different stores prior to undertaking a shopping trip. Therefore, visit to a store is likely to be dependent on other stores in a household's portfolio of stores. There has been some research about the effect of promotions within a store on store traffic. However, the issue of consumers' store choice as dependent on category prices in other stores (in a consumers' portfolio of stores) has not yet been addressed. Our research objective is to understand how category prices at different stores influence consumers' store choice (during a given trip) and consequently build store traffic. In this study we estimate a random coefficients bivariate probit model of consumer store choice. We use individual level household panel data of two grocery stores from two different chains. We find that there is considerable heterogeneity in household's decision to visit the two grocery stores based on the category prices in the two stores. The price elasticity of store trip estimates offer an insight as to how the retail managers can use the category price information of competitive stores to build store traffic and design loss leader categories to maximize store profits. Our results show that price elasticity of store trip is over-estimated when we treat store choice as an independent discrete choice process.

2 - Heterogeneous Hyperbolic Response of Sticker Shock

Chul Kim, KAIST, Supex 287, Hoegiro, Dongdaemoon-Gu, Seoul, 130-722, Korea, Republic of, gunbam@gmail.com, Duk Bin Jun

Many researchers have proposed several models to capture existence of reference price and Latitude of Price acceptance (hereafter LPA), and asymmetric price response. LPA is the range in which consumers indifferently respond to slightly different prices. LPA consists of two thresholds; upper threshold and lower threshold, and the reference price is located in this range. Also, according to asymmetric price effects theory, consumers may react more negatively to losses than they do positively to gains. However these models assume fixed threshold points and have three regimes (loss, gain, and LPA) which could induce nonlinear likelihood function. Therefore, theses models not only are difficult to estimate but also have unnatural assumptions. Thresholds might not be fixed but blurred in consumer's mind, and price response would be exponentially increase or decrease near the threshold points. Although using information about reference price could be helpful in determining exact objects and amount of price promotion, most researchers hardly use this information for optimal target marketing. Therefore, I propose heterogeneous hyperbolic response of sticker shock, price difference between retail price and reference price, in the utility function of choice model. By using hyperbolic sine function, this model is easy to estimate, since it has continuous likelihood functions and no regimes. Moreover, instead of modeling fixed threshold points, exponentially increasing and decreasing response to price difference could serve as fixed points. Therefore, this model could capture more realistic behavior of consumer behavior. Lastly, by using reference price information, this model could provide more profitable target marketing strategy than general heterogeneous choice model.

3 - Consumer Knowledge, Stated Preference, and Revealed Choice

Ying Jin, Peking University, Guanghua School of Management, Department of Marketing, Beijing, 100871, China, jinying@gsm.pku.edu.cn, Yuxin Chen, Meng Su

In this paper we investigate consumers' knowledge with various attributes of passenger vehicles and its effects on the inconsistency between stated preference and revealed choice. Previous research finds that consumers' knowledge plays an important role in their decision making process. However, it is still unclear how consumers' knowledge affects the inconsistency between stated preference and revealed choice. We collect the data from a total of 2034 consumers in China who plan to purchase a new vehicle within the next six months. Their knowledge on vehicles and their stated vehicle model preferences are elicited through a combination of conjoint experiments and survey questionnaires. Six months later, a second round survey is conducted for each participant. About seven hundred consumers actually bought a new vehicle and reported their actual automobile choices. We apply a multivariate hierarchical Bayesian choice model to jointly calibrate consumer knowledge on those essential attributes of automobiles. Furthermore, a binary logit model is implemented to examine the impacts of consumers' knowledge on the inconsistency between stated and revealed choice. We propose that consumers' knowledge can function as a significant indicator of the inconsistency between stated and revealed choice. The findings of this paper provide some additional insights in explaining the discrepancies between consumers' stated preferences and revealed preferences. It may help automobile firms make better predictions with regular consumer surveys and improve market share by influencing consumers' knowledge.

■ TB12

2nd Floor - Room 2220

Financial Market Consequences of Marketing Strategy

Cluster: Marketing and Finance
Invited Session

Chair: Natalie Mizik,Columbia Business School, 3022 Broadway, New York, NY, United States of America, nm2079@columbia.edu

1 - The (Unappreciated) Value of Marketing

Isaac Dinner, PhD Candidate, Columbia Business School, 311 Uris Hall, 3022 Broadway, New York, 10027, United States of America, idinner05@gsb.columbia.edu, Natalie Mizik, Don Lehmann

Because current earnings predict future financial performance, the stock market reacts strongly to earnings announcements. How rapidly and in what manner information about marketing actions and strategies is accounted for in the stock valuation is less clear. We examine the financial market's ability to fully and timely value marketing-related information released along with quarterly earnings announcements. We find evidence consistent with the market initially under-appreciating marketing and R&D effort. Specifically, we find differences in the immediate market response to earnings announcements for firms expanding versus reducing their marketing and R&D effort. However, we also observe a significantly greater positive stock price drift (i.e., systematic stock price adjustment) in the months following an earnings announcement for firms increasing marketing and/or R&D expenditures. We examine the dynamics and the mechanism underlying this differential drift. Firms increasing their marketing and/or R&D spending report significantly greater future operating performance than firms decreasing their marketing and R&D spending and the stock price adjustment (drift) accelerates around the time of the subsequent earnings announcement. Our findings suggest that the stock market takes time to fully incorporate implications of strategic marketing decisions. They also suggest the stock market tends to update firm valuation when the outcomes of marketing strategies are realized in future financial performance and new performance signals are sent to the market.

2 - Firm Innovation and the Ratchet Effect: How Firms Trade Off Value Creation in Financial and Product Markets

Fredrika Spencer, Duke University, 1 Towerview Dr, Durham, NC, United States of America, fjs3@duke.edu, Christine Moorman

We consider how firms manage and are managed by the stock market in the timing of the introduction of innovative products to the marketplace. We suspect and document that firms are rewarded for behavior consistent with ratcheting levels of innovation over time. This innovation ratchet incents firms to slow down the introduction of innovations so they exhibit a pattern of consistently exceeding prior performance. This strategic behavior results in higher abnormal returns for the firm in the stock market, but also the loss of revenues from products that are not introduced into product markets. Using twelve years of secondary data on firm innovations, firm stock returns, and estimated firm returns, we observe a subset of firms that play the innovation ratchet game. Firms with more resources and greater stock market scrutiny are more likely to fall into this class of firms. As expected, these firms suffer the greatest tradeoff between returns in the stock market and revenues in product markets. Hence, although the innovation ratchet motivates the firm to manage innovation so as to beat the ratchet over time, the firm is actually managed by the stock market in such a way that costs the firm a sizable amount of revenues associated with the delay of product introductions. Hence, value creation in financial markets and value creation in product markets are at odds when the firm plays the innovation ratchet game.

3 - Stock Market Valuation of Corporate Brand Strategy in Mergers and Acquisitions

Jonathan Knowles, CEO, Type 2 Consulting, 226 Fifth Avenue, 6th Floor, New York, NY, 10001, United States of America, j.knowles@type2consulting.com

We investigate whether certain types of corporate brand strategy are associated with abnormal returns in the two years following the completion of a merger. Our objective is to determine whether corporate brand strategy represents an underappreciated variable in determining post-merger success due to its role as a means for communicating context-appropriate positioning and messaging for the merged company, thereby assisting in securing the ongoing loyalty of customers, employees and investors (three constituencies whose behavior largely determines the success or failure of the merger). We put forward a classification of the corporate branding alternatives available to managers when engaging in a merger, each of which is associated with a particular set of messages regarding the strategic rationale for the merger. We use this classification to categorize more than a thousand mergers between two US entities with a transaction value of $1bn or more during the period 1995 to 2006. We use stock returns to establish whether any of the strategies is associated with abnormal returns.

4 - Managing for the Moment: The Use and Performance Implications of Real Activities and Accounting Accruals Manipulation Earnings Management Strategies

Natalie Mizik, Columbia Business School, 3022 Broadway, New York, NY, United States of America, nm2079@columbia.edu

Earnings management achieved through real activity manipulation (i.e., myopic management practices such as reducing "discretionary" spending to inflate current-term earnings) is of particular concern to marketers, as it is marketing programs that are most often cut in the pursuit of short-term gains. Our study focuses on and provides evidence of the scope and the financial consequences of this practice and accruals-based earnings management at the time of seasoned equity offerings. We find evidence of a tendency for firms to coordinate their accrual and real activities to artificially inflate earnings. We also find that the financial markets do not properly value firms inflating earnings and that this mis-valuation is more closely linked to real activity manipulation rather than accruals manipulation. Stakeholders and regulators need to recognize and appreciate the negative consequences of myopic earnings inflation practices and to consider potential changes to managerial incentive structures and non-financial information disclosure requirements to help remedy the problem.

■ TB13

2nd Floor - Room 2230

Entertainment Marketing: Internet

Cluster: Entertainment Marketing

Invited Session

Chair: Sebastiano Delre,Dr, Bocconi University, Via Roentgen 1, Milan, 20136, Italy, sebastiano.delre@unibocconi.it

1 - Fun and Beyond Fun: An Investigation of Consumers' Participation in Online Gaming

Chong Guan, PhD Candidate, Nanyang Technological University, S3-01B-C, 50 Nanyang Avenue, Singapore, 639798, Singapore, guan0010@ntu.edu.sg, Sunanda Sangwan, Judy Siguaw

Online games can be characterized as services that are strongly connected to leisure activities and fun-aspects of using hedonic information systems (Heijden 2004) or hedonic products (Hirschman & Holbrook1982). Prior studies show that significance of individual differences exists in online environment (Goldberg1992, Venkatesh & Brown 2001) and a better understanding of various consumers perception of the value of fun provided by the online games may help build better online gaming interfaces for prolonged use(Novak et al.2000). For pleasurable experiences, consumers often seek sensations on multiple sensory channels (Holbrook & Hirschman 1982), such as emotional or social appeal and human warmth. Increasing an online gaming interface's social presence (Argo et al. 2005) may have a positive impact on perceived fun for future participation. On the other hand, consumers are motivated to enjoy themselves and more likely to have fun when their context allows them the perceived flexibility of decision making and ego related resource to justify their participation in the activity (Okada 2005). When consumers are under the condition of ego-depletion, only limited regulatory resource can be used for decision making which may affect their evaluation of the fun derived from online gaming in variance (Vohs et al. 2008). This paper is composed of two parts. In study one, we concentrate on the relationship between perceived fun derived from online gaming depending on the consumers' personality characteristics. A survey conducted with 304 respondents supports our premises in evaluating value of fun. Study two current experiments examine how social presence and ego-depletion affects the evaluation of fun derived from online gaming. The results of both studies will be presented at the conference.

2 - The World is Not Enough - A Social Influence Model Multigroup Analysis of Virtual World Behavior

Boris Blechschmidt, Dipl.-Kfm., University of Muenster, Institute of B-to-B Marketing, Am Stadtgraben 13-15, Muenster, 48143, Germany, boris.blechschmidt@uni-muenster.de, Klaus Backhaus, Alexander Freund

First presented in management science by Bagozzi (2000), the social influence model (SIM) has been established as an alternative explanatory model to the technology acceptance model (e.g., Davis, 1989). Specifically, the SIM is suitable for the application to social environments. In a marketing context, it has been applied in the context of virtual community research (Bagozzi & Dholakia, 2002; Dholakia, Bagozzi & Pearo, 2004, Bagozzi & Dholakia, 2006a, 2006b). In this paper, we present a social influence model in a related context, namely that of virtual worlds, which offer inhabitants more possibilities of social interaction than virtual communities. Besides implementing the SIM in this context, we strived to incorporate motivational drivers of usage specific to virtual worlds. In a pre-study (N = 620 Second Life© inhabitants) we empirically identified four main motives using exploratory factor analysis. The main study featured a survey conducted on a globally distributed sample of N = 500 active members of Second Life©. This sample was split into two subsamples, which differed with respect to money-spending behavior (no-spending vs. spending subsamples). SEM analyses showed good fit of the social influence model to the data. Of further substantial relevance for marketing practice in virtual worlds, multigroup analysis revealed significant differences in structural relationships for certain motivational antecedents of inworld behavior. We consider both research and managerial implications of our findings.

3 - Simulating Cinema: How Cross-Cultural Differences in Social Influence Explain Box Office Distribution

Sebastiano Delre, Dr, Bocconi University, Via Roentgen 1, Milan, 20136, Italy, sebastiano.delre@unibocconi.it, Thijs Broekhuizen, Anna Torres

This paper uses a mixed method approach to show how cross-cultural differences in social influences can explain differences in distributions of market shares in different markets. First, we develop a realistic agent-based model that mimics the behavior of visitors, and produces the stylized effects. The simulation results indicate that social influences derived from the past and intended behaviors of others increase market inequalities. Second, we validate this assumption by making use of cross-cultural differences in Hofstede's Collectivism-Individualism trait as a proxy for the level of social influence present in a market. The results of this field study, performed in China, the Netherlands, Italy and Spain, empirically show that social influences differ across countries, and that these differences can explain the apparent differences in the dispersion of movies' market shares. The empirical survey further contributes to understanding the role of social influence by revealing a U-shaped relationship between Hofstede's Individualism index score and the degree of social influence.

■ TB14

2nd Floor - Room 2240

Cause, Charity, and Not-for-Profit Marketing I

Cluster: Marketing Strategy

Invited Session

Chair: Yue Li,Associate Professor of Management, Shantou University, Business School, 243 University Road, Shantou, GD, 515063, China, liyue@stu.edu.cn

1 - Success Factors of Cause-Related Marketing

Anne Julie Fries, PhD Candidate/Research Assistant, University of Cologne, Albertus-Magnus-Platz 1, Seminar für Marktforschung, Köln (Cologne), D-50923, Germany, fries@wiso.uni-koeln.de, Karen Gedenk, Franziska Völckner

Cause-related Marketing (CRM), i. e., the transaction-based partnership of profit- and non-profit-organizations, belongs to the fastest growing marketing tools. In a CRM campaign the purchase of a product by the consumer triggers a donation to a specific cause. This can have positive and negative effects for the profit-organization. To avoid the negative effects and strengthen the positive ones, it is important to understand how a CRM campaign should be designed by the profit-organization. The main aim of this research is to identify relevant drivers of CRM success and to determine their importance. Previous studies typically look at only one or two potential success factors and thus, their relative importance is not clear. Consequently, the main aim of this research is to bring together all potentially relevant success factors of CRM from the literature and practice and to analyze which drivers are mainly responsible for the success of such campaigns. The factors can be assigned to five groups: (1) cause characteristics, (2) product characteristics, (3) the relationship between the cause and the product, (4) the design elements of CRM campaigns and (5) company characteristics. Our focus lies on success factors that a company can actually influence while designing a CRM campaign. A large-scale survey was conducted, testing the effect of a broad variety of real and fictitious CRM campaigns on campaign evaluation and purchase behavior. We determine the relative importance of each driver and the interrelations between success drivers.

2 - Cause Marketing: Spillover Effects of Cause-Related Products in a Product Portfolio

Aradhna Krishna, Professor, University of Michigan, Ross School of Business Rm R6354, 701 Tappan Street, Ann Arbor, MI 48109-1234, aradhna@bus.umich.edu, Uday Rajan

The number of firms carrying a cause-related product has significantly increased in recent years. We consider a duopoly model of competition between firms in two products, to determine which products a firm will link to a cause. We first test the behavioral underpinnings of our model in two laboratory experiments, to demonstrate the existence of both a direct utility benefit to consumers from cause marketing (CM) and a spillover benefit onto other products in the portfolio. Linking one product in a product portfolio to a cause can therefore increase sales both of that product and, via a spillover effect, of other products in the firm's portfolio. We construct a CM game in which each firm chooses which products, if any, to place on CM. We show that if a single firm in the market links only one product to a cause, it can raise prices on both products and earn a higher profit. We assume each firm has an advantage in one product, and show that there is an equilibrium in which each firm links only its disadvantaged product to a cause. If the spillover effect is strong, there is a second equilibrium in which each firm links only its advantaged product to a cause. In each case, firms raise their prices on both products, and earn higher profits than when neither firm engages in CM. We also show that a firm will never place its entire portfolio on CM. Overall, our work implies that, by carrying cause-related products, companies can not only improve their image in the public eye but also increase profits.

3 - Price and Quality Decisions for Nonprofit Organizations Competing with Businesses

Charles Weinberg, University of British Columbia, 2053 Main Mall, Vancouver, Canada, weinberg@sauder.ubc.ca, Yong Liu

The purpose of this research is to provide a better understanding of the forces that influence price and quality decisions by nonprofit organizations. Price and quality decisions are particularly challenging for nonprofit organizations because they have a social rather than a for-profit objective function, they must obey a legal restriction not to distribute possible financial surpluses to those who control the organization's assets, and they have the opportunity to receive donations. Competition involving nonprofit organizations is rarely studies in the analytical literature. In this paper, we attempt to model the price and quality strategies chosen by nonprofits that compete with businesses. Such mixed markets occur in a number of areas including the arts, education, health care and social services. As quality is costly to provide, it is unclear under what conditions a nonprofit would choose higher or lower quality than that of a business and what prices it would charge. Nonprofit arts organizations, for example, often present "high culture" events which appeal to a limited audience. On the other hand, many health clinics appear to provide a limited level of care to people who cannot afford a higher quality provider. We develop a theoretical model to understand the forces which lead businesses and nonprofits to choose different market positions in terms of price and quality. Using game theoretic approaches, we develop solutions which indicate the equilibrium strategies for both the nonprofit and the business, and the conditions under which each entity which chose a higher (lower) price or quality level than its competitor.

4 - Corporate Philanthropy in China: The Case of 5.12 Wenchuan Earthquake

Yue Li, Associate Professor of Management, Shantou University, Business School, 243 University Road, Shantou, GD, 515063, China, liyue@stu.edu.cn

Corporate philanthropy is the practice of corporations donating a portion of their profits or resources to a nonprofit cause or organization. Although corporate philanthropy has recently emerged as an important business research topic, little research has focused on corporate philanthropy in China. Long criticized for be lacking business ethics and shirking social responsibilities, Chinese businesses made an unprecedented amount of donation to 5.12 Wenchuan Earthquake. The earthquake happening in Wenchuan, China on May 12, 2008 claimed tens of thousands of lives and left millions homeless. Soon after the earthquake, firms and public donated cash and non-cash rescue materials to the area. In several months, US$6 billion had been donated, a large portion of which was from Chinese businesses. This study examines corporate giving in China through an analysis of firms?donation decision after the earthquake. By looking at donation promises of top 500 Chinese firms, the study tries to understand how the firm's governance structure and other characteristics affect its donation decision making. Two dependent variables in the study are amount of donation and response time. The independent variables are firm size, ownership (state-owned or non-state-owned, public or private), industry, etc. The study finds that firms in consumer products industries donated more and acted more quickly to the cause than industrial products industries. Firm size and ownership affect donation decisions. The study also finds that firms experienced strong social pressure when they made decision about whether, how much, and how quick to donate. The study sheds some light on corporate philanthropy in china.

■ TB15

2nd Floor - Room 2320

Customer Lifetime Value: Strategy

Cluster: Customer Satisfaction, Loyaly, and Lifetime Value
Invited Session

Chair: Jaime Romero,Lecturer, U, Autonoma Madrid, c/ Fco Tomás y Valiente, 5, Fac. Economicas y Empresariales, Madrid, 28049, Spain, jaime.romero@uam.es

1 - Exploring Event Related Dependence Between Touch Point Outcomes and Customer Lifetime Value

Howard Dover, Assistant Professor, Salisbury University, 1101 Camden Ave, Salisbury, MD, 21801, United States of America, hfdover@salisbury.edu

A key reality of customer relationships management is that a customer's interaction with the firm, via touch points, affects the customer's lifetime value. Specifically, customer lifetime value is directly affected by sales force interaction. However, the outcome of the sales force encounter is not independent of the customer's lifetime value probability. A multi-level model is proposed to explore the event related dependence between these two processes. This model can be used to allocate individuals customer communication with the sales person most likely to increase the customer's lifetime value and thereby increase the customer equity of the firm.

2 - Modeling the Impact of Marketing Interventions on Mix of New Customers Drawn to a Firm

Shameek Sinha, Doctoral Graduate Student, Department of Marketing, Red McCombs School of Business, University of Texas at Austin, 1 University Station, B6700, CBA 7.202, 21st and Speedway, Austin, TX, 78712, United States of America, shameek.sinha@phd.mccombs.utexas.edu, Leigh McAlister

The CRM literature provides tools and insights that have been demonstrated to be useful to managers. This literature, though, is characterized primarily by the ëbackward-looking', 'inward-oriented' approaches to calculate customer lifetime value. We refer to an approach as 'inward-oriented' if the approach is restricted to the firm's internal database of customers' purchases. Because such approaches do not consider potential new customers or spending by the firm's current customers outside the firm, such approaches necessarily miss some growth opportunities for the firm. We refer to an approach as 'backward-looking' if the approach uses a customer's historical purchase patterns to project that customer's future value. Such approaches cannot account for any customer-specific or marketing-intervention-driven changes that might change customers' values in the future. The proposed approach is 'outward-oriented' in that we use a nationally representative dataset that is not tied to any particular firm. The approach is 'forward-looking' in that we model future spending as a function of potential marketing interventions. In particular, we use the attraction model developed by McAlister-George-Chien (2008) to consider the impact of distribution channel and of advertising medium on the expected future value of customers' in apparel, packaged goods and athletic equipment categories. We find that the internet as a distribution channel draws more profitable customers for women's apparel than for men's apparel and that membership warehouses attract more profitable customers for groceries and athletic equipments than for apparel. As an advertising medium, the internet draws more profitable customers for women's apparel and blogs draw more profitable shoppers for athletic equipment.

3 - Assessing the Effects of Service Usage and Subscription on Customer Value

David Schweidel, Assistant Professor, Wisconsin School of Business, 975 University Ave, 4191B Grainger Hall, Madison, WI, 53706, United States of America, dschweidel@bus.wisc.edu, Anita Elberse

Acquisition and retention processes are key to assessing the value of individual customers and a firm's customer base. In addition to the potential relationship between the acquisition and retention processes, service usage may also affect the value of customers. Different levels of service may have their own price points. Moreover, there may be relationships among the time until a prospect is acquired, its service usage after being acquired, and the duration for which it maintains service. Using data from an online DVD rental company, we jointly model these three processes, allowing for a flexible relationship among them, and demonstrate how customers can be valued based on when they were acquired, their usage behavior, and the duration for which they have maintained service to date. Using our modeling framework, we assess the potentially different impact of the size of the company's DVD library on acquisition and retention. We also consider the popularity of DVD titles and examine if the assortment of DVDs rented is related to the acquisition and retention processes. This may reveal different types of customers, such as "connoisseurs" who prefer less popular DVDs and "omnivores" who choose both popular and less popular DVDs. We explore how customer value differs across these segments and discuss the potential managerial implications.

4 - Customer Portfolio Management

Jaime Romero, Lecturer, U, Autonoma Madrid, c/ Fco Tomás y Valiente, 5, Fac. Economicas y Empresariales, Madrid, 28049, Spain, jaime.romero@uam.es, Martin Boehm, Anna Downarowicz

Customer lifetime value has become a standard metric of marketing performance and therefore constitutes a useful guide for decision making. Until now, the estimation methods focusing on the expected value of a customer relationship do not account for the differential risk across customers (Hogan et al 2002). As a consequence, customer risk has been neglected in customer base analysis and therefore in decision making. This can have dangerous implications for companies. For instance, current CLV measurement practices will predict that high risk customers are more valuable than low risk customers (Gupta 2006). Taking just into account profitability information, a manager would focus on customers who, although profitable, are very volatile and therefore could endanger the firm continuity. Considering risk and profitability jointly in decision making would avoid this type of decisions. Thus, building upon financial literature on portfolio management we propose an approach for customer management that considers both variables. We treat the customer base as a whole and provide a balanced portfolio of customers in terms of return and risk. In a large empirical study we show how our approach leads to a more efficient composition of the customer base in terms of these variables, in contrast to decisions which are entirely grounded on analysis of the profitability of customers at an individual level. We provide two implementations of our approach. The first one optimizes the customer base modifying its composition in terms of risk and return of market segments, while the second one employs risk and return of each customer. We derive implications for customer selection and for evaluation of marketing actions targeted to current customers. Presenting author funded by ECO2008-01557.

Thursday, 1:30pm - 3:00pm

■ TC01

Lower Level - Room 0210

Innovation

Cluster: Innovation

Invited Session

Chair: Dennis Herhausen,University St. Gallen, Dufuorstr. 40a, St. Gallen, 9000, Switzerland, dennis.herhausen@unisg.ch

1 - External Social Capital: A Risk Mitigating Resource of the Innovative Firm

William Baker, Professor, SDSU, San-Diego, San-Diego, United States of America, wbaker@mail.sdsu.edu, Amir Grinstein, Nukhet Harmancioglu

While entrepreneurial orientation (EO) and external social capital (ESC) are both related to organizational learning and are viewed as important drivers of successful innovations, their joint effect on the success of new product programs in established firms has yet to be explored. This research examines the roles of EO and ESC in minimizing market risks and creating superior innovation performance. Specifically, we examine their main effects and interaction effects in predicting three dimensions of innovation performance: radical innovation, share of new product sales and market response speed. The results show that (1) EO was positively related directly to all three innovation performance outcomes; (2) ESC was positively related to radical innovation and share of new product sales, but negatively related to market response speed; and (3) ESC negatively moderates the relationships between EO and innovation performance outcomes. These results support the premise that ESC can mitigate risks for innovating firms. Specifically, high ESC in aggressive firms (those with high EO), slows down the innovation process, helping these firms to confirm and refine ideas. Conversely, high ESC in more conservative firms (those with low EO) appears to speed up the innovation process, giving these firms the confidence to move forward with innovation programs earlier than conservative firms with less ESC. Finally, ESC was more beneficial for SMEs than large firms, ostensibly because SMEs have less human capital and less potential for diverse informational inputs into decision-making.

2 - Innovating in the Age of Aesthetics: Do we Need a New Conceptualization of Innovation Capability

Gaia Rubera, Assistant Professor, Michigan State University, North Business Complex, East Lansing, MI, 48823, United States of America, rubera@bus.msu.edu, Erkan Ozkaya, Roger Calantone

Marketing and innovation researchers have abundantly investigated the effect of innovation capability on firm performance; where innovation capability is defined as the capability to utilize the technological know-how inside a firm in order to generate a constant flow of new products. However, even a superficial look at the type of new products introduced in the last few years clearly shows that this vision of a firm's innovation capability is very incomplete. From LG's Black Series to Dell's colorful laptops, products with a cool appearance and stylish design are flooding the market. Hence, aesthetics is another type of critical know-how that firms must accumulate in order to nourish their innovation capability. This paper adopts an input-output perspective, in which innovation capability is conceptualized as a firms' capability to deploy its technological and aesthetic know-how to introduce new products. We analyze a) the nature of the interaction effect between the two types of know-how and b) which type of know-how has the biggest impact on innovation capability. To guarantee consistency with previous studies, we include the role of marketing capability in our model. Innovation and marketing capability, as well as their interaction effect, supposedly influence a firm's performance. The model is tested in a sample of 200 consumer electronics firms, through a Stochastic Frontier Estimation approach. Theoretical and managerial implications are discussed.

3 - Uncertainty and Idea Generation in Open Innovation

Chander Velu, Assitant Professor, University of Cambridge, Trumpington Street, Cambridge, CB2 1AG, United Kingdom, c.velu@jbs.cam.ac.uk, Tirthankar Charkarvarty, Michael Kitson

Traditionally, innovation was done internally and firms rarely resorted to sharing innovative results as a means to generate competitive advantage. More recently, firms have moved increasingly to a more open innovation model. In an open innovation model firms leverage the discovery of others and are also willing to commercialize their innovation by using third party firms whose business models might be better suited to bring the innovation to market. As a result, firms are able to accelerate their rate of innovation and create a more compelling competitive position. Open innovation models require systematic innovation processes that engage third parties for both idea generation and commercialization. Research on open innovation so far have predominantly focused on the theoretical framework with little empirical investigations on the process of idea generation and commercialization. This paper seeks to address the relationship between the level of uncertainty and the breadth and depth of search by firms for new ideas. We use the UK Community Innovation Survey to test our hypotheses. Economic uncertainty is measured by the volatility of turnover and the perceived demand uncertainty. We observe that using both the measures of uncertainty innovative search activity (depth and breadth) tends to respond positively to an increase in uncertainty. However this response is more pronounced for firms which had lower levels of innovative activity prior to the change in uncertainty while firms with higher levels tend to drop levels of innovation activity. We explore some of the managerial implications of how firms search for new ideas in an uncertain environment.

4 - Marketing Innovations: Conceptualization, Antecedents and Consequences of Marketing Innovativeness

Dennis Herhausen, University St. Gallen, Dufuorstr. 40a, St. Gallen, 9000, Switzerland, dennis.herhausen@unisg.ch, Marcus Schoegel

As products and services are becoming more and more similar and replaceable in many markets, companies have to permanently search for new sources of innovation. Especially in mature markets, marketing innovations (MI) provide an opportunity for differentiation and may lead to higher market performance (Andrews/Smith, 1996; Moore, 2005). MI, their consequences, and contingency variables are, despite of their relevance, still poorly understood (Beinert, 2008). Whereas prior research has investigated capabilities in product innovations, the fundamental questions of which capabilities are necessary to better identify, create, and execute MI have not been addressed. Drawing on the dynamic capability view of the firm (Teece/Pisano/Shuen, 1997), we propose that different configurations of MI capabilities are expected to be beneficial for companies. Hence, we developed a research framework consisting of a three step process: First, after an extensive literature review, we conducted numerous in-depth interviews with top managers from leading companies to understand practical challenges and to identify specific capabilities. Second, we developed a construct for marketing innovativeness and translated its antecedents and consequences in a testable structure, including the situational context. Third, we will test the corresponding path model with a management survey of international consumer goods companies (Spring 2009). Purpose of our research is to conceptualize MI, to identify MI capabilities depending on contingency variables in a company's environment, and to deliver specific implications for further marketing research in this topic. Furthermore, we will also give valuable insights from a practical point of view in providing detailed recommendations for managers.

■ TC02

Lower Level - Room 0220

Channels: Price Competition

Cluster: Channels

Invited Session

Chair: Georges Zaccour,GERAD, HEC Montreal, 3000 Cote-Saine-Catherine, Montreal, QC, H3T2A7, Canada, georges.zaccour@gerad.ca

1 - On the Proper Measure of Competition in Linear-demand Models of Distribution Channels

Charles Ingene, Professor, University of Mississippi, P.O. Box 1848, University, MS, 38677, United States of America, cingene@bus.olemiss.edu, Sihem Taboubi, Georges Zaccour

Marketing scientists often use linear-demand models of distribution channels to analyze various forms of competition. Commonly overlooked in these analyses is that aggregate demand behaves perversely as the intensity of competition (say t) increases. For the most commonly used linear-demand curve (qi = a - bpi + t pj), aggregate demand becomes price independent as t goes to its maximally permitted value of b, while prices and profits go to infinity! A common alternative linear-demand formulation (qi = a - bpi + t (pj - pi)) implies aggregate demand that is independent of competition at any value. Neither result comports with economic intuition. Central to these peculiarities is the mistaken definition of t as indicating competition. To properly assess competition, we employ a quadratic-utility function of a representative consumer. From it we derive a linear-demand system that allows for any number of competing products, manufacturers, retailers, or channels. We show that the appropriate measure of competition - which is defined in the utility function - affects all parameters of a linear-demand system; thus, t is an incomplete measure of competition. We prove that our linear-demand system yields intuitively appealing results for three key models in the literature: competing channels (McGuire and Staelin 1983); competing manufacturers (Choi 1991); and competing retailers (Ingene and Parry 1995). A simple, linear transformation brings the profit, margin, and quantity results deduced by the original authors into alignment with our results. We then show that the most general model in the literature, the "duopoly, common retailers" model of Choi (1996)-Trivedi (1998), is unfortunately incomplete; we present the rectified results.

2 - Uniform Pricing for Digital Goods: Effects on Competition

Dinah Vernik, Duke University, Fuqua School of Business, Durham, NC, United States of America, dav2@duke.edu, Preyas Desai, Debu Purohit

The digitization of goods such as music and movies has led to the emergence of a new class of retailers tha specialize in digital downloads. The resulting competition has led to interesting pricing policies. Online retailers tend to prefer uniform pricing where all "products" carry a single price, while traditional retailers differentiate prices. In our paper we show how the asymmetric equilibrium we observe in he market can change with the nature of competition between retailers.

3 - Sales Format in a Distribution Channel

Hyun-Soo Ahn, Ross School of Business, University of Michigan, Ann Arbor, 48109, United States of America, hsahn@bus.umich.edu, Goker Aydin, Chia-wei Kuo

When selling a given product, some retailers use a fixed, posted price while other retailers allow customers to negotiate. Stores like Costco and Walmart will sell home appliances or electronics at posted prices without any haggling. On the other hand, consumers can negotiate the prices of such items at local retailers. The retailer's decision to allow negotiation influences not only the retailer's profit, but also the manufacturer's since the retailer's order quantity depends on whether or not negotiation is used. The manufacturer would like to influence the retailer's sales format choice through the terms of trade. We find that the retailer prefers negotiation when the wholesale price is low and posted pricing when the wholesale price is high. We then analyze the effect of negotiation cost and scarcity of the product on the equilibrium sales format and pricing decisions. When the cost of negotiation is low and/or the product is readily available, negotiation is advantageous to both parties. As the negotiation cost increases or the product becomes more scarce, the retailer becomes reluctant to use negotiation. Up to a certain extent, the manufacturer responds to this by reducing the wholesale price so as to maintain negotiation as the equilibrium sales format. In fact, a slight increase in negotiation cost or a slight decrease in the product's availability may trigger such a large discount in the wholesale price that the retailer's equilibrium profit increases despite the larger negotiation cost or the reduced availability. When the negotiation cost is prohibitively high or the product is very scarce, the manufacturer no longer gains from offering a discounted wholesale price, thus it reverts to a high wholesale price, leading to posted pricing.

4 - The Dilemma of Pull and Push Price Promotions

Georges Zaccour, GERAD, HEC Montreal, 3000 Cote-Saine-Catherine, Montreal, QC, H3T2A7, Canada, georges.zaccour@gerad.ca, Simon-Pierre Sigué, Guiomar Martìn-Herrán

Should manufacturers of products such as automobiles and household appliances offer cash rebates to all consumers at the time of purchase, or offer trade deals to retailers? The authors conduct an analytical inquiry that shows that choosing between these two types of price promotion critically depends on the consumer sensitivity to both regular and promotional prices. More specifically, when consumers are more (less) sensitive to promotions than to regular prices, manufacturers are better (worse) off offering trade deals (consumer rebates) rather than consumer rebates (trade deals). Consistent with traditional predictions found in the economic literature, either of the two promotions can be offered indiscriminately if consumers make no difference between promotional offers and regular price reductions. The theoretical and managerial implications of these findings are discussed.

■ TC03

Lower Level - Room 0230

Promotion: Consumer Response

Cluster: Promotion

Invited Session

Chair: Yulia Nevskaya, PhD Student, Simon Graduate School of Business, University of Rochester, 4-345 Carol G. Simon Hall, University of Rochester, Box 270100, Rochester, NY, 14627, United States of America, yuliya.nevskaya@simon.rochester.edu

1 - Spending on the Fly: Mental Budgets, Promotions, and Spending Behavior

Jeff Inman, Frey Professor of Marketing, University of Pittsburgh, 356 Mervis Hall, Pittsburgh, PA, 15260, United States of America, jinman@pitt.edu, Karen Stilley, Kirk Wakefield

Although a significant body of work indicates that promotions provide a substantial short term lift for the promoted item, less attention has been given to the basket level impact and the role of mental budgets. Stilley, Inman, and Wakefield (2009) show that consumers have in-store slack for grocery trips - that is, they leave room in their mental budgets to make unplanned purchases. We build on this work and examine the effectiveness of promotional savings in increasing spending while incorporating consumers' mental budgets. Specifically, we evaluate how promotional savings' effect on spending varies depending on whether the item is planned or unplanned and whether the item is purchased before or after the shopper's in-store slack is depleted. Additionally, we examine how these relationships vary depending on income and payment method. To achieve these goals, we conducted a field study in which respondents used a hand held scanner to record the order of purchases. The results suggest that savings on planned items lead to stockpiling by higher income shoppers when the savings occur before the in-store slack has been spent, but lead to increased purchase of unplanned items when they occur after in-store slack is depleted. Additionally, the results indicate that savings on unplanned items before the in-store slack is depleted have no impact on basket size except for high income consumers paying with a debit or credit card. Even for these consumers, however, there is no effect on spending when we take mental budget uncertainty into account. Highlighting the importance of a mental budgeting perspective, our results suggest that many in-store promotions simply serve to influence what unplanned items the individual buys rather than generate incremental spending.

2 - A Strategic Discrete Choice Model of Catalog Mailing and Response

Sangwoo Shin, Assistant Professor, Krannert School of Management, Purdue University, 4040 Rawls Hall, 100 S. Grant Street, West Lafayette, IN, 47906, United States of America, shin58@purdue.edu, Sanjog Misra

Direct marketing firms often make promotional decisions strategically. For instance, catalogers take the expected customer response into consideration when deciding on whom, when and how often to mail. An econometric implication of the cataloger's strategic decision making is that estimating customer response conditional on the observed promotional activity (i.e., catalog drop) is potentially exposed to simultaneity and endogeneity biases. A natural way of tackling these problems is to jointly model the cataloger's mailing decision and the customer's purchase decision. The primary goal of this study is to do exactly that. We propose a simple yet novel modeling approach that accounts for the firm's strategic profit-maximizing promotion decision. We begin with formulating a simple two-player game between the cataloger and the customer, and derive the relevant joint likelihood. As a consequence, our proposed model is structurally consistent with the theory and the likelihood function reflects the underlying game structure (such as the sequence of players' moves, the choices and information available to them and the incentives they face). We further enrich the proposed model to allow for customer specific non-linear responses to key factors via the inclusion of heterogeneous penalized splines. Our results suggest that the proposed joint approach yields starkly different outcomes than does the conditional approach. Most interestingly, while the recommended mailing policy from the conditional model is unanimously "wait-until-customers-buy", the joint model justifies "back-to-back" mailing policies in certain contexts. We also find that optimal mailing policies based on our model would result in substantial savings in mailing costs to the cataloger in our data.

3 - A Dynamic Model of the Effects of Cross- and Up-selling Marketing Activities

Nino Hardt, CU Eichstaett-Ingolstadt, Auf der Schanz 49, Ingolstadt, 85049, Germany, nino.hardt@ku-eichstaett.de, Joachim Bueschken

Marketers are interested in identifying customers for cross-selling and up-selling activities. The results of such activities are observed (customers buy or buy not), whereas the underlying propensity of consumers to react favorably to cross- and up-selling activities is typically not observed. We develop a model in which this latent propensity is modeled on the individual consumers' level and assume that this latent state is, in turn, influenced by marketing activities. We furthermore assume that the effect of marketing activities is temporary meaning that shifting consumers to higher propensity may be followed by a down-shift to low propensity. These assumptions give rise to a Hidden Markov Model (HMM) which models the dynamics in propensity changes following cross- and up-selling marketing activities. This model explicitly accounts for up- and down-shifts of consumers' propensity to purchase. The proposed 2-state HMM estimates the mean and the variance of two Log-Normal processes and transition probabilities between the two processes on the individual level through a hierarchical structure. The group information allows for estimating the individual probability to shift into a higher state even if corresponding purchase behavior for that individual is not observed. We provide an application of this model to a real-life data set containing FMCG purchases. The results indicate that dynamics in latent states are present. We also find that significant probability exists to shift customers into a state of high propensity whose observed buying behavior does not suggest this opportunity. Implications for customer lifetime value and directions for future research are discussed.

4 - Inferring Price Promotion Effects on Dynamic Consumer Behavior From Aggregate Data

Yulia Nevskaya, PhD Student, Simon Graduate School of Business, University of Rochester, 4-345 Carol G. Simon Hall, University of Rochester, Box 270100, Rochester, NY, 14627, United States of America, yuliya.nevskaya@simon.rochester.edu, Paulo Albuquerque, Sanjog Misra

We study the effect of price promotions on demand for storable products with endogenous consumption. We model purchase and consumption decisions and estimate demand primitives using weekly store-level data across multiple retailer chains, supplemented with descriptive statistics of consumer behavior. Using estimates from the demand model, the paper investigates the impact of changes in price promotion frequency and depth across a line of differentiated products. We use data from the eye vitamins category which exhibits very high consumer loyalty. This allows us to focus on consumption and stock-piling and on the implications for the optimal scheduling of price promotions. Our counterfactual analyses (1) show that in-store promotions are used as a price discrimination mechanism, (2) investigate the relation between product size and promotion depth, and (3) illustrate how a firm may increase its profits by changing the promotion frequency across its product line.

■ TC04

Lower Level - Room 0240

Pricing: Competition I

Cluster: Pricing

Invited Session

Chair: Seungwon Jeon, Assistant Professor, St. John Fisher College, 3690 East Avenue, Rochester, NY, 14618, United States of America, sjeon@sjfc.edu

1 - Free In-network Pricing as Entry-deterrence Strategy

Tingting He, Assistant Professor, University of Wisconsin-Milwaukee, P.O. Box 742, 3202 N. Maryland Ave., Milwaukee, WI, 53201, United States of America, he2@uwm.edu, Dmitri Kuksov, Chakravarthi Narasimhan

This paper analyzes the decisions of firms to provide free in-network pricing, two-part tariffs and flat-fee plans to their customers. Recently, it has become a standard practice for telecommunication companies to offer free in-network calling plans rather than two-part tariffs or flat-fee plans, which are normally thought of as theoretically appealing from the company point of view. In particular, two-part tariffs and flat-fee plans had an early wide-spread acceptance in the traditional landline long-distance services, while more recently free in-network calling plans are more and more frequently offered. The research in this chapter aims to explain the emerging popularity of free in-network calling plans among telecommunication companies. Using the Spokes model, in this chapter the research investigates 2 cases: a duopoly without the threat of entry, and a duopoly with the threat of entry from a potential third firm. The results indicate that in a competitive setting (1) without the threat of entry, two-part tariffs should be a natural outcome, while (2) with the threat of entry, free in-network calling plans alone, or free in-network calling plan together with two-part tariffs or flat-fee plan can deter entry, and (3) flat-fee plans cannot deter entry without free in-network calling plans. Thus, it seems that increased competition and threat of further competitor entry may be explaining the observed pricing strategies of telecommunication companies.

2 - A New Approach to Measure Price Elasticity: Comparing Price Elasticity Across Industries and Firms

Wenzel Drechsler, Goethe-University Frankfurt, Grueneburgplatz 1, Frankfurt/Main, 60323, Germany, wenzel.drechsler@wiwi.uni-frankfurt.de, Bernd Skiera, Martin Natter

By assuming that firms optimally act in their market in terms of profit maximization, we show that it is possible to use public available firm data (annual reports) to obtain price elasticities at the firm level. Our approach has the advantage to make use of objective firm data and can be applied to a huge number of firms over time. In contrast to meta-analyses, our approach is not subject to a potential publication bias. Our big picture (over 300,000 elasticities from 1950-2007) shows that mean price elasticity is higher (in absolute terms) than suggested by meta-analyses, but decreasing over time. Given the increasing (adjusted) disposable income per capita, our result confirms that with increasing prosperity prices become less important (less price sensitive customers). Furthermore, our analyses show that top players like Procter & Gamble or Unilever successfully reach lower absolute price elasticities over time as compared to the industry benchmark. This shows that highly branded players are more successful in their brand equity building marketing activities and are able to charge a price premium. From the managerial point of view, our approach provides the opportunity to conveniently track price elasticity at the firm level in order to adjust tactical and strategic marketing actions. Hence, it is possible to benchmark the result of marketing actions against the industry average, competitors and other industries.

3 - Competitive Coupon Promotions and Targeting in Multi-product Duopolies

Seungwon Jeon, Assistant Professor, St. John Fisher College, 3690 East Avenue, Rochester, NY, 14618, United States of America, sjeon@sjfc.edu

Multi-product firms use coupons for multiple items. When consumers purchase multiple items for packaged goods, they compare not only prices for the bundle but also available coupons for the items. Accordingly, multi-product manufacturers have to consider couponing strategy for multiple items that may be in a basket. In this research, we consider couponing strategy of multi product firms that compete for the demand of the same assortment of goods. Specifically, we explore the implications of multi product competition on equilibrium prices and coupon targeting issues, and profitability in a retail duopoly setting. Whether or not target the coupon, providing coupon for all the goods are profitable. However, when there are mix of small and large basket consumers, targeting may not be profitable.

■ TC05

Lower Level - Room 0320

Consumer Behavior: Learning

Cluster: Buyer Behavior

Invited Session

Chair: Tanuka Ghoshal, Doctoral Candidate, Tepper School of Business, Carnegie Mellon University, 5000 Forbes Avenue, Pittsburgh PA 15213, tghoshal@cmu.edu

1 - Tradeoffs in the Dark: The Effect of Experience on Extrapolated Consumer Preferences

Yanliu Huang, Marketing Department, Wharton School, University of Pennsylvania, 3730 Walnut Street, 700 Jon. Huntsman Hall, Philadelphia, PA, United States of America, yanliuh@wharton.upenn.edu, Robert Meyer

Market choices often require consumers to extrapolate preferences formed in one domain of experience to an unfamiliar new one. The goal of this work is to explore the properties of multi-attribute utility functions given varying levels of familiarity with the stimulus set. Prior work has suggested that given the limited direct experience in consuming products, predictive inferences may involve a blend of two processes: exemplar-based and rule-based. Exemplar-based policies are those that forecast value based on the experienced utility of similar options, and rule-based policies are those that exploit generalized beliefs about the functional relationship between attribute values and utility. In six experiments, we tested the hypothesis that the prevalence of each of these processes will evolve over time as experience in a core judgment domain grows. Specifically, given limited experience predictions will rely on meta-cognitive "guessing" rules that make no attempt to utilize what has been observed about product values in a core domain. As experience grows, however, knowledge gained in the core domain will be increasingly utilized, first by using exemplar-based prediction rules that draw analogies between novel products and previously-viewed ones, then by using functional prediction rules that exploited learned continuous associations between attribute levels and valuations. Thus, there is a paradoxical U-shaped relationship between predictive accuracy and judgmental experience, where people with virtually no experience are able to provide more accurate predictions than those with moderate amounts of experience. These hypotheses are also supported by participants' concurrent written protocols.

2 - Quality, Expectations and Relationship Management: Athletic Performance and Alumni Donations

Hulya Karaman, Washington University in St. Louis, Campus Box 1133, One Brookings Drive, St. Louis, MO, 63130, United States of America, hkaraman@wustl.edu, Michael Lewis, Tat Chan

The development of relationships between firms and consumers is a dynamic process. One important factor that influences this relationship development is service quality. Elements of quality may play an important and complex role in relationship development. For instance, on one hand high quality can increase satisfaction and short-term retention, but very high quality can also raise expectations which can make it difficult to maintain subsequent satisfaction levels and long-term loyalty. The paper studies the role of a unique element of quality on loyalty and expectations using data on alumni donations. Specifically, the paper focuses on the link between individual level alumni donations and athletic team success. The paper strives to makes contributions both to the economics literature that has focused on alumni giving and athletic success and to the Customer Relationship Management (CRM) literature. First, the authors aim at establishing the existence of positive relationship between giving and winning. In contrast to the existing literature, the availability of individual level alumni donation data makes it possible for the authors to disentangle this highly controversial relationship between giving and winning. The empirical results add to a long-standing debate regarding the relationship between athletic success and alumni giving. Second, on the marketing side, authors investigate the role of expectations on alumni giving and hence on loyalty. Although the empirical findings indicate that athletic success does positively influence alumni giving, they also suggest that current athletic success may raise expectations of future athletic success and can therefore negatively affect long-term donation behavior.

3 - Uncovering the Coexistence of Assimilation and Contrast Effects in Hedonic Sequences

Tanuka Ghoshal, Doctoral Candidate, Tepper School of Business, Carnegie Mellon University, 5000 Forbes Avenue, Pittsburgh PA 15213, tghoshal@cmu.edu, Peter Boatwright, Joseph Nunes, Eric Yorkston

Most judgments consumers make are parts of sequences and are hence unlikely to be context-free. The two context effects that have been most reliably demonstrated in psychology and marketing are assimilation and contrast. A general presupposition for much of the work on assimilation and contrast is that one or the other takes place, and that characteristics of the context such as domain match, product knowledge, availability of cognitive resources, and context set range dictate which one occurs. In this research, we propose that both assimilation and

contrast can co-occur within a sequence of experiences and present a series of models separating these effects within a unique, real world data set. We find assimilation effects are prominent and contrast effects, which may be masked by assimilation, emerge only when we adjust for assimilation. To the best of our knowledge, this work is the first empirical demonstration of hedonic contrast using real-world data where stimuli are presented in random or non-monotonic sequences and the only to identify and separate assimilation and contrast effects within sequences of evaluations.

■ TC06

1st Floor - Room 1210

Mobile

Cluster: Special Track: Interactive Maketing
Invited Session

Chair: Russ Winer,Professor, New York University, Stern School of Business, 40 West 4th Street, Suite 811, New York, NY, rwiner@stern.nyu.edu

1 - Too Close to Call? The Effects of Closeness on the Referral Likelihood of Mobile Phone Users

Christian Barrot, barrot@bwl.uni-kiel.de, Jan U. Becker, Arvind Rangaswamy, Sonke Albers

In this paper, we explore the relative impacts of internal and external influence in an individual-level diffusion model of a mobile phone service. We use detailed information about marketing instruments for all providers, as well as information about inter-personal communications (e.g., extent of telephone calling between people, product referrals, the network structure among the subscribers) to estimate our model.

2 - The Impact of Electronic Word of Mouth for Location-sensitive Products: A Spatial Modeling Approach and Insights

Dustin Kirby, dkirby@mays.tamu.edu, Venkatesh Shankar

In this paper, we explore the relative impacts of internal and external influence in an individual-level diffusion model of a mobile phone service. We use detailed information about marketing instruments for all providers, as well as information about inter-personal communications (e.g., extent of telephone calling between people, product referrals, the network structure among the subscribers) to estimate our model.

3 - Modeling the Dynamics of Content Generation and Usage in Mobile Commerce

Anindya Ghose, Stern School, New York University, 40 West 4th Street, New York, NY, 10012, aghose@stern.nyu

Over the past few years user-generated content (UGC) such as online product reviews, blogs, audio and video clips on social networking sites has proliferated rapidly on the Internet and such content has had a profound impact on internet marketing. Taking cues from electronic commerce, different kinds of UGC are becoming available in mobile commerce environment as well spurred by the rapid expansion of the cellular telephony market. Examples of user contributed content include photos, graphics, ring tones, videos, and other kinds of multi-media content. As mobile commerce becomes an increasingly popular mode of conducting transactions, newer strategies for mobile advertising and marketing may need to be implemented in this environment compared to traditional internet marketing methods. This requires a deeper knowledge of consumers content creation and usage behavior in mobile commerce. However, little is known about how content creation by users is related to users usage of such content, or how these processes are affected by users personal and social network characteristics in mobile commerce. Besides, a unique aspect of mobile commerce is that users need to spend monetary resources (for example, by paying airtime charges) during content generation as opposed to that in electronic commerce where content generation can be done for free. This calls attention for the need to better understand the emerging mobile market, with a focus on why, how, and what aspects of user-generated content influence economic and social outcomes in mobile commerce. In addition we aim to identify what factors are associated with content creation and usage in such mobile commerce environments. We use a unique and unprecedented dataset consisting of 9.5 million mobile data transaction records across 180,000 users encompassing their content uploading and downloading behavior. We also have data on 3G voice, text and multimedia records made by the same users and their social networks. Finally, we have detailed user-related demographic and geo-location attributes that provide further insights into the drivers for users mobile commerce behavior. We use both classical time-series (vector-auto regressive models) and simultaneous equations modeling approaches to investigate these issues. Implications from our study will provide mobile commerce providers with insights into how to monetize such mobile UGC as well help advertisers gain an understanding of the dynamic, interdependent processes of users content creation and usage that can be used for mobile marketing.

4 - Mobile Marketing: A Research Agenda

Russ Winer, Professor, New York University, Stern School of Business, 40 West 4th Street, Suite 811, New York, NY, rwiner@stern.nyu.edu, Fareena Sultana

Mobile marketing or M-commerce has been growing rapidly worldwide. Although the main source of revenues for companies has been SMS or short message services, many other applications are being developed including location-based services, advertising, and price promotions. As the latest medium of the three screens for delivering content (TV, personal computers, mobile phones), it is important that marketing academics understand how the mobile screen is different from the others in terms of measurement, consumer behavior, marketing strategy, etc. However, relatively few papers on the mobile phone medium have appeared in the literature. This paper focuses on the presentations and discussions from a recent conference on mobile marketing sponsored by the Marketing Science Institute. We assimilate the proceedings from the conference into a framework for better understanding (1) how the mobile phone medium differs from TV and PCs, and (2) what the important areas are for academic research.

■ TC07

1st Floor - Room 1220

Internet: Relationship Management

Cluster: Internet Marketing
Invited Session

Chair: Zainab Jamal,Research Scientist, HP Labs, 1501 Page Mill Rd, Bldg 1U, MS 1132, Palo Alto, CA, 94043, United States of America, zainab.jamal@hp.com

1 - Modeling Youngsters' Attitude Toward Using Future Electronic Identification Systems

Christine Balague, Associate Professor, University of Sciences and Technology of Lille 1, 104 Avenue du Peuple Belge, Lille, 59043, France, christine.balague@iae.univ-lille1.fr

This research proposes a model of attitude toward using new electronic identification (eID) systems. Identification systems in the context of emerging technologies constitute nowadays a key area of research, either focusing on eID systems conception or on the consequences of these systems implementation on individuals and more globally on the society, including states policies and laws. Even if the technoglogies actually exist, lots of individuals remain reluctant to use eID systems for self identification while surfing the Internet, either for commercial and/or administrative purposes.Our paper aims to make a contribution in better understanding the variables impacting attitude toward using eID and the actual reluctance of youngsters to use these systems. Our paper investigates different theories to measure people's adoption of eID services, such as TAM (Technology Acceptance Model), DOI (Diffusion of Innovation), individuals' perceptions of risks and negative consequences, trustworthiness of organization, eID technology and Internet. Using structural equation models, this research provides new insights and proposes numerous future research directions to improve knowledge on eID systems that will become probably largely used in the next coming years.

2 - The Role of Interactivity in the Era of New Media and its Effect on Consumer-Brand Relationship

Verena Walter, University of St.Gallen, Dufourstrasse 40a, St. Gallen, 9000, Switzerland, verena.walter@unisg.ch, Marcus Schoegel

Marketing budgets are reallocated and Internet marketing will see indispensible gains. With nearly 70 percent of all US adults online, spending 30 percent of their leisure time on the Web, the Internet has reached the threshold of becoming a mass medium. Among many important attributes associated with the Internet, interactivity is the key feature that sets new media apart from traditional communication chan-nels. The body of literature explaining interactivity and its effects has rapidly grown since it has been recognized that interactive communication is highly engaging and generates positive communication results. While a number of studies have tested the effects of interactivity on consumers' psychological outcomes, the role of interactivity in building brand relationships has just been implicitly assumed. Besides, the technological advances within the last years put forth quite a number of new Internet applications, like blogs or communities, often referred to as "New Media". Yet, those instruments have not really been considered in the research tradition of interactivity, rather the investigations were constrained to interactive Website features, like hyperlinks, search functions or clickable images. We, therefore, propose that dif-ferent new media applications have a varying impact on the relationship to the customer. A conceptual research framework is developed that emphasizes the mediating role of interactivity on the customer-brand-relationship. By focusing on different interactive media instruments within this framework, we investigate also the distinct media contribution effects on the relationship to the consumer. In a between-subject experiment the mediating effect of interactivity on the consumer-brand-relationship should be empirically extracted.

3 - Key Successful Factors of e-CRM Implementation in Service Industry of Taiwan

Hui-I Yao, PhD Candidate, The University of Nottingham Malaysia Campus, Jalan Broga, 43500 Semenyih, Selangor Darul Ehsan, Malaysia, antoniayao@hotmail.com, Cassey Lee Hong Kim

As technology is always improving, banks have built new channels, Internet banking, in order to contact their customers and increase customer satisfaction. This study investigates the key successful factors of e-CRM implementation in the service industry of Taiwan. In this study, we worked with the banks in Taiwan to understand the effective key factors of e-CRM implementation at three different requisite stages: establishing, enhancing, and terminating stages. The empirical results show that effective key activities at each stage result in a significant increase in perceived performance and customer satisfaction. In addition, this study reveals that in this emerging channel, some important antecedents cause the effectiveness of the e-CRM implementation.

4 - Impact on Customer Churn of Intensity of Sharing of User-generated Content at an Online Service

Zainab Jamal, Research Scientist, HP Labs, 1501 Page Mill Rd, Bldg 1U, MS 1132, Palo Alto, CA, 94043, United States of America, zainab.jamal@hp.com

Customers continue to increasingly interact online - sharing photos, videos, songs and other user-generated content. Research on social networks has ignored to a large extent the existence of social networks within the customer base of online services that have sharing functionalities. We believe the availability of such sharing functionalities increases the stickiness of these online services as it allows their customers to easily connect and share with their social network. In the absence of such functionalities, customers are more likely to move to competitive services that allow them to not only store and manage their digital content but also to share it with their social network. In this study, we evaluate the value of sharing by establishing a link between the sharing activity of a customer as captured by RFM metrics adapted to sharing behavior and key performance metrics like customer churn and CLV. We use a conditional hazard model for multiple events with heterogeneity to estimate the impact of sharing activity on the probability of customer churn. We also include other factors that may impact the churn rate like recency, frequency and amount of purchases, amount of digital content uploaded, number of other customers who viewed the content as well as number of calls to the customer service center. We show that intensity of sharing has a negative impact on customer churn. Thus, the more sharing the customers engage in the more likely they are to stay with the online service.

■ TC08

1st Floor - Room 1230

Empirical IO

Cluster: Empirical IO

Invited Session

Chair: Sergio Meza, Assistant Professor, University of Toronto, 105 St. George St., Toronto, ON, L6J 5N1, Canada, sergio.meza@rotman.utoronto.ca

1 - When Pavarotti Meets Harry Potter at the Super Bowl

Ron Shachar, Tel Aviv University, Faculty of Management, Tel Aviv, Israel, shachar@duke.edu, Shlomi Parizat

Leisure industries form a major part of economic and social activity. However, so far very little attention was given to individuals' allocation of time across leisure activities and the possible interdependencies across these industries. Using structural estimation and individual level data on the allocation of time of Americans in 2003 we show that there are three major clusters of activities: culture, pop-culture and social. For example, the pop-culture cluster consists of movies, music and computer use. Our estimates demonstrate that there is a significant interdependencies across leisure activities. These interdependencies are due to the attributes of these activities (which are formulated as points on a latent attribute space) and the need to pay travel costs for out-of-home activities. The estimation of this model is challenging since the individuals are facing a multiple discrete-continuous choice with non-linear pricing. We overcome this obstacle by a powerful genetic algorithm in the estimation.

2 - Entry in Markets with Indirect Network Externalities: The Case of Ethanol Fuel Retailers

Scott Shriver, Stanford Graduate School of Business, 518 Memorial Way, Stanford University, Stanford, CA, 94305, United States of America, scott.shriver@gsb.stanford.edu

Determinants of market entry have been widely studied in the empirical industrial organization literature (e.g. Bresnahan and Reiss (1987, 1990, 1991), Berry (1992), Mazzeo (2002), Seim (2004)). However, models advanced in these works have ignored the potential dependence of entry decisions upon consumer adoption of goods or services which are necessary complements to the product of interest. For example, the size of the market for ethanol fuel depends upon the number of consumers who have adopted ethanol-compatible vehicles. The fact that consumer demand for complementary goods is determined simultaneously with market entry decisions by the primary good retailer leads to the presence of an indirect network effect and an econometric endogeneity problem. I develop a structural model of market entry which fully accounts for such network externalities by specifying a joint likelihood that reflects consumer utility for complements and retailer profits for the primary good. As in Bresnahan and Reiss (1991), retailers in oligopoly markets are assumed to play an entry game of complete information. The specification takes the form of an ordered probit entry model which is coupled to an aggregate logit demand system through the presence of market-level unobservables, which are bivariate normal random variables. Estimation is achieved by a full-information maximum likelihood (FIML) routine. In my empirical application, parameter estimates are utilized to assess a variety counterfactual marketing policies aimed at accelerating the availability and profitability of ethanol fuel.

3 - Preference Evolution in the South Korean Cigarette Market

Sungho Park, PhD Candidate, Cornell University, 201C Sage Hall, Cornell University, Ithaca, NY, 14853, United States of America, sp393@cornell.edu, Sachin Gupta

Consumer preferences in the South Korean cigarette market show strong changes over an eight-year period. Analyzing this evolution is critical in understanding market outcomes. We develop a likelihood-based demand model that captures the changes in consumers' preferences using aggregate market-level data while considering consumer heterogeneity and the endogeneity of prices. We show that our model allows us to precisely measure brand equity and correctly interpret the firm's pricing, new brand launch, and positioning decisions. By comparing the results derived from the proposed model with those from a conventional static model, we also show that ignoring preference change can cause misleading interpretations of market outcomes.

4 - Multiple Adoptions in the Wireless Phone Market: Structural Demand with Dynamic Demographics

Sergio Meza, Assistant Professor, University of Toronto, 105 St. George St., Toronto, ON, L6J 5N1, Canada, sergio.meza@rotman.utoronto.ca, Max Rempel

In this paper we propose a modification of the standard random coefficients logit model to allow for changes in the distribution of the sample population due to differential adoption rates of a durable good. Essentially, we use our structural model to endogenously derive population weights to update the distribution over time. We use quarterly data on several European countries to estimate the adoption of mobile phone services. Our approach deals with both replacement purchases and multiple adoptions. The former feature is important as our data series includes nine years while contracts often last one to three years, the later feature is crucial as we observe adoption rates well beyond the size of the population of the respective countries. We find that income is an important demographic variable that can help explain most of the evolution of the adoption and pricing pattern of the category. Additionally our model corrects the biases in price elasticities that in the standard BLP model are introduced by ignoring the changes in the demographics distribution of the non-adopting population.

■ TC09

1st Floor - Room 1240

Agent-Based Modeling in Marketing

Cluster: Marketing Models

Invited Session

Chair: William Rand, Assistant Professor, University of Maryland, 3457 Van Munching Hall, College Park, MD, 20742, United States of America, wrand@umd.edu

Co-Chair: Roland Rust,University of Maryland, 3451 Van Munching Hall, College Park, MD, 20742, United States of America, rrust@rhsmith.umd.edu

1 - Rigorous Agent-based Modeling in Marketing

Roland Rust, University of Maryland, 3451 Van Munching Hall, College Park, MD, 20742, United States of America, rrust@rhsmith.umd.edu, William Rand

Agent-based modeling illustrates how complex marketing phenomena can emerge from simple rules. Marketing phenomena that are too complex for conventional analytical or empirical approaches can often be modeled using this approach. Agent-based modeling investigates aggregate phenomena by simulating the behavior of individual "agents," such as consumers or organizations. Some useful examples of agent-based modeling have already been published in the marketing literature, but widespread acceptance of the agent-based modeling method has been slowed by the lack of widely accepted standards of how to do agent-based modeling rigorously. We address this need by proposing guidelines for rigorous agent-based modeling. We demonstrate these guidelines, and the value of agent-based modeling for marketing research, by the use of an extended example. We use an agent-based modeling approach to replicate the Bass model of the diffusion of innovations, and then show how extensions of the Bass model that would be difficult to carry out using traditional marketing research techniques are possible to implement using the agent-based approach.

2 - Agent-based Modeling of the Diffusion of Alternative Fuel Vehicles

Rosanna Garcia, Assistant Professor, Northwestern University, 202 Hayden Hall, Boston, MA 1930, r.garcia@neu.edu, Ting Zhang

The market place acceptance of alternative fuel vehicles (AFVs) is important for reducing green-house gas emissions and reducing American reliance on foreign oil. This is a marketing diffusion issue in a complex environment where consumers, auto manufacturers and governmental agencies interact with each other to influence adoption decisions and timing. In this study, we use an agent-based model to simulate individual micro-level agents including: vehicle producers, consumers and the government. We consider marketing strategies of producers, purchasing behavior of consumers and competition among producers, who must abide by governmental policies. The producer agents seek vehicle designs and production decisions, as well as marketing strategies that maximize their profits. Consumer agents seek a vehicle from the available options that maximizes their utilities. As a first step in validation of our model, we replicate the game theoretic approach of Michalek, et al., (2004) to establish face validity for our model. Because Michalek's model is based on homogeneous consumers, we extend upon that study by using heterogeneous consumers with unique preferences. We base these preferences on survey data of 200 automobile buyers with varying interests in AFVs. For data collection, we used Sawtooth's software to administer a choice-based conjoint analysis survey. Then using Sawtooth's simulation software, SMRT, we find market share of preference results for various types of vehicles. We then compare the ABM results to the SMRT results. Matching results indicate model verification. After model verification and validation, we simulate word of mouth and advertising to determine their combined impact on the diffusion of AFVs.

3 - Issues in Validating Agent-based Models

Robert Marks, Professor of Economics, University of New South Wales, School of Economics, AGSM Building, University of New South Wales, Sydney, 2052, Australia, bobm@agsm.edu.au, Daniel Klapper, David Midgley

We illustrate some of the important methodological and practical issues involved in validating agent-based models. These issues include the extent to which the researcher has data for all the phenomena the model covers, macro versus micro-calibration, scaling from available data to the universe of interest and optimizing models with many parameters and noisy outputs. They also include the complementary roles of two forms of validation: destructive testing of model assumptions and algorithms and empirical fitting of the model to data. And finally they also include the issue of how to weight various possible outputs in fitting the model to data. We illustrate all these issues by validating an agent-based model of the interactions between consumers, retailers and manufacturers. For this model we have good macro-data on retail sales for an important supermarket category and some micro-data on consumer behavior from a panel study. But there are also missing data, many unknown parameters and complex model behavior generated from the interactions of classes of simple agents. These represent substantial challenges in validating agent based models in general as well as in our specific case.

4 - Untangling Customer Social Equity via Agent Based Model

Renana Peres, The Wharton School, Room 767, Jon M. Huntsman Hall, 3730 Walnut Street, Philadelphia, 19104-6340, United States of America, peresren@wharton.upenn.edu, Barak Libai, Eitan Muller

Customers in social networks convey a double contribution for the firm, by both purchasing the product or service, and by affecting the behavior of other network members via social means such as word of mouth. We term the monetary value of the latter contribution as the social value for an individual customer, or social equity when aggregated across customers. For many products and markets social equity is of great importance, especially in the context of new product growth. However, while direct purchase measures such as customer lifetime value were heavily investigated and applied, measures of social value and social equity are scarce, examined mostly in the aggregate level, and do not consider the structure and dynamics of the social network customers are a part of. Given the increasing interest of firms in understanding and affecting the word of mouth of customers in both online and offline environments, untangling the way social equity develops and should be measured is of considerable interest. We believe that agent based models (ABM) that are increasingly used by researchers in marketing to examine complex market dynamics, are a promising tool to capture the non-trivial way in which customer social equity evolves from the dynamics in social networks, and from individual social value. Using a stochastic cellular automata ABM we investigate the fundamental sources of customer social equity, and discuss theoretical and managerial implications.

■ TC10

1st Floor - Blau Auditorium

Meet the Editors

Cluster: Meet the Editors

Invited Session

Chair: Anocha Aribarg,Ross School of Business, University of Michigan, 701 Tappan St., Ann Arbor, MI, 48105, United States of America, anocha@umich.edu

1 - Meet the Editors

Editors of leading journals for marketing academics will present their editorial policies and perspectives. The following editors are represented:

Marketing Science: Eric T. Bradlow

Management Science: Preyas Desai and Pradeep Chintagunta

Quantitative Marketing and Economics: Peter Rossi

Marketing Letters: Joe E.Urbany

Journal of the Academy of Marketing Science: Tomas Hult

■ TC11

2nd Floor - Room 2210

Choice Models: Applications

Cluster: Choice

Invited Session

Chair: Peter Oppenheim,Associate Professor, Deakin University, 221 Burwood Highway, Burwood, Vi, 3125, Australia, peter.oppenheim@deakin.edu.au

1 - Market Segmentation for Multi-Feature Products: A Clusterwisė Variable Selection Approach

Sunghoon Kim, Doctoral Student (Department of Marketing), University of Illinois at Urbana-Champaign, 350 Wohlers Hall, 1206 S. 6th St., Champaign, IL, 61820, United States of America, skim210@illinois.edu, Jianfeng Xu, Feng Liang

Market segmentation based on product benefits is an essential element of marketing. In a new marketing environment where products tend to have many features, current methods (e.g., Conjoint Analysis, Generalized Mixture Regression Models) are limited in effectively executing market segmentation. Most methods of benefit segmentation assume that consumers consider every product feature for their choice decision, but researches have shown that consumers may consider only a subset of features (e.g., Bettman 1979). More interestingly, consumers have heterogeneity in selecting important product features for their choice (Gilbride, Allenby and Brazell 2006) and this heterogeneity can be an optimal index for market segmentation. Responding to these motivations for a new segmentation approach, we propose a clusterwise approach with a build-in Bayesian heterogeneous variable selection procedure. The novelty of our approach is the Bayesian hierarchical layer we introduce to bridge the population-level model (George and McCulloch 1993, 1997) and the individual-level model (Gilbride, Allenby and Brazell 2006). Besides executing segmentation, the additional layer pools information across similar consumers for a better model fitting. Because of the build-in variable selection procedure, each segment produced by our method is linked with a small set of product features which can help managers effectively design new products and advertising. An efficient MCMC algorithm has been developed to sample the posterior distribution, which provides both parameter estimation and uncertainty assessment. In addition to simulation studies, we applied our method on a choice-based study of diverse features in online shopping, and the results demonstrated the potential of our approach.

2 - Multivariate Probit Model to Examine Synergies within a Firm's Channel Portfolio

Mahima Hada, PhD Candidate, The Pennsylvania State University, 421A Business Building, University Park, PA, 16802, United States of America, muh167@psu.edu, Rajdeep Grewal, John Liechty

Firms distribute, market, and sell their products through a combination of multiple channel types i.e. via a specific "channel portfolio". For example, Apple's channel portfolio consists of five channel types: Apple retail stores, Apple online, third-party retail stores, resellers, and catalogers. One of the reasons firms use a channel portfolio is to benefit from the synergies between multiple channel types. However, extant research has empirically studied synergies only between two channel types - either, as direct and indirect channels (e.g. Dutta et al 1995), or as two specific channels, such as dealers and rental agencies (Purohit 1997). However, as illustrated with Apple Inc., firms use more than two channel types in their channel portfolio, and our paper seeks to study the synergies between all the channel types used by a firm. Using a multivariate probit model, we estimate the latent interdependencies within a firm's channel portfolio. We estimate the positive and negative synergies between firm's channel types using two studies. The first study analyzes firms' domestic channel portfolio and uses secondary data. The second study analyzes firms' international channel portfolio, and uses survey data. Our results show that some of the common beliefs about synergies between channel types do not hold. First, we find that latent interdependencies between channel types are not as pronounced as expected. Second, there exist more negative synergies between channel types than positive synergies. Our second finding is significant for managers as firms seek to benefit from positive synergies between the channel types in their channel portfolio.

3 - Using Water Service Delivery Attributes to Evaluate Pricing Policies

Peter Oppenheim, Associate Professor, Deakin University, 221 Burwood Highway, Burwood, Vi, 3125, Australia, peter.oppenheim@deakin.edu.au, Gamini Herath

This paper examines the importance of various service levels in water and waste water delivery systems. In Australia, most water and waste water services are provided by private sector water utilities. Pricing and efficient provision of services involve two major issues, namely: (a) the standard of the general services such as quantity and quality of water supplied, and (b) efficiency of response by water authorities in the event of water service interruptions such as breakages, damages and overflows. In recent years water utilities in Australia have found it necessary to re-evaluate their water and waste water service delivery systems. This has been largely due to growing water demands, droughts and enhanced consumer expectations. The strategic framework for reform of the water sector in Australia requires sustainable management of wastewater and stormwater from metropolitan water services. This study seeks to examine consumers' responses to various levels of service delivery. A choice modelling approach was used to estimate the impact of various levels of service delivery. A series of stated choice experiments and mixed logit models were estimated to establish the willingness to pay for desired levels of service delivery. The levels of service delivery as well as prices associated with these services were varied and tested to determine whether these service delivery, service price associations affected consumer willingness to pay for specific water and waste water services. The results of this study provided important information for water utilities for both pricing purposes and prioritizing investments in service delivery systems.

4 - The Evolution of Internal Market Structure

Garrett Sonnier, Assistant Professor, UT Austin, 1 University Station, Austin, TX, 78712, United States of America, garrett.sonnier@mccombs.utexas.edu, Oliver Rutz

Factor analytic choice models are often used to represent the internal structure of a market. Using data on consumer choice amongst competing brands, these models infer the positions of brands in a latent attribute space. Early methods for internal market structure typically assume that the category is mature and stable, thus the brand positions are assumed to be constant over time. Later work allowed for state dependence due to habit persistence or variety seeking as well as correlation of attributes across product categories. However, these models are limited in their ability to infer the evolution of market structure in a new or dynamic product category. We propose a dynamic factor analytic probit model to study the evolution of market structure. Our model accommodates new and evolving product categories, and can also accommodate the introduction of new brands over the analysis horizon. The model is estimated via MCMC methods. Data augmentation is used to draw a set of latent utilities consistent with the observed choice data. Time varying brand attributes are estimated via a forward-filtering, backwards smoothing algorithm. The model allows us to infer the evolution of market structure over time. Our estimation approach naturally allows for state dependence and the effect of competitive attributes in the evolution of each brand's attribute. We apply the model to a five-year panel data set on consumer purchases in a new adult beverage category. The category is characterized by rapidly shifting shares and the successful introduction of a competitive brand in year two, thus it is well suited to test the implications of our modeling approach.

■ TC12

2nd Floor - Room 2220

Marketing Investments, Financial Performance and Shareholder Value

Cluster: Marketing and Finance

Invited Session

Chair: Lopo Rego, Assistant Professor, University of Iowa, 108 PBB W274, Iowa City, IA, 52242, United States of America, lopo-rego@uiowa.edu

1 - A Fundamental Signal from Advertising: Analyst Under-reaction

Min-Chung Kim, Assistant Professor, Hong Kong Polytechnic University, China, msmckim@polyu.edu.hk, Leigh McAlister

Relating marketing expenditures to the value of the firm is a major concern for marketing managers. Marketing scholars have recently begun to address this important research question. In this article, we propose a fundamental signal from advertising and show that it is related to cumulative abnormal stock returns (CAR, returns in excess of expected returns predicted by the three factor model of Fama and French 1993), after controlling for the accounting and finance variables known to affect the CAR. In addition, we show that the fundamental signal from advertising is not related to changes in analysts' expectation of firm value. We thus provide evidence that financial analysts under-react to the fundamental signal from advertising, despite the fact that the measure is impounded in firms' stock prices. With the findings, this paper joins a growing literature that demonstrates a link between marketing and financial value of a firm.

2 - The Relationship Between Web Chatter and Stock Price

Leigh McAlister, Professor, Ed and Molly Smith Chair in Business Administration, Department of Marketing, Red McCombs School of Business, University of Texas at Austin, 1 University Station, B6700, CBA 7.228, 21st and Speedway, Austin, TX, 78712, United States of America, leigh.mcalister@mccombs.utexas.edu, Garrett Sonnier, Tom Shively

Researchers are beginning to investigate the possibility that conversations on the web may have important implications for business. Studies have shown links between usenet discussions and TV ratings, between on-line book reviews and on-line book sales, between on-line movie reviews and movie revenues, and between on-line discussions and on-line prices. These studies assume that on-line discussion builds preference for the object being discussed. In this paper, we focus not on discussions designed to influence preferences, but on discussions designed to resolve technical problemsóespecially those problems that accompany the purchase of a new technical product. It is our hypothesis that savvy investors monitor the level of discussion about a technical firm's products and interpret that discussion level as a proxy for that firm's sales, an important indicator of the firm's value that is invisible to investors between a firm's quarterly reports. Using on-line discussion data, firm performance and firm stock price data for a technical firm, we show that, indeed, on-line discussion does move with firm performance. Further, we show that augmenting the traditional model of a firm's stock returns with information on on-line discussion levels improves the model's ability to fit stock price data and also improves the ability of the model to predict the firm's stock price in a hold out period.

3 - Exploring the Risk-return Trade-offs of Brand Quality

Kapil Tuli, Southern Methodist University, Dallas TX, kapilrtuli@smu.edu.sg, Sundar Bharadwaj

Although the concept of brand quality is considered a critical aspect of brand equity, there is little research that investigates the financial impact of brand quality. The current study investigates brand quality from the perspective of shareholder wealth. Consistent with expectations, we find that changes in brand quality are positively associated with stock returns and negatively associated with changes in idiosyncratic risk of stock returns. The positive impact of brand quality, however, comes at a cost as changes in brand quality are positively associated with the changes in a firm's systematic risk. The changes in brand quality also tend to complement the impact of changes in earnings on stock returns and systematic risk. Specifically, the impact of brand quality on stock returns is stronger if the earnings of a firm also increase. Importantly, the impact of brand quality on systematic risk becomes negative (as opposed to positive) if the changes in earnings are positive. Overall, the preceding results underscore the complex nature of the risk-return tradeoffs inherent in evaluating the impact of brand quality on shareholder wealth.

4 - How Does Marketing Listen to Stock Markets: Implications of Using Stock Market Movements to Guide Strategic Investments

Anindita Chakravarty, PhD Student, Penn State University, PA, United States of America, azc132@psu.edu, Rajdeep Grewal

The shareholder value approach has traditionally been applied to gauge the future economic potential of various marketing strategies. In this approach, managers observe how stock markets react to their strategies in order to understand the possible discounted cash flows that may accrue from their actions. However, little is known about the reverse, i.e., how do managers react to stock market movements considering that stock markets may provide valuable signals about shareholders' expectations about a firm? Using prospect theory and the shifting focus model of risk, we propose that stock market movements and the information inherent in them can be used to plan for investments in marketing capabilities relative to other strategically important capabilities such as product innovation capabilities. We also propose that investment decisions when guided by stock market movements should improve the performance of firms. We create a heterogeneous longitudinal sample of firms from 10 industries in order to test our propositions. We estimate the effects of stock market movements on relative investments in marketing and product innovation capabilities in the first stage, followed by the effects of the predicted investments as derived from the first stage on firm profitability. We estimate the two-stage model using the Bayesian MCMC approach. We find that managers tend to react to past stock returns but not to past patterns of stock volatility. Similarly managers react to expectations of a firm's future stock returns but not to future expectations of stock volatility. Reactions to past stock returns seem to favor greater investments in marketing capabilities. However reactions to expectations of a firm's future stock returns favor investments in product innovation capabilities. Also, managerial reactions to both past stock returns and expectations of future stock returns depends on past patterns of stock volatility, past profitability, firm leverage, and competitive intensity at the level of the industry. We also find that business-to-business (B-to-B) firms react more to past stock movements than business-to-consumer (B-to-C); whereas B-to-C firms react more to future expectations of stock market movements than B-to-B firms. Finally, we find evidence that stock market movements indirectly affect firm profitability. Specifically stock market movements influence relative investments in strategic capabilities that in turn directly impacts firm profitability.

5 - Customer Relationship Management Capabilities and Shareholder Value

Lopo Rego, Assistant Professor, University of Iowa, 108 PBB W274, Iowa City, IA, 52242, United States of America, lopo-rego@uiowa.edu, Neil Morgan

There is growing evidence of an association between market-based assets, such as brands and customer relationships, and the financial performance of the companies that possess them. However, we know little about how firms create, maintain and leverage market-based assets such as strong positive relationships with customers. Drawing from the Resource Based View and Dynamic Capabilities theory and using customer relationship data covering over 200 large firms for the years 1994 through 2006, we examine how customer relationship management capabilities contribute to create shareholder value. We develop a theoretical framework linking a firm's shareholder value with three elements of customer relationship management capabilities: (i) customer relationship management effectiveness - the firm's ability to create strong positive relationships with customers; (ii) customer relationship management efficiency - the firm's resources consumed in achieving realized brand equity outputs, and (iii) customer relationship management leverage - the firm's ability to utilize existing customer relationships to create and maintain shareholder value. Our results indicate that firms' customer relationship management capabilities are related to shareholder value performance from both an accounting (cash flows) and stock market (Tobin's Q) perspective.

■ TC13

2nd Floor - Room 2230

Entertainment Marketing: Movies I

Cluster: Entertainment Marketing
Invited Session

Chair: Ashish Sinha,SMIB, Victoria University of Wellington, 1120 Rutherford House, Wellington, New Zealand, ashish.sinha@vuw.ac.nz

1 - Empirical Analysis of Competition Between Affiliate and Independent Theaters

O. Cem Ozturk, Emory University, 1300 Clifton Road W462, Atlanta, GA, 30322, United States of America, oozturk@bus.emory.edu, Sriram Venkataraman

Understanding the extent of retail competition within an industry is important to marketing managers and policy makers alike. For example, in the motion picture industry, exhibitors can use this information to set admission prices, manage their daily assortments, or make location choice decisions, etc. Policy makers can use this information to assess if affiliate theaters, i.e. exhibitors that belong to national-level chains, exert unfair influence over independent theaters, i.e. single-location movie exhibitors. If such effects exist, managers and policy makers are interested in learning what underlying factors drive this influence, so that they can design appropriate marketing investments or regulatory controls. Despite its significance, there is a dearth of academic research looking at the level of competitive intensity between exhibitors in the motion picture industry. This study addresses this research gap by proposing a semi-parametric spatio-temporal econometric model to estimate the time-varying competitive intensity between theaters. Our model allows firms to differentiate themselves on multiple dimensions like admission prices, geographic location, chain affiliation, etc. This feature of our model enables us to measure the marginal contribution of each attribute as well as the combined effect of all attributes on competitive intensity between exhibitors. Our empirical analysis reveals that the impact of some of these attributes can be non-linear and non-monotonic even though the combined effect is somewhat linear. We use our demand model parameters to conduct some "what-if" analyses to illustrate the implications of perturbing some of the elements of differentiation on retailer performance.

2 - International Product Launch: The Case of Motion Picture DVDs

Ashish Sinha, SMIB, Victoria University of Wellington, 1120 Rutherford House, Wellington, New Zealand, ashish.sinha@vuw.ac.nz, Renu Emile, Namwooon Kim

While there has been a surge of academic research activity related to the motion picture industry in recent years, much of the research has focused its effort on understanding the theatrical release of movies in domestic and international markets (Neelamegham and Chintagunta 1999; Elberse and Eliashberg 2003). In this paper, we propose a Mixed Negative Binomial model to understand the dynamics of international product launch for motion picture DVDs. Of specific interest is the relationship between theatrical and the non-theatrical channels. While advances have been made in the prediction of box-office revenue for a movie, there is more predictability to DVD sales, as the success of these movies in another channel, namely the theatrical channel, is already known. We analyze data for three different countries, namely Germany, Australia and Japan, and consistent with earlier research, we find the existence of success-breeds-success phenomenon in this auxiliary channel. Successful movies at the box-office are, on average, also successful in the non-theatrical channels. In addition, our analysis shows that a standardized international product strategy would not be a correct approach for this product category.

3 - Impact of Media on Crime - Case of the Motion-picture Industry

Sriram Venkataraman, Assistant Professor, Emory University, 1300 Clifton Road, Atlanta, United States of America, svenka2@emory.edu, Pradeep Chintagunta, Sudheer Chava

We study if media consumption impacts crime. Specifically we assess if local-market level movie consumption affects local-market level crime in the short-run. Previous studies that have tried to answer similar questions rely either on experimental data or aggregate date. We on the other hand conduct our analysis using two disaggregate non-experimental databases. One database tracks market level hourly event by event crime by crime type. The second database contains detailed hourly title-level movie sales by geographic market. We use variation across markets in factors such as weather (snow, rain etc.), local sports and entertainment events, etc. to control for unobserved factors that could influence both crime rates and movie attendance at the local market level. Our results suggest that the effects of movies on crime (when present) vary by crime-type and geographic markets. We also demonstrate how levels of data aggregation potentially bias these effects.

4 - Does the Sequence of Countries Matter in the International Rollout of New Products?

Reo Song, PhD Student, Texas A&M University, Marketing Department, 215G Wehner Bldg. 4112 TAMU, College Station, TX, 77845, United States of America, strada@tamu.edu, Sanjay Jain, Venkatesh Shankar

With the growing globalization of business, managerial interest in formulating a sound international market entry strategy is gaining prominence. Previous studies on international market entry have primarily examined issues such as international market scope, timing of international rollout, and time to takeoff in each market. However, very little is known about the important issue of the sequence of countries in which firms introduce new products. We address important research questions related to this issue in the context of the motion picture industry. Is the sequence of the international rollout the same for most products introduced from the same home country? If not, on what does it depend? What are the key determinants of international entry sequence? Does international entry sequence matter when it comes to worldwide performance? To answer these questions, we estimate a structural econometric model of entry sequence and revenues using a unique dataset comprising leading Hollywood movies in about 30 countries during 2007-08. Our modeling framework investigates the roles of movie characteristics such as advertising and production budgets, user and critical reviews, star power, genre, release dates, and weekly box office revenues, and country-specific factors such as GDP, piracy rate, Internet penetration, and culture. Our preliminary results show that cultural and economic factors are significant determinants of the sequence of entry into international markets. We also find that learning from market outcomes in initial launch countries influences the subsequent sequence of entries in international markets. Importantly, the results show that international entry sequence does make a difference to the level of global performance.

■ TC14

2nd Floor - Room 2240

International Marketing II

Cluster: Marketing Strategy
Invited Session

Chair: Terry Elrod,Professor, University of Alberta, 3-23 School of Business Building, Edmonton, AB, T6G 2R6, Canada, terry.elrod@ualberta.ca

1 - Assessing Biases in Cross-national Research on Consumer Innovativeness

Deepa Chandrasekaran, Lehigh University, 621 Taylor St., Bethlehem, PA, 18015, United States of America, dec207@lehigh.edu, Gerard Tellis

Survey research on consumer innovativeness is fraught with three serious biases: socially desirable responding, yea-saying, and nay-saying. We propose simple measures to assess the pattern, causes, and effects of these biases. From a survey of 5569 respondents across 15 countries, we find evidence of substantial biases. These biases seem to differ significantly by country. Collectivism, uncertainty avoidance, and level of education seem to influence the extent of biases. These biases lead to erroneous conclusions about innovativeness as assessed by average penetration of new products from market data. The standardization correction does not correct these biases. Three negatively-valenced items provide the least biased measures of innovativeness.

2 - Shaking Hands Across The National Divide: The Success of Foreign JVs in India

Joseph Johnson, Assistant Professor, University of Miami, 501 Kosar Epstein Building, Coral Gables, Fl, 33146, United States of America, jjohnson@miami.edu, Krishna Prasanna, Gerard Tellis, Ram Krishnan

The consistent growth of the Indian economy since 1991 has attracted foreign direct investments from the world over. Most of these investments have been in the form of joint ventures between Indian and foreign firms. While practioners and researchers highly recommend such collaborative entry modes as a way to increase the chances of success in foreign markets no study has examined the success of joint ventures in India. How can we measure the success of such ventures? Do country level factors affect success? How do firm level factors impact success? What role does entry timing play? These are the questions that this paper addresses. The authors propose that stock market valuations provide a forward looking measure of the expected success of international market entry strategies. Using data from the Indian stock market the authors analyze the market reaction to entry announcements of joint ventures into India. Preliminary results show that most of the joint ventures are in the B-to-B area. Joint ventures with smaller Indian firms are more successful than those with larger ones. Other results show that investors reward joint ventures with firms from more masculine cultures and punish ventures with firms from economically disimilar and risky countries. The authors also find that earlier joint ventures have higher success than later ones. The study has implications for firms planning to enter India through joint ventures and for Indian firms looking for venture partners abroad. This paper contributes to the growing literature on the marketing finance interface by extending financial valuation techniques to international market entry decisions.

3 - The Role of Cultural Distance on Innovativeness in MNCs

Masoomeh Moharrer, Politecnico di Milano, via Giuseppe Colombo, Milano, Italy, negar602001@yahoo.com, Hooman Tahayori

Today Multinational corporations play an important role in global business. Like any kind of firms, some MNCs perform better than the others. Different factors can cause different performance level of MNCs. Role of subsidiaries should also be considered as an important factor in the success of MNC. The primary studies of firm's multinational growth argue that learning and transfer of knowledge consist of a one-way movement of technologies and methods from headquarters to subsidiaries (Hymer 1960; Vernon 1966; Caves 1974) and it is the subsidiary which benefits from the corporation. However the reverse flow is considered as well and organizational learning theory states this. Most recent studies stated that even subsidiaries can become the source of new knowledge, technology for other parts of MNC. One factor which received less attention is the effect of the distance between resources and capabilities of parent company and its subsidiaries. These resources may be tangible, such as proprietary knowledge, or intangible, such as reputation or brand name, and are based on the firm's history and other complex social interactions (Collis, 1991). In this research we are arguing why distance in reseouces can affect positive impact on the innovative performance of the MNCs. Subsidiary with less distance can bring less new information to the company so less effective in new product development. While by having more distant the subsidiary can bring more diverse idea to the firm and more effect on the innovative performance of the firm.

4 - Pride and Prejudice: Investigating the Symbolic Properties of Country of Origin in Asia

Terry Elrod, Professor, University of Alberta, 3-23 School of Business Building, Edmonton, AB, T6G 2R6, Canada, terry.elrod@ualberta.ca, Giana Eckhardt, Luming Wang

This work considers country of origin effects within Asia. Quota samples of consumers from four Asian countries report willingness to consider products from ten product categories from each of ten Asian countries. They also report which of ten country descriptors pertaining to technology and fashion leadership apply to each of these same ten Asian countries. A Bayesian market structure analysis of these data shows that a single dimension, corresponding to degree of economic development, is present but insufficient. A second dimension is needed to distinguish between technological versus fashion leadership, and between product categories that emphasize technological versus fashion considerations. The analysis strongly suggests that strong economies within Asia can differentiate themselves along a technology-fashion continuum rather than simply "follow the leader." However, this opportunity does not extend to the weaker half of these ten Asian countries. Their best opportunity for economic prosperity may continue to be as low-cost producers rather than as identified countries of origin. An important exception is when selling in the home market, since the data also reveal a strong home-country bias for all nationalities of respondents.

■ TC15

2nd Floor - Room 2320

Customer Lifetime Value: Metrics

Cluster: Customer Satisfaction, Loyaly, and Lifetime Value

Invited Session

Chair: Tanja Frischmann,Goethe University of Frankfurt & E-Finance Lab, Gr,neburgplatz 1, Frankfurt, 60323, Germany, frischma@wiwi.uni-frankfurt.de

1 - Customer Scoring and Competition - The Case of Retail Format Competition

Michael Jungbluth, Phd Student, CU-Eichstaett-Ingolstadt, Auf der Schanz 49, Ingolstadt, 85049, Germany, michael.jungbluth@kuei.de, Joachim Bueschken

Customer scoring is widely practiced in industries such as mail order, telecommunications or financial services to identify customers for specific marketing activities. It has been suggested to score customers on the basis of the value of their transactions per unit of waiting time taking into account the possibly heterogeneous covariation of waiting times and purchase volume. We extend this scoring approach by conditioning both, waiting times and purchase volumes, on interactions with a competitor. In the literature, it has been repeatedly suggested to include interactions with competitors when scoring customers. On the basis of individual purchase data of customers with two retailers over a period of two years, we score customers using a hierarchical Bayesian method, which incorporates the possibility that purchases with a competing retailer affects both, waiting times and purchase volumes, with the focal retailer. We test this model using simulated data and demonstrate that the model identifies individual-level and group-level parameters well. It is then applied to a real-life data set. We find significant effects of interactions with the competitor on purchase timing with the focal retailer on the individual level. This results in differences in customers' scores when competition is included. Our results indicate that it is relevant to account for competition when scoring customers. Implications and directions for future research are discussed.

2 - Measuring Household Response in Database Marketing: A Latent Trait Approach

Gary Russell, University of Iowa, Tippie College of Business, Iowa City, IA, 52242, United States of America, gary-j-russell@uiowa.edu, Subom Rhee

Database marketers often select households for mail solicitations using information on past purchase behavior. One of the most common methods, known as RFM coding, ranks households according to three criteria: the recency of the latest purchase event, the long-run frequency of purchase, and the cumulative dollar expenditure. We argue that the use of RFM information in targeting households creates major statistical problems (selection bias and RFM endogeneity) that complicate the calibration of predictive models. This reflects the fact that the firm's attempt to optimize mailing policy distorts the information on the household's true preferences. Using a latent trait formulation to capture a household's innate propensity to purchase a product, we construct a methodology that avoids the statistical limitations of the RFM model. The result is a household scoring approach that can be used on any customer database - even a customer database for which the firm has attempted to optimize mailing policy. We compare the methodology to the RFM probit model in an application to a database from a charitable organization. We show that the new approach provides a better fit to the database. Moreover, we argue on conceptual grounds that the latent trait approach is superior because it assumes the existence of a stable household characteristic that impacts the behavior of both the household and the firm. Using the parameter estimates of the latent trait model, we provide diagnostics on the relative effectiveness of various types of mailings and consider implications for improving household solicitation policy.

3 - Share of Wallet's Impact on Customer Value

Tanja Frischmann, Goethe University of Frankfurt & E-Finance Lab, Grüneburgplatz 1, Frankfurt, 60323, Germany, frischma@wiwi.uni-frankfurt.de

Accountability of marketing actions is a topic of ongoing interest. To measure and value the returns obtained from marketing investments, it is essential to link customer related metrics to financial results and performance. Several metrics and their influences have been analyzed so far. However, recent research has asked for methods and metrics which account for competition as well as for the consideration of potential biases, not using the optimal metric (e.g., Gupta and Zeithaml 2006). In this context share of wallet is a topic of growing importance among both managers and academics and has gained a lot of interest (e.g., Glady and Croux 2009). Managers' understanding of share of wallet implies a positive relationship between share of wallet and customer financial performance. While this claim is obviously important for management, it has not been empirically reviewed. As share of wallet is neither easy to obtain nor simple to monitor and costly to collect, it is necessary to evaluate the use of this customer metric. Therefore, this paper studies the relationship between share of wallet and customer value and examines the question whether this customer metric can be a critical indicator for customer relationship management. This article uses customer survey as well as internal transaction data from a major European retail bank. We contribute to existing literature by using continuous share of wallet data and including a set of perceptual as well as behavioral metrics. Based on these results we are able to derive managerial implications for customer segmentation strategies and cross-selling activities.

Thursday, 3:30pm - 5:00pm

■ TD01

Lower Level - Room 0210

Innovation: New Product Development and Design

Cluster: Innovation

Invited Session

Chair: Mark Kilgour,Lecturer, University of Waikato, Private Bag 3105, Gate 7 Hillcrest Road, Hamilton, New Zealand, kilgour@waikato.ac.nz

1 - The Role of Alliance, Alliance Partner and Format Characteristics on the Market Acceptance of Formats

Sujan Dan, Assistant Professor, University of Tennessee, 343 Stokely Management Center, Department of Marketing & Logistics, Knoxville, TN, 37923, United States of America, sdan@utk.edu, Alina Sorescu, Rajan Varadarajan

New products rely on technologies that are often subject to strongly contested standards wars. In an attempt to enhance the prospects of market acceptance (adoption in more products and by more firms) of the technical formats that their products are built on and their emergence as industry standards, firms often form standard setting alliances to develop and promote formats. Despite a proliferation of such alliances, the determinants of their success in setting industry standards are largely unknown. We develop and empirically test a theoretical framework examining the relationships between the characteristics of standard setting alliances, alliance partners, and technical format and the market acceptance of the format. Results indicate that the relationship between the size of a standard setting alliance (number of partners) and the market acceptance of a format is inverted U-shaped, suggesting that a larger membership in the development alliance does not always imply market acceptance of the format. Furthermore, we find that that compared to alliances with a greater proportion of specialists, alliances with a greater proportion of generalists are better at developing formats that find greater market acceptance. Formats promoted by formal alliances do not appear to have a higher market acceptance than these promoted by informal alliances. Finally, the broader the applicability of a technical format across product categories, the greater its market acceptance.

2 - If Creative Thinking Techniques Are So Great, Why Aren't They Used More?: Actor-observer Difference

Mark Kilgour, Lecturer, University of Waikato, Private Bag 3105, Gate 7 Hillcrest Road, Hamilton, New Zealand, kilgour@waikato.ac.nz, Scott Koslow

Creativity is at a premium in marketing and a myriad of creative thinking techniques have been suggested to supply this needed imagination. Despite this, advertising agencies and product development departments rarely take up these various techniques, often even looking down on those who do. To explain this disconnect between research and practice, we identify several problem that obscure our ability to understand the effectiveness of creativity techniques. First, creative thinking techniques may have effects when observed independently, but those using the techniques may have a hard time seeing these effects. Second, independent judges may have problems assessing creative work when the work presented to them is poorly elaborated on - which is not uncommon when ideas are in the formative stage of development. These problems are further compounded when the tests are performed on students, who react to techniques in different ways than professional subjects. To illustrate these effects we present an experiment undertaken on both professional and students samples that compares the self-reports of creatives', account executives' and students to independent judges' assessments. Sometimes the different perspectives match, but other times they diverge. Student self-reports are often wildly inaccurate, but problems also arise in the self-reports of industry professionals. Judges can be inaccurate as well, especially when the material they have to assess has not been elaborated highly. In explaining why techniques aren't more used, one aspect is that users have a hard time seeing the effects. However, another is that researcher may overstate the positive benefits of these techniques, especially when using student samples.

3 - The Origin of Innovations: Consumer, Inventor, or Technology?

Stav Rosenzweig, Visiting Scholar, University of Southern California, 3660 Trousdale Parkway, Los Angeles, CA, 90089, United States of America, stav.rosenzweig@marshall.usc.edu, David Mazursky, Gerard Tellis

Innovations are vital for business health, survival, and success. They initiate new markets, sustain incumbents, and help new entrants grow to be dominant. Do innovations originate with consumers, technologies, or inventors? Which of these three starting points and subsequent paths leads to the most impactful innovations? How has this pattern changed over the century? These are key unanswered questions in innovation and ones addressed in this study. The origin and paths of innovation are of importance to scholars and managers, because they may critically affect the success of those innovations. This paper aims to address the following questions: is it possible to identify distinct innovation paths? if so - do different innovation paths yield different consequences? Moreover, can we observe trends over time in innovation paths? We employ a historical approach to answer these questions. We study the detailed history and consequences of 188 innovations, which were introduced to the American market between 1900 and 1999. We find that each one of these innovations follows one of three key paths: consumer-, inventor- or technology-originated. We suggest that the innovation paths affect the level of innovation and the probability of generating a new product category. The dominant thinking in marketing is that firms should adopt a consumer orientation. Accordingly, impactful innovations should begin with the consumer. In contrast, we find that innovations predominantly originate with inventors. Further, innovations that originate with inventors tend to be more impactful, and more often trigger the start of new product categories. Moreover, we find that despite increasing awareness to customers' wants, impactful innovations have become less consumer-originated over time.

■ TD02

Lower Level - Room 0220

Channels: Retail Competition

Cluster: Channels

Invited Session

Chair: Tirtha Dhar, Assistant Professor, University of British Columbia, 2053 Main Mall, Vancouver, BC, V6T1Z2, Canada, tirtha.dhar@sauder.ubc.ca

1 - The Role of Quality in a Channel with Asymmetric Retailers

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This paper investigates the diverging incentives for product quality in a channel with two asymmetric retailers and a common supplier. When retailers differ in terms of service provision and channel power, changes in manufactured quality cause channel conflicts. In particular, our results show that if the low service retailer becomes dominant in the channel, it may induce a low level of quality that is detrimental for the other members of the channel. The low service retailer benefits from quality reduction first by improving its competitive standing against its rival retailer by lessening the importance of quality for consumer choice and second by strengthening its relative bargaining position vis-a-vis its supplier. Our results also show that consumer surplus may increase as a result of quality reduction.

2 - A Dominant Retailer's Impact on Manufacturers: Profits, Wholesale Prices, Shipments, Product Lines

Qingyi Huang, Northwestern University, Marketing Department, 2001 Sheridan Road, Evanston, IL, 60208, United States of America, qingyi-huang@kellogg.northwestern.edu, Vincent Nijs, Karsten Hansen, Eric Anderson

Previous academic research on the influence of dominant retailers such as Wal-Mart has looked at implications for incumbent retailers, consumers, and the local community. However, little is known about how Wal-Mart affects suppliers' performance. Manufacturers suggest that Wal-Mart uses its growing power to squeeze their profits. Published academic results are inconsistent and provide insufficient support for a directional hypothesis on the impact of Wal-Mart market entry on manufacturer profits. In this paper, we study how Wal-Mart market entry impacts manufacturer profitability. We also empirically investigate the underlying mechanisms causing these effects. Recent analytical papers suggest that manufacturers' best response to entry involves changing wholesale prices charged to incumbent retailers although the predicted direction of change contradict one another. We use a unique dataset for a packaged goods category offered by a major manufacturer in the industry. The dataset records the manufacturer's interactions with all retail stores, including Wal-Mart, for a period of five years, allowing us to evaluate the impact of entry on manufacturer profits, wholesale prices, and shipments.

3 - Is the Robinson-Patman Act Dead?

Ryan Luchs, Assistant Professor of Marketing, Duquesne University, Palumbo-Donahue School of Business, 600 Forbes Ave., Pittsburgh, PA, 15282, United States of America, luchsr@duq.edu, Tansev Geylani, Anthony Dukes, Kannan Srinivasan

While the goal of the Robinson-Patman Act is to prevent price discrimination and level the playing field for small buyers, in reality the retail marketplace is not aligned with this goal. Much anecdotal evidence suggests that Wal-Mart and other big-box retailers can and do obtain better prices for the same goods when compared with small, localized competitors. In this manuscript, we scrutinize why the marketplace reality is divergent with the goal of the Robinson-Patman Act. To this end, we examine the case history of the Robinson-Patman Act from an empirical perspective to show how the landmark Brooke Group v. Brown and Williamson ruling from the Supreme Court has made pursuing Robinson-Patman cases a difficult task for plaintiffs. This analysis suggests that the current legal environment is such that the Robinson-Patman Act offers little protection for companies wishing to stop price discrimination. Moreover, our analysis shows that the effect of the Brooke Group ruling is particularly strong for primary-line cases, for cases where a competitive harm ruling was made, and for cases with small plaintiffs.

4 - Fixed Fee Payment and Two Part Tariff: Who Pays Whom

Tirtha Dhar, Assistant Professor, University of British Columbia, 2053 Main Mall, Vancouver, BC, V6T1Z2, Canada, tirtha.dhar@sauder.ubc.ca

In marketing channel literature it is shown that two part tariff contracts can eliminate double marginalization problems. Such contracts entail retailers making a fixed fee payment along with per unit wholesale price (Murthi, 1987). Based on this contract design and directionality of the fixed (i.e. payment by downstream channel member to upstream channel member) it is sometime claimed that two part tariff contract can not exist in marketing channel because in traditional multi product retailing we do not observe retailers paying fixed fees to manufacturers (Iyer and Vilas-Boas, 2003). Recently Kuksov and Pazgal (2007) have shown that manufacturer paid fixed fee (similar to slotting allowance) can exist only if the downstream (i.e. retailing) market is competitive. In this paper we first show that even without retail competition there can be such fees paid by upstream channel members (i.e. manufacturers). We then present a flexible model of upstream and downstream competition and show that cost structures and nature of the products carried by the downstream channel members will influence the directionality of the fixed fee payment. We show that the direction of the fixed fee payment by the channel players will change depending on the scale economies in the channel cost even without any market competition. We then expand and show in a competitive market nature of the product categories sold through the channel will also play an important role in directionality of the payment. Retailers will pay the fees if products carried by them are substitutes. On the other hand, if the products are complements then the directionality of the payment will change. Our research provides new and testable insights into directionality of side payments such as slotting allowances.

■ TD03

Lower Level - Room 0230

Promotion: Sales Promotion

Cluster: Promotion

Invited Session

Chair: Aharon Hibshoosh,Professor, San Jose State University, Department of Marketing/DS, San Jose State University, San Jose, CA, 95192, United States of America, rhibshoosh@gmail.com

1 - How Should Retailers Manage Organic and Conventional Products Across Categories?

Koen Pauwels, Associate Professor, Ozyegin University, Kusbakisi Str. No:2, Altunizade, Uskudar, Istanbul, 34662, Turkey, koen.pauwels@ozyegin.edu.tr, Ram Bezawada

Retailers consider organic products as a prime opportunity to improve differentiation and performance in a price-competitive industry. Now that the sales of organic products have grown to rival that of conventional products in some categories, retailers face the question of how to manage both groups of products, which are natural substitutes. Assortment variety, price levels and promotions in either group may strongly affect the other group, and thus retailer performance. A recent paper has questioned conventional wisdom that typical retail tactics help organic product performance, as illustrated by the failure of the ëWal-Mart price' strategy (Ngobe 2008). The author thus leaves us with the question ëare organics compatible with the conventional supermarkets?'. This paper addresses this question by calculating long-term own and cross-elasticities of organic and conventional product sales in response to changes in assortment, price and promotions. Moreover, we consider broader performance implications in terms of category margin and store revenues. A rich dataset of 40 categories for a large US retailer allows us to present the first empirical generalizations on long-term consumer response to retailer marketing actions for organic products Based on our specific results, retailers who wish to grow organic sales and at least maintain conventional sales should focus on reducing organic prices and offering deeper and more frequent organic discounts. To grow conventional sales without much harm to organic sales, reducing regular prices of conventional products helps. Finally, retailers should resist increasing (or should even cut back on) the depth and frequency of conventional discounts.

2 - Measuring the Effectiveness of Integrated Promotion Activities: The Case of Wine Marketing

Ram Bezawada, Assistant Professor, State University of New York, Buffalo, Buffalo, NY, 14260, United States of America, bezawada@buffalo.edu, Tolga Akcura, Koen Pauwels

The aging of the baby boomers, increased publicity of health benefits of wine consumption, and increased prosperity has significantly impacted demand for wine products in the United States. Several new world wines regions are entering the US market with distinct offerings, which in turn is influencing old wine world regions to respond with unique varieties. The challenge to both manufacturers and retailers of wine products is to identify the optimal marketing mix product category strategies in this unique category. In this research, we seek to understand the effectiveness of the different promotion strategies typically undertaken by wine marketers. Our scanner panel data consist of all types of promotion activities both in store (e.g., wine ratings display/shelf talkers, end of aisle displays/gondolas, in store wine tastings) and out store such as catalog mailings, media advertising and communication on internet with customers and their responses to e-mails sent. Moreover, we also have information pertaining to the cost of goods sold (at the individual SKU level), inventory costs and the costs of various promotional activities. Using the above, we seek to determine the relative impact and profitability of the above promotion activities thereby helping firms to effectively target their strategies to improve profitability.

3 - Consumer Welfare in Price Discrimination Schemes with Rationed and Non-rationed Deals under Leakage

Aharon Hibshoosh, Professor, San Jose State University, Department of Marketing/DS, San Jose State University, San Jose, CA, 95192, United States of America, rhibshoosh@gmail.com, Uriel Spiegel, Uri Ben-Zion

We initiate comparative analysis of consumer welfare under endogenous segmentation generated by voluntary rationed and non rationed Price Discrimination (PD) schemes with downward leakage and by a regular monopoly. The analysis is done for a market with uniform distribution of consumer reservation prices. We assume linear individual consumer demand (unlike the unit demand in Hotelling based models) for a "must have if affordable product" and a consumer deal proneness (or lack of it) that is a consumer inherent trait. Accordingly, we identify four consumer purchasing types: loyal consumer always paying full price, deal prone -full price consumer can pay full price but prefers a deal, strictly deal prone consumer, and a non purchaser. We generated homogeneous segmentation based on consumer reservation prices, consumer inherent deal proneness and the relative level of leakage rate. Consumers in a given segment have a purchasing type that is PD scheme and segment specific, though the type may vary from one PD scheme to the other. Segment's profile is unique and the segmentation exhaustive. We identify the functional forms of the individual consumer surplus (CS) under alternative PD schemes. Under rationing, this functional form is qualitatively affected by the effectiveness of the quantity restriction, and three distinctive cases are identified. For the reference boundary consumers of the segments we computed the CS value. Some segment based CS comparison followed. Obviously, no PD scheme is universally dominant. We also inquired who is benefiting from an increasing consumer leakage. As leakage is increasing, prices and purchase limits change and a consumer may switch segment(s) and her CS may or may not exhibit monotonic or even continuous change.

■ TD04

Lower Level - Room 0240

Pricing: Competition II

Cluster: Pricing

Invited Session

Chair: Elie Ofek,Professor, HBS, Morgan 195, Soldiers Field, Boston, MA, 02163, United States of America, eofek@hbs.edu

1 - Out-group Homogeneity Bias and Strategic Market Entry Decisions

Neil Bendle, PhD Student, University of Minnesota, Carlson School of Management, 3-150 321 19th Ave S, Minneapolis, 55455, United States of America, bendl003@umn.edu

Will a well documented psychological phenomenon, out-group homogeneity bias, impact strategic market entry decisions or will competitive pressures nullify the effects? Bias can be driven out of markets by selection pressures but this may depend on the bias and decision context. I therefore address whether competition will drive out a specific bias — out-group homogeneity bias —in an important decision context —strategic market entry decisions. Marketers face a one-time cost to enter the market and decide in later rounds whether to stay in the market. Out-group homogeneity bias is a variance bias; our tendency to see groups to which we don't belong as less varied than our own. The bias is an interaction of group (i.e. market) and marketer. It is not a characteristic of a specific marketer; all may experience it when viewing their particular out-groups. As context dependent variance biases are exceptionally difficult to learn, this research concentrates on market pressures and not learning. A model suggests that out-group homogeneity bias may encourage entry near the average customer in out-group markets. Marketers experiencing the bias may display excess commitment to the out-group markets scaring off other entrants. Furthermore decisions to enter are not the same as decisions to stay in a market after entry. Even when a marketer experiencing bias makes an unprofitable decision to enter once they have sunk the entry costs the decision to stay in the market may be profitable. These observations suggest experiencing bias may make marketers more likely to both enter and remain in certain markets. Out-group homogeneity bias would therefore persist even in competitive markets. This has marketing strategy implications, especially in international and underserved markets.

2 - When is it Optimal to Ignore the Threat of a Competitive Entry?

Olivier Rubel, Assistant Professor of Marketing, UC Davis, One Shields Avenue, Davis, CA, 95616, United States of America, orubel@ucdavis.edu

I consider a dynamic model a la Eliashberg and Jeuland (1986) where a monopolist is not sure about the exact entry date of a possible competitor. Combining simultaneously stochastic entry and finite time horizon I identify the optimal feedback pricing strategies for both regimes, i.e. before and after the entry occurred for the monopolist and the new entrant. As the perceived likelihood of a competitive entry increases, the monopolist should increase the price of his product. Moreover, I identify conditions for which it is optimal for the monopolist to ignore the threat of a competitive entry.

3 - Up-market or Down-market Stretch: Optimal Sequential Introduction of New Products

Mahmood Pedram, Purdue University, 403 West State Street, West Lafayette, IN, 47906, United States of America, mahmood@purdue.edu, Subramanian Balachander

In this paper we conduct an analytical study of the optimal timing of introduction of a firm's products targeted at segments that differ in their willingness to pay for quality. There are many examples where firms introduce a high-quality product followed by a lower-quality version of the product. Past studies have suggested that such a sequence of introduction may mitigate the cannibalization effects of the low-quality product on profits from the high-quality product. However, there are several instances where firms introduce a lower quality model and follow it up with higher quality model. In this paper, we identify the conditions other than technological improvements occurring over time that may justify such a sequential strategy. We show that if the segment targeted with the higher-quality product has a lower valuation of the product but a higher marginal utility of quality, then it becomes optimal to introduce a low-quality product followed by a high-quality product. Next we consider what characteristics of a firm might induce it to follow a particular sequential strategy. We show that that a firm with a high-quality image would introduce a lower-quality product followed by a higher-quality product, while a firm with a low-quality image would introduce a high-end product first and subsequently a lower-end product. We also show that regardless of the quality image of the firm, the product being delayed always targets the consumer segment with lower total valuation and also always provides lower margins to the manufacturer.

4 - Complementary Goods: Creating and Competing for Value

Elie Ofek, Professor, HBS, Morgan 195, Soldiers Field, Boston, MA, 02163, United States of America, eofek@hbs.edu, Taylan Yalcin, Eyal Biyalogorsky, Oded Koenigsberg

This paper studies the strategic interaction between firms producing strictly complementary products. With strict complements, e.g., video-game consoles and software titles, a consumer derives positive utility only when both products are used together. We show that when the products are developed by separate firms (ënon-integrated' development) the quality levels are lower than those chosen by a monopolist. This happens because of the incentive to free-ride on the rival's quality; hence a firm is unable to capture all the value associated with costly quality improvements. Moreover, when the firms develop products sequentially the second mover has an advantage: it can choose an even lower quality level and secure higher profits than the first mover. However, if the first mover can mandate a royalty or licensing payment from the second firm for permission to produce a compatible product (as often occurs in hardware-software arrangements) the profit advantage flips: the first mover develops a much higher quality product and captures value via a high licensing fee. When there is vertically differentiated competition in one of the product markets (e.g., two hardware firms of different quality), and royalty fees are permitted, all firms can earn positive profits in equilibrium. This finding is in sharp contrast to the extant literature that suggests that the low quality firm will be driven out of the market. Finally, we examine the incentives to develop both products in house vs. letting the more efficient firm develop the second good. By shedding light on the incentives to improve quality and the effect of royalty fees, the analysis provides valuable insights for formulating marketing strategy in industries where consumption involves complementarities among multiple goods.

■ TD05

Lower Level - Room 0320

Consumer Behavior: Social Influence

Cluster: Buyer Behavior

Invited Session

Chair: Hiroshi Kumakura,Professor, Senshu University, 2-1-1, Higashi-mita, Tama-ku, Kawasaki, 2148580, Japan, kumakura@isc.senshu-u.ac.jp

1 - The Role of Social Influence in Innovators' Adoption Behavior

Dominik Papies, Assistant Professor, University of Hamburg, Von-Melle-Park 5, Hamburg, 20146, Germany, dominik.papies@uni-hamburg.de, Esther K. Papies, Michel Clement

Extant research has often distinguished between innovative consumers and the majority by describing the majority as being influenced by social pressure and personal influence whereas innovators are not, e.g., Bass (1969) and Rogers (2003). However, innovative consumer behavior often takes place in a social context. We propose that innovative consumers, who are also members of a social system and are thus likely to interact with other members of their social groups, might not be immune to social influence. Prior research is inconclusive as to the extent to which innovative consumers communicate with significant others concerning new product adoption. Our research seeks to shed light on this question and analyzes the extent to which innovative consumers are influenced by communication behavior and other social drivers of innovation adoption behavior. In a large-scale survey including key social psychological variables as well as classical predictors of adoption behavior from the domain of marketing research, we identify the specific quality of social influence that drives the purchase decisions of innovative consumers and distinguishes them from the majority of consumers. Thus, our findings challenge the dominant view that innovators' decisions are not induced by social influence and offers new insights that are relevant for understanding as well as for targeting innovators' adoption behavior.

2 - Family Groups Consuming Television: Do Shared Moments Breed Strong Interactions?

Jose-Domingo Mora, PhD Candidate, Simon Fraser University, 6-102 Fraser St., Port Moody, BC, V3H0C7, Canada, jdmora@sfu.ca, Robert Krider, Jason Ho

Social influences occur during encounters with others at every stage of the process of consumer decision making, from need recognition to post-purchase evaluation. Group consumption is a distinct facet within this process. Group consumption is important in many product categories, from vacations to dining to audiovisual entertainment, but it has been largely ignored in the empirical modeling literature. Since the importance of social interactions on buyer behaviour is now beyond doubt, we argue that consumer interactions during consumption should have a sizeable effect on product perceptions, consumer satisfaction and, ultimately, on product choices and individual consumption. We investigate the role played by group consumption in shaping mutual influences among television viewers, and how this interplay influences individual choices, using simultaneous equations models where a new operationalization of group consumption is introduced and tested. We take advantage of a unique dataset available for this research which was generated from the electronic people meter panel that measures television audiences in Mexico. This dataset reports choices and time spent at the individual level during prime time, an interesting time slot where local broadcasters exhibit telenovelas -the most important form of televised entertainment in the planet, according to BBC World. Notably, this dataset reports individual psychographic profiles. We evaluate how type of program, consumer psychographics, as well as the usual demographics, moderate the interactions that take place during group consumption.

3 - The Mechanism of Cyclical and Self-Organized Change of Choice Set Size: Discussion with Agent Based

Hiroshi Kumakura, Professor, Senshu University, 2-1-1, Higashi-mita, Tama-ku, Kawasaki, 2148580, Japan, kumakura@isc.senshu-u.ac.jp

A cyclical and self-organized change of choice set size is discussed here. First, a cyclical change of choice set size (the number of brands consumer buying) is shown by POS data. Then, the mechanism in which choice set size varies cyclically and self-organizedly under interaction among consumers and companies is proposed. Finally, an agent-based simulation model examines the mechanism. Marketing strategies affect choice set size; on the other hand, choice set size affects these marketing strategies. Moreover, choice set size affects (future) choice set size itself via marketing strategies. Such autonomous interaction phenomenon is called self-organization. Self-organization is the phenomenon that a new macro pattern emerges according to interaction among inner micro agents without control of outer. Namely, when the atmospheres shared by agents exceed critical thresholds of an agent or agent group, this atmospheres spreads within the organization and macro patterns in the organization vary. The typical self-organization phenomenon is language. Language always varies. (Macro) usage is changed by not specific authorities but many speakersÅf free will uses (micro) autonomously. We suppose consumers and companies to be inner micro agents, and the number of brands sold and bought in a market to be a macro pattern, and then we examine the change of a macro pattern under interaction among micro agents by an agent based simulation model. Tiny contribution of this research is discussing the cyclical change of a marketing phenomenon from the viewpoint of self-organization of markets and by using an agent based simulation model.

■ TD06

1st Floor - Room 1210

Interactivity and Retailing

Cluster: Special Track: Interactive Maketing
Invited Session

Chair: Sandy Jap,Sandy_Jap@bus.emory.edu

1 - Do Multichannel Customers Really Outperform? Retention, Revenues, and Multichannel Usage

Sara Valentini, University of Bologna, Via Capo di Lucca, 34, Bologna, 40126, Italy, s.valentini@unibo.it, Scott Neslin, Elisa Montaguti

Recent work in marketing suggests that customers shopping across multiple channels tend to be more profitable. However, we know very little about the key drivers of customer profitability in multi-channel shopping contexts. The main purpose of this study is to investigate whether customers who become multi-channel become more profitable as a result. To do so, we develop a model that jointly estimates retention, multi-channel shopping, and revenues. We propose a probit model for retention and multi-channel shopping and a standard right-censored Tobit regression for revenues. We control for selectivity bias through a recursive model that allows error terms between retention, multichannel shopping and revenues to be correlated. Data were obtained from a major European multi-channel retailer. This provides us with a cohort of new customers whose transactions were longitudinally tracked for four-and-a-half years. We find that multichannel shopping behavior increases both customer retention and revenues per customer among the customers who are retained. However, we also find evidence of a controversial role of multi-channel shopping behavior on retention; customers who become multichannel early are more likely to re-new their memberships.

2 - The Effect of Channel Elimination on Customer Metrics: Transition from Catalog Retailers to E-Tailers

Umut Konus, PhD Student, University of Groningen, RUG FEB, Department Marketing, P.O. Box 800, NL-9700 Av., Groningen, Netherlands, u.konus@rug.nl, Peter Verhoef, Scott Neslin

In marketing literature there are numerous studies on the firm's adoption of new channels and its effect on customer behaviour and firm performance. There is no research up-to-now focusing on the consequences of a firm's elimination of a transaction channel. In this research we study a mail-order retailer's elimination of catalogue channel. This elimination aims to steer customers to the dominant on-line channel and to reduce costs. We posit that channel elimination merits research attention as a marketing policy change which impact on customer behaviour remains unexplored. The issue has managerial importance since mail-order retailers have been striving to shift their business to on-line activities. The objective of study is to understand the impact of channel elimination on customer behaviour in terms of sales, purchase frequency, expenditures and customer channel usage. We used 5 years of behavioural data from a large scale Dutch e-tailer with over 1.000.000 transactions. Our data consists of an experimental group of 25.000 customers who have no longer received catalogues after the first 2,5 years and a control group of 25.000 customers who continuously received catalogues during the observed 5 years. Our initial results reveal that: elimination of catalogue channel has a negative impact on (a) total sales and (b) number of purchases made from alternative channels. Furthermore, the average expenditures from telephone and voice response system channels decrease, whereas the elimination does not affect in the average expenditure in the on-line channel. Hence, the results show that the elimination of the catalogue channel does not enhance on-line sales as intended.

3 - Modeling Multichannel Media Consumption: Multitasking and the New Media

Sandy Jap, Sandy_Jap@bus.emory.edu, Chen Lin, Sriram Venkataraman

With the emergence of the new interactive media landscape, consumers are fundamentally changing the way they consume and experience marketing communication efforts across a variety of online (i.e., email, search, games) and offline (i.e., tv, radio, newspaper/magazines) media channels. Understanding how consumers use the mix of traditional and new media channels and how to best allocate media spend across these channels are critical issues facing marketers today. As new technologies allow firms to enact these policies at the individual-, segment-, and market-level, developing predictive models to facilitate these decisions is on the rise. Equipped with such analytics, firms with this insight would be able to speak authoritatively to clients and the marketplace regarding how consumers are interacting with online and offline communication media i.e. provide ROI on marketing spend by media, by consumer, by segment, etc.

■ TD07

1st Floor - Room 1220

Auctions: Internet

Cluster: Internet Marketing
Invited Session

Chair: Sam Hui, Assistant Professor, New York University, Tisch Hall, 40 West 4th Street, New York, NY, United States of America, khui@stern.nyu.edu

1 - An Analysis of Alternate Auction Policies for Search Advertisements

Subramanian Balachander, Purdue University, 403 West State Street, West Lafayette, IN, 47907, United States of America, sbalacha@purdue.edu, Karthik Kannan, David Schwartz

In the online world, publishers place ads from advertisers adjacent to internet search results for a given keyword. To sell such advertising, web publishers auction multiple ad slots using a generalized second-price auction. In this paper, we compare two auction policies that publishers can use to determine the rank and payments of bidding advertisers. The first policy, the highest bid policy, ranks ads based on the bids submitted while the second policy, the highest profit policy, ranks ads based on the expected profit generated to the publisher. Interestingly, we find that the highest profit policy may generate lower publisher profits per keyword even though it uses more information. Subsequently, we present two sets of empirical studies. First, we analyze data on keyword costs from two search engines and show that the data are consistent with our theoretical results, although they do not conclusively rule out alternate theories. In the second analysis, we establish that the correlation between valuations and click through rates are positive, an important assumption in our theoretical model. Taken together, both these results provide significant support for the theoretical results.

2 - To Bundle or Not To Bundle: On the Profitability of Multi-item Auctions

Peter Popkowski Leszczyc, Associate Professor, University of Alberta, 4-30F School of Business building, Edmonton, AB, T6G 2R6, Canada, ppopkows@ualberta.ca, Gerald Häubl, Yingtao Shen

We investigate under what conditions it is more profitable to auction two items jointly as a bundle vs. separately, and we examine how this is determined by the degree of complementarity of the items, by the amount of heterogeneity in bidders' valuations, by whether the components are auctioned both as a bundle and separately, and by the outside availability of the individual items. Empirical evidence from four field studies shows that a bundle auction is less profitable than separate component auctions when complementarity is low. This sub-additivity of bundle revenue is due to the inefficiency of bundling, which may even result in one of the components selling for more than the bundle (when perceived fit of the items is low). However, when complementarity is high, bundling tends to result in (often substantially) greater revenue than separate auctions. This super-additivity is stronger for services than physical goods, suggesting that the time-critical nature of services increases the risk of winning only one of the two items (exposure risk), resulting in less aggressive bidding in the separate component auctions. This effect is observed even when the outside availability of the items is high. Moreover, we find that a mixed bundling strategy, where the components are auctioned both as a bundle and separately at the same time, results in lower selling prices compared to using both a pure component (when the items are only available separately) and a pure bundling strategy (when the items are only available as a bundle). More specifically, the revenue of a single auction of a bundle of complementary items is greater under pure bundling, whereas the combined revenue of separate component auctions for non-complementary items is greater under a pure component strategy.

3 - The Impact of Promotional Messages During Auctions

Eric Greenleaf, Professor of Marketing, Stern School, New York University, 40 West 4th Street, Rm. 813, New York, NY, 10012, United States of America, egreenle@stern.nyu.edu, Sha Yang, Caroline Ducarroz

Auctioneers often use send promotional messages to bidders and potential bidders during live and internet auctions. Although the impact of marketing actions taken before bidding starts has been studied, the impact of in-auction messages on bidder behavior and prices, and auctioneers' strategies for when to issue messages and what to say in them, have not been studied. We propose and test a model of these messages with features. First, we distinguish between "informational messages" conveying information about the auctioned item and "urging messages" urging people to bid higher or join the auction. Second, we propose that auction messages influence final auction prices through two paths. They can increase auction prices directly by increasing valuations of people already bidding, and indirectly by attracting more bidders, thus increasing auction prices. Third, we propose that the auctioneer's decision on when to issue messages depends on past auction events and messages. Thus, the model reflects interactive feedback, where past messages influence auction prices and the number of bidders, while past bidding behavior, number of bidders, and messages influence current messages. We test the model using a dynamic framework that simultaneously studies the interactive impact of messages on consumers and consumer behavior on messages. We test the model using data from real-time internet auctions of airline tickets held by Air France that typically lasted less than 15 minutes and used messages. The results support the proposed model and associated hypotheses. We also propose that this model has applications to other situations, such in online video games, where marketers can issue interactive messages during consumer experiences based on information collected in real time.

4 - Nonparametric Demand Estimation Using Online Auction Experiments: A Polya Tree Approach

Sam Hui, Assistant Professor, New York University, Tisch Hall, 40 West 4th Street, New York, NY, United States of America, khui@stern.nyu.edu, Edward George

We show how a retailer can estimate the customer valuation distribution for a new product using the observed transaction prices from online second-price auction experiments. For this purpose we propose a Bayesian nonparametric methodology based on Polya trees which, given the limited nature of the data, requires a specially tailored implementation. In collaboration with an online jewelry retailer, we illustrate how this methodology can be used to derive the profit maximizing price of a new jewelry product.

■ TD08

1st Floor - Room 1230

Empirical IO: Strategy

Cluster: Empirical IO

Invited Session

Chair: Sunil Kishore, PhD Candidate, University of Minnesota, Carlson School of Mgmt., 321 19th Ave S CSOM 3-150, Minneapolis, MN, 55455, United States of America, mailsunil@gmail.com

1 - The Effect of Changes in Local Market Structure on Product Line Decisions on Movie Theaters

Pradeep Chintagunta, Robert Law Professor of Marketing, University of Chicago, 5807 S. Woodlawn Avenue, Chicago, United States of America, pradeep.chintagunta@chicagogsb.edu, Yesim Orhun, Sriram Venkataraman

We study how several measures of product assortment are influenced by firms' responses to changes in competition. Our data include daily box-office revenue information at the individual movie theater - title level from September 2003 to March 2005. We also observe title, theater and market characteristics. The data reveal considerable variation in the number of competitors within (i.e., over time) and across geographic markets. This aspect of the data allows us to control for market and theater specific time-invariant unobservables. Our results indicate that the net revenue impact of changes in competitive environment of a movie theater can be ascribed both to the direct impact of competition as well as to the indirect effect of endogenous product line decisions.

2 - Are Advertising and R&D Complements?

Georg von Graevenitz, Assistant Professor, Ludwig Maximilians Universität München, Kaulbachstr. 45, Munich, 80539, Germany, graevenitz@lmu.de, Philipp Sandner

Escalation of advertising or R&D expenditure can give rise to endogenous barriers to entry (Sutton, 1991, 1998). This paper investigates whether escalation of expenditure on R&D raises the return to expenditure on advertising or vice versa. We model this question following Sutton (1998) and show that joint occurrence of advertising and R&D is most likely due to complementarity. Descriptive analysis of a dataset on 2093 large companies shows that roughly 50% of these combine advertising and R&D to raise barriers to entry. To provide a more rigorous test of the complementarity hypothesis three empirical tests are performed using regression analysis. We use a dataset that combines stock market and balance sheet data with information on patents, patent citations, trade marks and trade mark citations from the Internet. Results from Tobin's q regressions show that advertising is a complement to R&D for companies that mainly rely on R&D to create barriers to entry. R&D is not found to be a complement to advertising for companies mainly relying on advertising to create entry barriers. Our results show that R&D intensive companies self select into use of advertising and that this has significant positive effects on market value. Qualitatively similar results hold in regressions of the gross-profits ratio on R&D to sales and advertising to sales ratios. These results are derived using two stage GMM regressions in which we instrument these ratios using information on patents and trade marks. Finally, quantile regression is used to exclude the possibility that R&D and advertising are complements to a common unobserved variable. We confirm that advertising is a direct complement to R&D for companies relying on R&D.

3 - The Relative Impact of Marketing versus R&D Efforts on the Top-Line Growth of Leading Large Firms

Gautham Vadakkepatt, PhD Student, Texas A&M University, 217 Wehner Building, 4112 TAMU, Texas A&M University, College Station, TX, 77843, United States of America, ggopal@mays.tamu.edu, Venkatesh Shankar, Rajan Varadarajan

The re-emergence of top-line growth as a major corporate priority, together with the challenges in achieving growth, has drawn renewed attention to the drivers of firm growth. While prior research sheds some valuable insights on firm growth, not much is known about two aspects of growth. First, researchers have focused mostly on the relationship between firm growth and industry dynamics. Consequently, the emphasis has been on industry level structural variables relative to firm level strategic variables. Second, prior research does not adequately account for the mode of firm growth (external growth, or growth through mergers or acquisitions versus organic growth, or growth through internal initiatives). This is particularly problematic in light of the prevailing view that external growth is an inferior mode of achieving sustainable long-term growth. We address these issues by examining the effects of two key under-researched strategic determinants of organic growth, R&D efforts and marketing efforts. In doing so, we explicitly account for firm characteristics such as external growth history, degree of diversification, top management turnover and industry characteristics. We develop survival and growth models using panel data. Using a dataset compiled from Fortune 500, COMPUSTAT, SDC and individual 10-K reports, we empirically test the hypothesized effects of R&D and marketing efforts on the growth of 180 leading manufacturing firms for the period 1991-2006. Preliminary analysis suggests that marketing efforts, external growth history and degree of diversification are key drivers of firm growth. However, there is insufficient evidence for the effect of R&D efforts on firm growth.

4 - Brand Architecture - Boon or Bane?: A Two Sided Matching Model of Acquisitions

Sunil Kishore, PhD Candidate, University of Minnesota, Carlson School of Mgmt, 321 19th Ave S CSOM 3-150, Minneapolis, MN, 55455, United States of America, mailsunil@gmail.com, George John, Om Narasimhan

Much of the research in branding has emphasized the importance of developing and maintaining brand portfolios. The role of brand architecture in an acquisitions context, though acknowledged to be important, remains largely unexplored. This is the gap we wish to fill. Examining the brand architecture in an acquisitions context poses unique challenges, as the decision to match is not only mutual, but also depends on the choices and characteristics of other firms in the industry. It is therefore important to model the preferences of both sides, i.e., the acquirer and the target. We accommodate this interaction between choices by building a structural two-sided matching model and separately identifying and estimating both i) the preferences of the acquirers and the targets that affect the formation of the matches, and ii) the factors that influence the outcomes of the matches. Our preliminary estimates indicate that target companies have a greater preference for matching with acquirers that follow a house of brands or mixed branding architecture than for matching with acquirers that follow a branded house architecture.

■ TD09

1st Floor - Room 1240

Models and Measurement for Bundling Strategies

Cluster: Marketing Models

Invited Session

Chair: Vithala Rao, Professor, Cornell University, 351 Sage Hall, Johnson School, Ithaca, NY, 148536201, United States of America, vrr2@cornell.edu

1 - Bundling of Competing Products in a Retail Channel

Nanda Kumar, Associate Professor of Marketing, University of Texas at Dallas, SOM, 800 West Campbell Rd., SM32, Richardson, TX, 75080, United States of America, nkumar@utdallas.edu, Vithala Rao

In the package goods industry retailers commonly promote bundles which comprise of products made by competing manufacturers. For instance, retailers will promote bundles comprising of Lay's or Doritos manufactured by Pepsi with Coca Cola beverages. This practice is not viewed favorably by manufacturer's like Pepsi who would prefer that the bundle comprise of products manufactured by them and not that their rivals. In this study we develop a game-theoretic model in which two manufacturers sell multiple products through a common retailer. We allow the demands of the products in the bundle to be related in a flexible manner without restricting them to be complements or substitutes. As a benchmark we first examine a setting where the two manufacturers simultaneously decide their product strategy, which entails choosing one of three options: (a) sell the two products separately (b) offer only the bundle or (c) offer the bundle and the products separately. Given the product strategy, the manufactures decide the wholesale prices and the retailer then sets the retail price. We next examine a setting in which the manufacturers set the wholesale price of their products and allow the retailer to decide whether or not to bundle. In the event that the retailer decides to bundle he also decides which bundle to offer. In contrast to the benchmark the retailer may decide to create a bundle comprising of the competing manufacturers' products. We compare the profits of the retailers across the different product strategies to identify market conditions under which the retailer would (not) prefer to bundle products made by competing manufacturers. We also identify market conditions in which manufacturers may be better off when their products are bundled with a product made by a competing manufacturer. By comparing the profits of the manufacturer in benchmark model with that from the setting in which the retailer makes the bundling decisions we are also able to make statements about when it may (not) be optimal for manufacturers to allow the retailer to make the bundling decisions.

2 - Modeling Preferences in Sequential Bundling

Manoj Agarwal, Binghamton University, State University of New York, Binghamton, NY, 13902, agarwal@binghamton.edu, Vithala Rao, Kalpesh Desai

Consider a consumer who has bought a digital camera. She also needs a photo printer. While she could buy both together (probably in an explicit bundle), it is quite likely that she may buy the printer at a later date after using the camera. How would the camera brand affect her choice of printer brand? If she bought a particular printer brand first, would she have bought the same camera brand? In this research we study these types of "implicit" bundles which arise in sequential choice situations. Other examples of such situations are in cross-selling situations where firms market other services to consumers who have already bought one of the products of the firm. In these implicit bundles, the set of products is not sold together as an explicit bundle. However the utilities derived from the products have complementary/substitute relationships among the products and their attributes (Rao 2004). Additionally, the sequential nature of choice suggests that the preferences for the second item may depend on the characteristics (and brand) of the first item. Bundling literature has studied bundle preferences when the bundle decisions are made concurrently in explicit bundles. Bundle preferences are mapped from the preferences for the individual items of the bundle. Several models have been suggested for these mappings both in terms of preferences and choices. Yadav (1994) has suggested the weighted additive model for bundle preference formation. Bundle choice has been studied using the Balance Model (Farquhar and Rao 1976), attribute satiation model (McAlister 1979) and heterogeneous components model (Chung and Rao 2003), among others. We investigate three different models to understand the preferences for the second item in the "implicit" bundle. The utility of the second item will consist of its own utility and an adjustment term based on the utility of the first item. In the first model we postulate that the adjustment factor is a linear function of the utility of the first bundle item. Our second model follows the Yadav (1994) anchoring and adjustment idea. The adjustment factor is a linear function of the utility difference between the first and second item. In the third model we follow the spirit of Novemsky and Dhar (2005). The adjustment factor is a linear function of the utility of the first item and the variance of the second item. In each model, we test both an additive and a multiplicative adjustment. Preliminary results support the third model. We plan to test the predictive ability of the model on a holdout sample. This type of analysis can be helpful to a retailer like Best Buy, where knowing what other products consumers own, can be helpful in determining the next product that she may buy.

3 - An Incentive-compatible Approach for Assessing Consumers' Reservation Prices for Bundles Under Uncertainty: Application and Implications

Rabikar Chatterjee, Professor of Marketing, University of Pittsburgh, 340 Mervis Hall, Pittsburgh PA 15260, RABIKAR@katz.pitt.edu, R. Venkatesh

Consumers are typically uncertain about the performance of products and indeed about their own preferences, especially when the products are new or unfamiliar. For a single product, Wang, Venkatesh, and Chatterjee (2007) have developed an incentive-compatible approach to elicit an individual's reservation price as a range, with the level of performance- and preference-related uncertainty corresponding to the price range. On the other hand, Jedidi, Jagpal, and Manchanda (2003) emphasize the importance of measuring reservation prices jointly for a portfolio of complements or substitutes, in order to make better bundling decisions. Their method, however, does not ensure incentive compatibility; nor does it consider explicitly the implications of consumer uncertainty. This research develops an incentive-compatible elicitation technique that extends Wang et al.'s procedure to assess individual reservation prices for bundles as a range, where the range captures the consumer's uncertainty relating to the bundle's perceived performance as well as the consumer's own preference structure. The proposed methodology is applied and tested for predictive performance relative to alternative methods. Further, our study allows us to understand how consumer uncertainty at the individual product level maps into the (composite) uncertainty for the bundle, given the relationship between the individual components in the bundle (i.e., substitutes, complements, or independent). The strategic implications for bundling and pricing are analyzed.

4 - Upgrading Methods for Bundle Choices

Ye Hu, University of Houston, 4800 Calhoun Rd, Houston, TX, 77584, United States of America, yehu@uh.edu, Vithala Rao, Min Ding, Young-Hoon Park

Offering bundles of products is a valuable strategy for sellers. Retailers offer bundles consisting of items chosen across categories (e.g., digital cameras, photo printers, and scanners) while manufacturer's bundles consist of different products and/or services (e.g., computer notebook and a cellular service contract). In many cases, technically complex products bundled together. In this context, two important managerial questions such as what products should be bundled, and at what price should a bundle be offered need to be answered. These questions become more complicated when one considers the possibility of using a mixed bundling strategy which involves offering bundles and individual products for sale. The value a consumer derives from a bundle not only depends on the features in each product/service in the bundle, but also on whether the features in different product/services in the bundle have synergistic value and substitutable role. Incorporation of such interactions among product features is an essential aspect of developing a bundle choice model. Collection of suitable data for estimating several interactions in a bundle utility function is a daunting task. Conjoint analysis, choice based or self-explicated, normally cannot efficiently handle interactions among the attributes/levels among the features. To answer questions like this where interactions are critical for complex products, an efficient new method needs to be developed. We propose a revised upgrading method to achieve just that. The essence of the new method is to allow a respondent to reveal the interactions he/she cares. As a result, we no longer need to search all possible interactions for each individual (an infeasible task).

■ TD10

1st Floor - Blau Auditorium

Meet the Editors

Cluster: Meet the Editors
Invited Session

Chair: Linda Salisbury, Assistant Professor of Marketing, Carroll School of Management, Boston College, Chestnut Hill MA 02467, linda.salisbury@bc.edu

1 - Meet the Editors

Editors of leading journals for marketing academics will present their editorial policies and perspectives. The following editors are represented:

Journal of Marketing Research: Tulin Erdem

Journal of Marketing: Ajay Kohli

Journal of Service Research: Kay Lemon

International Journal of Research in Marketing: Stefan Stremersch and Donald R. Lehmann

Journal of Interactive Marketing: Venky Shankar

■ TD11

2nd Floor - Room 2210

Choice Models: Methodology

Cluster: Choice
Invited Session

Chair: Eric Schwartz,University of Pennsylvania, 3730 Walnut St., 700 Jon M. Huntsman Hall, Philadelphia, PA, 19104, United States of America, ericschw@wharton.upenn.edu

1 - Multiple Constraint Choice Models with Interior Solutions

Takuya Satomura, Associate Professor, Keio University, 2-15-45, Mita, Minatoku, Tokyo, 1088345, Japan, satomura@fbc.keio.ac.jp, Jaehwan Kim, Greg M Allenby

We propose a new framework of investigating consumersÅf brand choice with multiple constraint. Economic models of choice typically assume consumers maximize utility subject to a budget constraint. However, models that only include a budget constraint will misrepresent their behavior if a consumer makes purchases subject to multiple constraint. Examples of multiple constraint includes monetary budget, maximum weight of package and volume of the product. We build a multiple constraint choice model which can express the interior and corner solutions corresponding to positive and zero demand. The proposed econometric model has a closed form expression for the discrete-continuous probability. Our model assumes the presence of structural heterogeneity, with different respondents being bound by different set of constraint. This setting enables as to make inference about the number or proportion of respondents who are bound by each constraint. In addition, proposed hierarchical Bayesian model allows heterogeneity in utility parameters. We apply our model to volumetric conjoint data from a national beverage manufacturer. We assume a presence of quantity constraint in addition to a budget constraint in our model. We find the multiple-constraint model leads to better in-sample and predictive fits. Our analysis also indicates that the presence of even a small fraction of respondents with binding constraints different form the rest can severely bias parameter estimates. The comparison of shadow values between the monetary budget and the quantity capacity shows the relative importance of budget constraint.

2 - Random Utility Models and Rational Choice Behavior

Thomas Steenburgh, Associate Professor, Harvard Business School, Soldier Field, Boston, MA, United States of America, tsteenburgh@hbs.edu, Andrew Ainslie

The purpose of this paper is to show that standard random utility models, including the nested logit and covariance probit, models, result in inconsistent preferences across choice sets; thus, they imply that individuals make irrational choices. We identify that assumptions lead to this irrational choice behavior and propose a new model to fix these problems.

3 - An Empirical Investigation of Consumer Adoption and Consumption of a Video on Demand Service

S. Sriram, Assistant Professor, Ross School of Business, University of Michigan, 701 Tappan Street, Ann Arbor, MI, 48109, United States of America, ssrira@umich.edu, Puneet Manchanda, Pradeep Chintagunta

We investigate consumer adoption and usage of a video on demand service for movies. Two aspects of the context pose some unique challenges that we seek to address in our research. First, consumers are uncertain about the quality of the signal they would receive upon subscription and the extent to which they would use the service. This uncertainty is likely to decrease as they accumulate information regarding signal quality and their usage rate over several periods. Second, the fee structure for the service has three components - (a) a one-time activation fee, (b) a monthly subscription fee, and (c) a per-movie rental fee. The presence of the one-time activation fee implies that when consumers pay the activation fee, they would expect to realize utility from the service over an extended period of time. As a result, the decision to sign up for the service would depend on both the utility she would expect to derive from the service in that period and the expected utility from the service over her lifetime. This implies that we need to account for the forward-looking nature of the consumer's decision making process. In order to account for these two characteristics of the context, we develop a learning model with forward-looking consumers. Based on the estimates of our demand model, we draw some inferences regarding changes in the fee structure and/or signal quality on adoption, subscription and consumption behavior.

4 - Incorporating Covariates in the Beta-binomial Model

Eric Schwartz, University of Pennsylvania, 3730 Walnut St., 700 Jon M. Huntsman Hall, Philadelphia, PA, 19104, United States of America, ericschw@wharton.upenn.edu, Peter Fader, Bruce Hardie

The "beta-logistic" model of Heckman and Willis (1977) is a popular method to simultaneously incorporate observed and unobserved heterogeneity in a repeated (binary) choice setting. But unlike other related models (such as the "proportional hazards" approach for timing models), the beta-logistic does not allow covariates to directly affect choice propensities at the individual level; instead it suggests that covariates only affect the shape of the mixing distribution that governs these propensities. We discuss and demonstrate the problems with this approach, and propose a new repeated choice model that brings in covariates to directly affect individual-level propensities. First, using simulated data, we show that the beta-logistic systematically underestimates both (a) the true variation across individuals' predicted probabilities and (b) the true size of the covariate effect. Then we apply our method to several real datasets and show that it provides better statistical performance (as well as substantially different parameter inferences) compared to the beta-logistic.

■ TD12

2nd Floor - Room 2220

Marketing Issues in the Startup and IPO Context

Cluster: Marketing and Finance

Invited Session

Chair: Jade DeKinder, Assistant Professor, UT- Austin, 1 University Station, B6700, Austin, TX, 78712, United States of America, Jade.DeKinder@mccombs.utexas.edu

Co-Chair: Cem Bahadir, Assistant Professor of Marketing, University of South Carolina, 1705 College Street, Columbia, SC, 29208, United States of America, cem.bahadir@moore.sc.edu

1 - Transforming B2B Social Capital Into IPO Value: The Role of Absorptive Capacity

Guiyang Xiong, PhD Student, Emory University, 1300 Clifton Rd, Goizueta Business School, Atlanta, GA, 30322, United States of America, Guiyang_Xiong@bus.emory.edu, Sundar Bharadwaj

There is a growing recognition that both horizontal and vertical business relationships can constitute valuable intangible assets, since social capital embedded in such relationships can be transformed into financial value. However, marketing and finance research has generated conflicting results regarding the impact of B2B relationships on firm performance, and most extant research is confined to mature firms. Against this backdrop, this study investigates the financial impact of three types of B2B relationships as well as the moderating factors that play a part. To do so, we draw on marketing strategy literature to identify three types of social capital from value-creation, horizontal value-appropriation, and vertical value-appropriation relationships. We also develop three types of absorptive capacity and postulate that the financial implications of each type of B2B relationship will be contingent on the level of the relevant absorptive capacity. We then employ robust econometric methods to analyze a large sample of Initial Public Offering (IPO) companies from multiple industries. We derive absorptive capacity measures using stochastic frontier estimations, and utilize Heckman two-stage method to control self-selection bias of firms' IPO decisions. The panel data regression results support the expectation that different types of B2B social capital have asymmetric impact on firms' IPO value, and that the impact is contingent on a firm's level of absorptive capacity and its industry context. The study thus provides quantitative evidence on the financial potential of social capital and the conditions under which it can be best realized into IPO value through appropriate marketing strategies.

2 - Not All Market Ties are Created Equal: The Timing and Strength of Market Ties in the Commercialization

Sundar Bharadwaj, Emory University, 1300 Clifton Rd, Goizueta Business School, Atlanta, GA, 30322, United States of America, Sundar_Bharadwaj@bus.emory.edu, Leslie Vincent

The objective of this research is to examine the role of market information gathered through network connections during the marketing strategy formation process. In particular, this research employs a panel of teams engaged in technology commercialization and follows them throughout the process of commercializing the technology. Network connections are a critical resource that must be capitalized upon in highly uncertain environments (Hansen 1999; Obstfeld 2005) and is applicable to this context where teams are focused on the highly uncertain process of strategy development for a new innovation occurring outside of traditional organizational boundaries. Using periodic surveys, we capture the teams' use of external connections and the role they play in the strategy formulation process. Our results suggest that weak market ties are especially critical in the early formation and later implementation of a marketing strategy, while strong market ties play a more critical role during the middle stages of strategy formulation. Therefore we present a dynamic model of marketing strategy formulation which accounts for the different resource demands throughout the strategy development process and extends the current knowledge within the marketing strategy domain. Furthermore, this research builds upon the network literature by shifting the focus from network structure to the characteristics of the ties themselves as well as the uses of such ties over time.

3 - The Role of Marketing Information Availability and Complexity on Speed and Decision Making in the IPO Process

Jade DeKinder, Assistant Professor, UT- Austin, 1 University Station, B6700, Austin, TX, 78712, United States of America, Jade.DeKinder@mccombs.utexas.edu, Cem Bahadir

Many firms that are operating as successful private companies choose to initiate the initial public offering (IPO) process to raise additional capital they require to achieve their strategic goals. Firms that decide to IPO must enter the registration process through the Securities and Exchange Commission (SEC). However, not all firms that enter this process ultimately conclude with an IPO. Many times firms withdraw from the IPO process, resulting in financial and reputational loss for the potential issuer, underwriter (usually an investment bank), and the investors. This loss makes it critical to understand what drives the decision of a firm to withdraw versus IPO. In addition to the ultimate decision, the time in the registration process can be costly as well. It is therefore critical to investigate the ultimate decision as well as what drives the length of time a firm uses to make a decision.

4 - Marketing Strategy and Firms' Initial Public Offerings (IPOs)

Tien Wang, The University of Texas Arlington, tien@uta.edu, Xueming Luo

How can marketing help create firm shareholder value? Recent research on marketing-finance interface has shown that marketing spendings (i.e., expenses in communications, market research, advertising, and other marketing efforts) matter financially after firm stocks are traded publicly. The current article ponders this issue rather differently and in an innovative way. It addresses the value of marketing spendings when "marketing strategy first meets Wall Street"óthat is, at the time firm stocks first become traded publicly in the context of initial public offerings (IPOs). The results from a large-scale, cross-industry study indicate that firms' pre-IPO marketing spendings help reduce IPO underpricing and boost IPO trading in the stock market. The econometric models also suggest that these effects are heterogeneousóthat is, more salient for firms with higher cost reduction efficiency and in markets with a smaller number of historical IPOs. This research suggests that marketers can meet this challenge and get more bang for the buck from their marketing expenses, based on more effective marketing spendings and more efficient operations. Thus, prudent investors may be better able to pick "star" IPOs if they can track pre-IPO marketing spendings and model firm cost reduction efficiency simultaneously. Future research directions are discussed.

■ TD13

2nd Floor - Room 2230

Entertainment Marketing: Movies II

Cluster: Entertainment Marketing

Invited Session

Chair: Xia (Angela) Liu,Syracuse University, 721 University Ave Suite 311, Syracuxe, NY, 13244, United States of America, xliu05@syr.edu

1 - Determinants of Line Extension Success: An Investigation of Movie Franchises

Sanjay Sisodiya, Assistant Professor of Marketing, University of Idaho, College of Business and Economics, 875 Campus Drive, P.O. Box 443161, Moscow, ID, 83844-3161, United States of America, sisodiya@uidaho.edu, Berna Devezer

The movie industry is of continued interest for researchers and practitioners alike in part due to the availability of data and the challenges the industry faces from high costs, threats to incompletion, riskiness of acceptance, etc. One area of increasing importance is the development of movie franchises to minimize the risks of new movie introductions. A film developed from a franchise is considered a movie line extension (MLE), which includes prequels, remakes, sequels, spinoffs, or movies sharing other common story elements. We aim to examine the determinants of MLE success using the model of extension success (Reddy, Holak, and Bhat 1994). This model has not yet been applied to the movie industry, and the existing research on MLEs either emphasizes a few elements of success and/or is based on small data sets (e.g., Basuroy and Chatterjee 2008; Sood and DrÈze 2006). We test our hypotheses with data on over 300 movies introduced in the US from 1996-2006, using total and first weekend box office revenue as measures of success. For extension characteristics we consider naming conventions, timing, order of entry, advertising, production, and distribution. Naming conventions can influence the perception of movie line extensions. Instead of a decay effect between consecutive line extensions, we hypothesize a U-shaped anticipation effect for extended gaps between releases. Order of entry, advertising, production, and distribution should all be positively related to success. We use brand strength and symbolic value for parent brand characteristics. The former is measured by franchise total revenue and prior line extension revenue. The latter is determined using consumer ratings and expert reviews. We also include firm characteristics in the model.

2 - Endogeneity of Ticket Availability and Moviegoer's Demand Restriction in the Movie Industry

Dong Soo Kim, KAIST, 87 Hoegiro, Dongdaemoon-gu, Seoul, 130-722, Korea, Republic of, finding@business.kaist.ac.kr, Duk Bin Jun

In this study, I propose a new model to dynamically describe the weekly commercial performance of a movie. Moviegoer's choices are affected by three forces, the supply side, demand side, and environments around them. The supply side, ticket availability, is one of key factors to influence moviegoer's choices and used as an important explanatory variable in many previous studies. The demand side, demand restriction, is also important factor to moviegoer's choices, nevertheless a few studies dealt with it. In order to consider moviegoer's demand restriction, I introduce a multivariate choice framework rather than the classical multinomial choice framework. Furthermore, I incorporate an unobserved movie characteristic term into an aggregate random coefficient model, since environments, especially the WOM communication, force ticket availability to be endogenous for moviegoer's choices. From the proposed modeling framework, I suggest that three forces take important roles as in the classical economic theory; Ticket availability, demand restriction, and environments act as a price, a budget constraint, and influencers, respectively.

3 - Large Screens or More Shows: What Tilts the Balance in Scale-of-entry Decisions in the Movie Industry

Anita Rao, GSB Stanford University, 518 Memorial Way, Stanford, CA, 94305, United States of America, anitarao@stanford.edu

Advances in digital technology can change the landscape of future cinema theatres. Digital technology reduces the costs of additional screenings for a given movie, because a digital copy of a movie can be more easily played on multiple screens at the same time. Whether this can help increase revenues depends on how much customers value the additional showings. While more showings may seem better, more showings also entail smaller auditoria (holding seating capacity fixed). It is this trade-off: ëdo people value the large screens associated with large auditoria or theaters with many showings?' and its repercussions that is one of the motivations behind this paper. We examine this tradeoff in the context of the broader question of scale-of-entry determinants in the movie theater industry. We use a new data set on movie showings in India at the movie-chain-market-week level to estimate a BLP-style demand model providing measures of customer preferences for the number of movie showings and screen size.

4 - Dynamics of Star Power Effects Beyond the Opening Week

Xia (Angela) Liu, Syracuse University, 721 University Ave., Suite 311, Syracuxe, NY, 13244, United States of America, xliu05@syr.edu, Tridib Mazumdar

While past research has focused on movie stars' influence on the opening weekend box office revenue, the dynamics of star power effects during second week onwards has not been investigated. The conventional wisdom is that after the movie is released the word of mouth spread by viewers will take over, and the star's impact may become less relevant in the later theatrical run. However, stars are found to keep a movie in theaters for a longer time (De Vany and Walls 1999). Such findings highlight the importance of examining star power beyond the first weekend. Utilizing archival data from movies featuring major Hollywood stars during 2000 to 2006, we empirically investigate whether the star power effects decay during a movie's theatrical life, the pattern of this decay for different sources of star power, and how word-of-mouth (i.e., buzz) moderates this decay. Findings of this research will shed light on the importance of stars beyond ensuring financing, distribution, and audience interest in the opening week.

■ TD14

2nd Floor - Room 2240

International Marketing I

Cluster: Marketing Strategy

Invited Session

Chair: Ying Xiao,PhD Student, University of Illinois, 350 Wohlers Hall 1206 S. 6th St., Champaign, 61820, United States of America, yxiao2@uiuc.edu

1 - Cross-national Analysis of the Impact of Word-of -Mouth on Online Purchasing Behavior

Hsin-Chen Lin, PhD Candidate, Krannert graduate School of Management, Purdue University, 103 West Stadium Ave, West Lafayette, IN, 47906, United States of America, lin42@purdue.edu, Manohar Kalwani

Recent empirical studies have examined the impact of word-of-mouth on the online purchasing behavior of US consumers. In this study, we compare the impact of word-of-mouth on the online purchasing behavior of US versus Japanese consumers. We consider whether the impact of word-of-mouth is greater in a more collectivist culture such as Japan than in an individualistic culture such as the United States. Specifically, we analyze the impact of word-of-mouth for books and MP3 players using data from amazon.com and amazon.co.jp websites in the U.S. and Japan respectively. We use the number of reviews and the nature of the reviews to measure the word-of-mouth associated with a given book or an MP3 player. Our empirical findings reveal some differences in the nature of reviews of US versus Japanese consumers. For example, we find that Japanese buyers of MP3 players are less likely to write extremely positive or extremely negative reviews than their US counterparts. We also find that the US buyers of both books and MP3 players write longer reviews than their Japanese counterparts. However, we find that contrary to our hypothesis the effect of online word-of-mouth on sales is not stronger in a collectivist culture such as Japan than that in an individualistic culture such as the United States.

2 - Strategic Responses of Firms Towards the Impact of National Culture on Innovativeness

Erik Mooi, Assistant Professor, Aston Business School, Aston Triangle, Birmingham, B47ET, United Kingdom, e.a.mooi@aston.ac.uk

Innovation underlies firm growth. It allows firms to react to changing market conditions, helps firms compete in new and existing markets and thereby contributes to the bottom line. One challenge to achieving greater innovativeness are the different cultures in which firms operate. Although there is evidence suggesting firm innovativeness varies substantially across countries and country cultures (Furman et al. 2002; Tellis et al. 2009), we know very little about how firms react to cultural characteristics that may hinder, or help, innovativeness. Do cultural effects have unfiltered effects on innovativeness or are there ways by which firms can reduce possible negative effects of cultures on innovativeness and also strengthen positive cultural effects on innovativeness? We answer this research question using secondary database containing the measures of Hofstede and the Marketing in the 21st Century dataset that contains 5,594 firm responses from 16 different countries. The analysis of our dataset through several hierarchical linear models reveals a pattern of cultural effects on innovativeness. Subsequently we test, based on contingency theory arguments, if firms respond to these cultural challenges by adapting and emphasizing learning and market orientation to achieve fit with the environment in which they operate. We test this proposition through a series of meditational analyses using a combination of Sobel-Goodman tests and bootstrapping as suggested by Shrout and Bolger (2002). The analyses indicate mediation and suppression effects that shed light on how firms respond to the influence of culture on innovation.

3 - Is the World Becoming Flat? Role of Globalization and Internet in Worldwide Consumption Convergence

Satheeshkumar Seenivasan, PhD Student, University at Buffalo, 215 Jacobs Management Center, UB North campus, Amherst, NY, 14260, United States of America, ss383@buffalo.edu, Debabrata Talukdar, Kamer Yildiz

Research in macroeconomics indicates that incomes around the world have been converging in the latter half of the twentieth century, a period marked by an increasing trend towards globalization. Several researchers suggest that globalization could have mitigated income inequality between participating nations. As incomes increase in developing countries, people in these countries try to emulate the lifestyles of their counterparts in developed countries, leading to consumerism and triggering potential convergence in consumption levels across the world. Using both beta and sigma convergence notions from the macroeconomics literature, we test for convergence in consumption levels across 70 countries in 18 different product categories over a period of recent 18 years. Consumption convergence will be largely driven by cross-country interactions. Since such cross-country interactions will be more rampant in highly globalized economies, we would expect them to have faster a convergence rate. Also, advent of the Internet has greatly boosted cross-country information flow thereby accelerating socio-cultural integration across nations. Thus, the emergence of the Internet is expected to induce a further acceleration in consumption convergence rates across countries. We also test whether globalization is resulting in a bipolar world with widening consumption gap between participating and non-participating nations. Finally, convergence in consumption levels across countries implies that income effects on consumption levels in individual countries should be accentuated by globalization, especially in newly developed and middle income countries. We proceed to test how income/wealth effects on consumption levels are moderated by country specific cultural and globalization variables.

4 - Consumer and Producer Welfare in Gray Market

Ying Xiao, PhD Student, University of Illinois, 350 Wohlers Hall 1206 S. 6th St., Champaign, 61820, United States of America, yxiao2@uiuc.edu, Udatta Palekar

There has been a great amount of debates on the legal status of parallel importation, which is closely related to its welfare implications. However, the data collection becomes difficult due to the sensitivity of this area. In this study, we take the game theory approach to model parallel importation activity between two markets. We find out that generally parallel importation will hurt consumers from the export market but benefit those from the import market. But there exist situations where consumers in both markets will benefit. We also find out that channel structures play an important role in determining the social welfare. The producer as well as the distributor profitability will also be discussed.

■ TD15

2nd Floor - Room 2320

Customer Satisfaction

Cluster: Customer Satisfaction, Loyaly, and Lifetime Value
Invited Session

Chair: Feng Liu, Assistant Professor, University of Wisconsin - La Crosse, College of Business Administration, 1725, La Crosse, WI, 54601, United States of America, liu.feng@uwlax.edu

1 - Using Prediction Markets to Forecast Customer Satisfaction

James Lemieux, Assistant Professor, University of Kansas, Summerfield Hall, 1300 Sunnyside Ave., Lawrence, KS, 66044, United States of America, jlemieux@ku.edu, Koleman Strumpf

Data collection can be costly and time consuming. Prediction Markets promise to overcome this limitation while providing more accurate population estimates. They have proven successful in forecasting box-office sales, elections, and sports (e.g., Iowa Electronic Market, Intrade.com). However, it is unclear whether this mechanism works for stocks with less well-defined outcomes, such as ëHow satisfied are a brand's customers?' In this context, expertise is ambiguous, since the question concerns personal preference. A Prediction Market for customer satisfaction could be sensitive to systematic perceptual biases and provide less reliable estimates than a standard survey. The accuracy of a Prediction Market was tested using a field experiment involving student professor evaluations as a proxy for customer satisfaction. The payoffs were based on a final evaluation survey. Approximately 450 subjects participated in a semester-long study. The results show that the market price for the professor's rating accurately forecasted the actual professor rating as measured by the final survey, but the accuracy depended on format of the market. The implied market price was more accurate in forecasting the actual final rating for binary-outcome stocks that represented ranges on the evaluation scale (e.g., 1.0 to 1.5), compared to numeric-outcome stocks the represented the final value (e.g., 3.5). Participation was positively correlated with actual market knowledge, risk attitudes and initial performance. The market was highly concentrated with the top 25 traders accounting for more than 50% of all shares traded. There were no differences in participation between those who received a cash reward and those who only received play money.

2 - Which Satisfied Customers do Really Pay More? A Non-parametric Moderator Analysis

Maik Eisenbeiss, PhD, University of Muenster, Marketing Center Muenster, Am Stadtgraben 13-15, Muenster, 48143, Germany, maik.eisenbeiss@uni-muenster.de, Markus Cornelissen, Klaus Backhaus, Wayne D. Hoyer

During the past two decades, customer satisfaction (CS) has become a crucial focus for many companies, as a positive influence on their financial performance is expected. However, the understanding of constructs mediating this link is highly inconsistent: While previous research has demonstrated that the link between CS and financial performance is mediated by constructs such as customer loyalty, repurchase behavior and word-of-mouth, there is still a limited understanding of other key variables. One such mediator is willingness to pay (WTP) which offers a direct link to a company's pricing strategy and thus represents an effective leverage to increase profits. Based on a conceptual framework drawing on psychological aspects as determinants of post-choice valuation and using innovative statistical techniques (variants of Generalized Additive Mixed Models), the authors provide evidence that the relationship between CS and WTP is of much greater complexity than is suggested in previous research. First, the results show that the CS/WTP-link follows a negative asymmetric inverse S-shaped function (i.e., negative consequences of low satisfaction levels are considerably stronger than positive consequences of high satisfaction levels). Second, situational and enduring customer characteristics as well as relational characteristics exhibit a moderating influence on the CS/WTP-link in terms of both its strength and its functional form. Overall, the study reinforces the importance of accounting for higher order complexities in the links of the satisfaction profit chain and particularly offers a deeper understanding of how CS affects WTP. Methodologically, a modeling technique is introduced that provides a flexible and elegant means to capture such higher order complexities.

3 - Traditional and User-generated Voice-of-customer Metrics and Financial Performance

Qiang Fei, PhD Student, University of Iowa, 108 PBB S219, Iowa City, IA, 52242, United States of America, qiang-fei@uiowa.edu, Lopo Rego

A recent study by The Wall Street Journal found that 25% of surveyed e-commerce companies had customer ratings and customer reviews on their websites. However, this same study also indicated that most firms do very little with this increasingly available, self-reported and rich customer data. Additionally, if one considers that several of these e commerce companies are also spending significant resources on market research studies, it seems that these firms are not making an efficient utilization of all customer data available to them. Furthermore, the characteristics of self-reported data, paired with the open-ended nature of user generated reviews, suggest an opportunity for mining into customers' minds, perceptions and attitudes. Nonetheless, very little is known about the reliability and validity of user-generated customer data or its usage as marketing intelligence. The main objective of this study is threefold. First, we identify the types of user-generated content available and relate them to traditional voice of customer metrics (VOC) used in the auto industry, for the years 2004-2006. Second, we develop a scorecard of different VOC metrics, including perceived quality, customer satisfaction, repurchase intentions, word-of-mouth and complaints, as well as user-generated metrics such as customer ratings, product and brand comments and recommendations, and assess their psychometric and measurement properties. Third, we evaluate the predictive power of each of these VOC metrics in terms of their association with product and financial market performance metrics. Overall, our results provide interesting insights on the potential usage of user-generated content as marketing intelligence and as predictors of future financial performance.

4 - Reflecting Mirrors: How Providers and Facilities Affect Customer Satisfaction with Each Other

Feng Liu, Assistant Professor, University of Wisconsin - La Crosse, College of Business Administration, 1725, La Crosse, WI, 54601, United States of America, liu.feng@uwlax.edu, Purushottam Papatla

The literature on service quality provides many approaches to characterize service attributes. Thus, for instance, the SERVQUAL scale proposed by Parasuraman, Ziethaml and Berry (1988) includes five types of service attributes: reliability of the service, responsiveness of the service provider, empathy of the service provider with the customer, assurance conveyed through the service provider's expertise and tangibles such as the physical facility used in the delivery of the service. Rust and Oliver (1994) suggest an alternative approach that uses only three sets of attributes: features of the service itself, aspects of service delivery and the environment in which the service is delivered. Both approaches, however, recognize the fact that the overall satisfaction with a service is affected by service provider attributes as well as attributes of the service context such as the ambiance of the facility where the service is delivered. This suggests that satisfaction with the service provider is likely to be affected by the satisfaction with the service ambiance and vice versa. Interestingly, however, this inter-dependence between the two types of satisfaction and how it affects the satisfaction with the service overall has not been formally explored in the literature. This is the issue that we examine in this research empirically using data from a large panel survey of patient satisfaction with physicians, the ambiance of the healthcare facility where the service was provided and with the service overall. Since satisfaction is measured on an ordinal scale, we utilize a trivariate ordinal model for our analysis. We calibrate the model within a Bayesian framework using MCMC methods. Implications of our findings for managing satisfaction with services are discussed.

Friday, 8:30am - 10:00am

■ FA01

Lower Level - Room 0210

New Products: Diffusion I

Cluster: New Products and Product Policy
Invited Session

Chair: Brian Hartman,PhD Student, Texas A&M University, Department of Stat. MS 3143, College Station, TX, 77843-3143, United States of America, bhartman@stat.tamu.edu

1 - Optimal Dynamic Advertising in the Generalized Bass Model of New Product Diffusion

Christophe Van Den Bulte, The Wharton School, University of Pennsylvania, 3730 Walnut Street, Philadelphia, PA, 19104, United States of America, vdbulte@wharton.upenn.edu, Gila Fruchter

We identify the optimal dynamic advertising strategy for a new product that diffuses according to the Generalized Bass Model (GBM). The technical challenge in this problem is that it involves a constraint one the advertising spending (the decision variable) in the form of a differential equation. Prior research has dealt with this challenge only partially, leaving the problem of initial spending unsolved. Using a variational approach, we solve the dynamic optimization problem and find the optimal advertising spending over time, including at launch. We also properly account for the salvage value at the end of the planning period. We demonstrate that the optimal advertising under the GBM structure is to start at as low a level possible and then to increase spending throughout the planning period. We further show that more intuitively appealing patterns of continuous decrease and increase-then-decrease (both with an uptick towards the end) are also possible as optimal dynamic advertising paths under the GBM structure, but only if the initial level of advertising spending is suboptimal. These results cast doubts on the value of the GBM for normative planning purposes.

2 - Seasonality Models for New Product Diffusions: Shrinking Seasonal Split and Product Mix Approaches

Evren Ozkaya, Georgia Institute of Technology, 765 Ferst Dr. NW, Atlanta, 30332, United States of America, evrenozkaya@gmail.com, John Vande Vate, Pinar Keskinocak, Michael Waithe

Seasonality is part of almost any demand management activity. In forecasting time series data with seasonality, the common practice is to first "deseasonalize" the data to obtain a trend curve estimate, then extrapolate the trend and "reseasonalize" it to obtain final forecast numbers. Therefore, having good seasonality factor estimates has 2-fold benefits: (1) improving the trend estimate, (2) improving the final forecasts. In this paper, we analyze the impact of seasonality on new product diffusions and propose models to improve forecast accuracy through better estimation of seasonality factors. We first extend the analysis of Miller and Williams (2003) to the nonlinear (diffusion-type) trend cases and compare several methods for estimating seasonality factors. We show that the Empirical Bayes methods' (i.e., Shrinkage Estimators) performance over the classical decomposition (CD) method depends on the trend type of the data series. We propose two novel approaches: "Shrinking Seasonal Split (SSS)" and "Product Mix Forecasting (PMF)" for better identifying and removing seasonality from the data series. Under simulated data, we show that the SSS method can significantly improve seasonality factor estimates over the classical decomposition (CD) method and the shrinkage estimators, especially for short data series with nonlinear trend and high random error variance. For very short data series, where it is not possible to calculate seasonality factors, we introduce PMF method that can eliminate seasonality by focusing on product mix percentages instead of actual units. With real data, we show that PMF can significantly increase forecast accuracy.

3 - Unconstrained Global Diffusion: The Case of Freeware

Guy Yogev, Tel Aviv University, Levanon 88, Tel Aviv, 69345, Israel, yogevg@post.tau.ac.il, Barak Libai, Eitan Muller

A key limitation of our understanding how innovations grow globally, are the constraints which relate to the marketing of products. Global diffusion models are mostly "constraint free" and focus on the communication process, and accordingly on the interactions among countries and regions, as a central explanation of why innovations grow differently in different areas. In reality, this growth is highly affected by marketers decision which countries to enter when, by managers decision how much to invest in each country, and by a host of country specific barriers including regulation and supporting infrastructure. These constraints limit our ability to generalize on the new product growth process, and to understand the real difference in drivers of growth. In this research we use a unique database of close to 20M consumers, describing the world wide growth since launch of a "freeware". This digital information product grew in an organic way without the constraints that characterize the tangible durables that often are examined in global diffusion research: No central decision maker, no physical resource needed (capacity, inventory, transportation), borderless marketing efforts, no regulation, and even no constraints due to affordability and price. This enables us a unique view of the communication processes that drive the growth of digital information products of this kind, and allows us to understand the primary ways innovations grow in today's world. We compare the growth of the freeware to other physical goods in different stages of the growth process, which helps to confront a number of questions including how borderless the world really is, and when do country characteristics help better to explain organic, unconstrained growth.

4 - Investigating Cross-country Interaction in New Product Diffusion

Brian Hartman, PhD Student, Texas A&M University, Department of Stat. MS 3143, College Station, TX, 77843-3143, United States of America, bhartman@stat.tamu.edu, Debabrata Talukdar, Bani Mallick

An important area of new product diffusion research in need of additional research is the role of cross-country interactions. That need is especially relevant in a world that is fast becoming a "global village". We extend the existing set of cross-country interaction studies in two ways. First, the mixing models in the existing literature are basic population-based models of cross-country interaction. One of our primary contributions is to develop several competing and complementary mixing models that capture more realistic interaction dynamics among countries. Specifically, we develop mixing models of cross-country interaction that take into account bilateral flow of people (tourism), goods (trade), capital (investments), and spatial proximity. Second, the only driver of cross-country influence on new product diffusion process in the existing literature has been the diffusion specific word-of-mouth effect. Our study applies a reference leader-follower hierarchical structure on countries as a source of cross-country influence independent of the traditional word-of-mouth effect. We use Hierarchical Bayesian techniques to estimate the parameters in our proposed modifications of the Bass Diffusion Model and compare their predictive accuracies. Our data covers seven new product diffusions across thirty-one countries. The sample covers essentially all the major developed and developing countries and accounts for about 80% of the global economic output and 60% of the global population.

■ FA02

Lower Level - Room 0220

Channels: Governance I

Cluster: Channels
Invited Session

Chair: Nicolas Pernet,University of St.Gallen, Dufourstrasse 40a, St. Gallen, 9000, Switzerland, nicolas.pernet@unisg.ch

1 - The Role of Economic Rents and Supervision in Distribution Channels

Desmond (Ho-Fu) Lo, Assistant Professor, Santa Clara University, 500 El Camino Real, Santa Clara, CA, United States of America, hlo@scu.edu, Mrinal Ghosh, Francine Lafontaine

One key organizational issue in the design of vertical agreements is the role of economic rents and supervision to make these agreements self-enforceable. Given the right to terminate non-compliant dealers, downstream economic rent reduces the dealer's incentives to shirk while supervision helps to direct behavior and detect non-compliance. There are, however, contrasting viewpoints on the interdependence between rents and supervision and their impact on dealer behavior. Classical efficiency wage theory and some recent work on theory of the firm view these control instruments as substitutes, whereas recent developments in relational contracting suggest that these instruments are complements. In this paper, we shed light on the role of economic rents and supervision in inducing desired, yet non-contractible, dealer behavior. Specifically, we investigate (1) whether the amount of downstream economic rent left on the table by the manufacturer and the intensity of manufacturer's downstream supervision are substitute or complementary control instruments and (2) their impact on non-contractible dealer efforts. This is empirically investigated in the context of vertical agreements between a leading manufacturer of a key computer accessory in China and its non-exclusive dealers in China. Our model, based on the unique institutional aspects of this trading relationship, shows that the size of downstream economic rent and the manufacturer's supervision intensity are used as complementary control instruments to induce non-contractible dealer-side marketing efforts. Implications for theory and practice are drawn.

2 - Modeling the Risk of Increasing Supply Chain Length

Mark Vandenbosch, Professor, University of Western Ontario, Ivey Business School, 1151 Richmond St. N, London, ON, N6A 3K7, Canada, mvandenbosch@ivey.ca, Stephen Sapp

The combined forces of globalization and enhancements in information technologies have lead to ultra-competitive markets that put firms on a never-ending efficiency treadmill. Although this ultra-competitiveness has yielded great benefits in terms of lower prices, it has also lead to longer and more complex supply systems that appear to be more prone to failure. The 2007 pet food scandal and the subprime mortgage crisis can attest to that. In this research, we focus on the relationship between the length of the supply chain and the ability of the principal (buyer) to effectively monitor the agent (supplier). In evaluating potential suppliers, buyers use both hard and soft data to assess the compliance of the seller to the contracted terms and to evaluate the ability of the seller to engage in opportunistic behavior. Hard data is quantitative in nature, externally verifiable and measured on scales on which there is universal agreement. In contrast, soft data is more qualitative in nature. It comes from observation and questioning in areas not always directly pertinent to the focal contract. Both types of data are valuable as safeguards in the contracting process. However, as the supply chain lengthens, the ability of the buyer to incorporate soft information into contracts is reduced and eventually eliminated. This implies that the risk of opportunism on the part of the supplier increases as the cost of the inputs decrease. We develop a model and conduct a comparative statics analysis to develop a series of hypotheses related the overall costs (input cost + risk) faced by the buyer as the supply chain lengthens. We test these hypotheses using a sample of US mortgages from 1995 to 2005 - a period over which the length of the supply chain increased dramatically.

3 - Structural Estimation of Moral Hazard Models: An Application to the Design of Marketing Channels

Ranjan Banerjee, PhD Candidate, Carlson School of Management, 4-171, 19th Avenue South, Minneapolis, MN, 55455, United States of America, baner036@umn.edu, Om Narasimhan, George John

We consider a firm that wants multiple tasks performed through retail outlets that differ in the attractiveness of their location. Clearly, the firm wishes to do this in the most efficient (i.e., profit maximizing) manner possible. To do this, the firm needs to figure out what mix of tasks to assign to which outlet and how to compensate an outlet based on the mix of tasks assigned to it. Given this problem, we start by specifying an appropriate multitask principal agent model which is particularized to a specific real world multi-channel context. This model yields optimal contracts conditioned on the location endowment and an observed performance outcome. We then derive an appropriate econometric specification based on this analytical model and use a non-linear estimation procedure based on the Generalized Method of Moments approach to estimate the relevant parameters . We use our parameter estimates to assess the magnitude of the incentive effect (loosely, the impact of incentives on outcomes), while accounting for the endogenous selection of outlets to contracts. We are also able to use our structural model to estimate the long term revenues from each outlet. We test the validity of our structural model by comparing these estimates with an independent, empirically generated estimate. We use the structural model to compare the performance of the observed multi-channel structure with alternative single channel forms. We estimate counterfactual revenues when i) the firm uses purely company owned stores, and ii) the firm uses only independent stores. We find that the current mixture of stores yields estimated revenues almost 20% higher than those yielded by any of the incentive based contracts.

4 - Managing Strategic Risks in the Context of Channel Management

Nicolas Pernet, University of St.Gallen, Dufourstrasse 40a, St. Gallen, 9000, Switzerland, nicolas.pernet@unisg.ch, Marcus Schoegel

As it is well-known, the advent of the Internet had a significant impact on established distribution channels for music and the dominance of the big record labels. As demonstrated in this example distribution channels today are exposed to greater risks, ranging from an acceleration of technological change to highly dynamic customers' channel behavior and even an increasing number of governmental interventions (Pennings/Wansik, 2004). Besides the increasing external uncertainty companies also face internal challenges like a decreasing attractiveness of established channels or a strategic misfit between the organization and the distribution channel strategy (Pumphrey, 2006). The purpose of this research is to focus on the management of these strategic risks by providing on the one hand generic strategic approaches within channel management, which firms can choose from to offset the exogenous and endogenous risks they face. On the other hand the research focuses on the scope of action which directly influences the management's choice of the strategic approaches, consisting of top-management's risk perception, risk identification capabilities, distributive strategic flexibility and structural inertia. The research then suggests the conditions (threat levels) under which each strategic approach might be appropriate, and describes the relevance of the scope of action regarding each of the different threat levels. The study will be performed following a two step process. Step one explores relevant relations and important factors from the point of view of an inductive approach (based on different case studies). Step two is deductive in terms of testing the relationships within the conceptual framework that originates from step one (based on Multiple Regression Analysis).

■ FA03

Lower Level - Room 0230

Advertising: Consumer Behavior

Cluster: Advertising

Invited Session

Chair: Deepa Pillai, Southern Illinois University, Carbondale, Department of Marketing, College of Business, SIUC, Carbondale, IL, 62901, United States of America, dpillai@siu.edu

1 - Love at First Sight? Effects of Direct Mail Design on Consumer Response Behavior

Manfred Krafft, Professor of Marketing, University of Münster, Am Stadtgraben 13-15, Münster, 48143, Germany, m.krafft@uni-muenster.de, Sebastian Feld, Heiko Frenzen, Kay Peters

Publications on direct marketing contain manifold - and often conflicting - recommendations for designing successful direct mail pieces. Empirical studies have typically addressed direct mail design in cooperation with a single company by analyzing response rates resulting from experimental variations of a few selected design features. However, generalizable findings for different industries and different stages of the consumer response process are almost non-existent. Against this background, our study provides answers to the following questions: (1) What drives consumers to open direct mail pieces, and (2) what induces them to respond to a direct mail offering? Based on a representative sample of 3,000 German households, we investigate the effects of (1) various envelope characteristics on opening behavior, and (2) design characteristics of the envelope content (i.e., the letter, brochure, and response device) on consumers' retention of direct mail pieces. Campaign volume and total mailing volume of the sender organization are included as covariates. Analyzing 682 direct mail campaigns from non-profit organizations and financial service providers, we find that the design characteristics, along with mailing volumes, account for more than one fifth (one quarter) of the variance in opening (retention) rate. Interestingly, the effects of mailing volume on opening and retention rates are mostly non-linear and industry-specific. Mailing volume decisions also involve some trade-offs between getting consumers' attention and response. Finally, opening and retention behavior are uncorrelated, implying that opening a direct mail piece is only a necessary condition for responding to the offer. Consequently, both stages of the response process have to be optimized independently.

2 - Comparative Advertising: Effects of Affective and Cognitive Information on Brand Evaluation

Ying Ho, Assistant Professor of Marketing, University of Macau, Faculty of Business Administration, Avenida Padre Tomas Pereira, Taipa, Macau, Macau, yingho@umac.mo, Candy K. Y. Ho

This study examines the relative effectiveness of affective information (i.e. affect valance) and cognitive information (i.e. argument quality) on brand evaluation in comparative advertising. Traditional wisdom suggests that people are cognitively wiser when they are sad than when they are happy (Schwarz and Bless 1991). This implies the argument quality (i.e. cognitive information) of an ad influences consumers' brand evaluation more when consumers are in negative affective state than when they are in positive affective state. Contrary to this belief, we propose that, in comparative advertising, the influence of argument quality may be weaker for negative (vs. positive) affect ads. An ad portraying positive affect (positive affect ad) promotes global processing and an ad portraying negative affect (negative affect ad) promotes local processing (Gasper and Clore 2002). We argue that due to global processing, positive affect ad viewers tend to view the advertised and competing brands as members within the same product category. During brand evaluation, they are more likely to attribute the experienced positive affect to the product category than to the advertised brand. Due to local processing, negative affect ad viewers are likely to consider the advertised and competing brands as two separate entities. They tend to attribute the experienced negative affect to the competing brand. Thus, negative (vs. positive) affect ad viewers should find their experienced affect more diagnostic for differentiating between the advertised and competing brands. This results in a reduced reliance on argument quality to evaluate the brands. We propose that this effect is due to consumers' felt ambiguity in attributing the experienced affect to a single brand.

3 - Consumer Consumption Impulses: The Role of Sensory Stimuli

David J Moore, University of Michigan, 701 Tappan Street, Ann Arbor, MI, 48109, djmoore@umich.edu, Sheila Sasser

Exposure to the enticing aroma of certain foods in the marketplace often stimulates affect-driven responses such as craving and desire, and this in turn may trigger consumption impulses. The question is: what are the psychological and neurological processes that the consumer experiences when confronted with an eating temptation initiated by an olfactory cue? Our results showed that olfactory stimuli can trigger low-road emotions (like appetitive desire and craving), and these emotions, in turn, influence consumption impulses. Theoretical and managerial implications are also discussed.

4 - Determinants of Attitudes Towards Product Placement: A Structural Equation Modeling Approach

Deepa Pillai, Southern Illinois University, Carbondale, Department of Marketing, College of Business, SIUC, Carbondale, IL, 62901, United States of America, dpillai@siu.edu, Pola Gupta, Siva Balasubramanian

In recent years, product placements have attracted significant attention from both marketers and academic researchers. Nevertheless, most studies in this area are descriptive or exploratory in nature. This study examines the drivers of consumers' attitudes towards product placement using a structural equation model based on extant research. Using data from a large survey, we test this model for measurement and structural invariance using multiple group analysis for three categorical variables — gender, age, and level of media exposure. Based on the fit indices and the statistical significance of the structural paths, we conclude that the model offers excellent fit for the data. Four attitudinal constructs (attitudes toward Regulation, Realism, Advertising, and the placement of ethically charged products) are significant predictors of consumers' attitudes to product placement. The model reflects both measurement and structural invariance across gender and across age groups, but not for different levels of media exposure. In other words, no significant differences emerged in either the measurement instrument or the relationship between constructs for this model between males and females, and between young and old groups. However, a comparison of respondents who had high and low levels of media exposure indicates significant differences with respect to both the measurement and the structural components of the model. We discuss implications of these results for marketing practitioners.

■ FA04

Lower Level - Room 0240

Pricing: Willingness-to-Pay

Cluster: Pricing

Invited Session

Chair: Steven Huff, Assistant Professor of Marketing, Brigham Young University, 613 TNRB, BYU, Provo, UT, 84604, United States of America, huff@byu.edu

1 - More Choice and the Polarization of Willingness-to-Pay

Luc Wathieu, ESMT, Schlossplatz 1, Berlin, 10178, Germany, wathieu@esmt.org, Sheena Iyengar, Marco Bertini

This paper suggests that product proliferation causes consumers to be more sensitive to quality differences. We combine analytical results and experimental evidence to investigate the impact of more choice on willingness-to-pay, in a context of vertical differentiation. We show that willingness-to-pay for a high-end alternative increases, and willingness-to-pay for a low-end alternative decreases, when consumers are confronted with a larger set of alternatives. We determine that this is caused by a rational inference about the relevance of product quality in the category at hand.

2 - Improving the Accuracy of Price Response Functions Using the Willingness-to-pay-as-a-Range Concept

Florian Dost, ESCP-EAP European School of Management, Heubnerweg 6, Berlin, 14059, Germany, florian.dost@escp-eap.de, Robert Wilken

Pricing decisions are often founded on price-response functions. These functions are derived from individual-level willingness-to-pay (WTP) data. In order to reliably predict market reaction to price, these functions have to be as accurate as possible. To reduce historical and side effects, price-response functions usually rely on experimental data. However, experimental data is costly; and the higher the desired accuracy, the higher the associated costs. Recent research indicates that the concept of WTP (originally defined as the maximum price a respondents is willing to pay for a product) should be extended to a range of prices. This range is conceptualized by a maximum and a minimum reservation price and a price-range associated with a linear choice probability in between. This range-based concept provides more information per respondent than the traditional point-based understanding of WTP. Until now the additional information of a price-range has been largely ignored. Probably, this resulted in many misspecifications of individual- and aggregated-level price-response functions. We use the concept of WTP-as-a-range in order to estimate price-response functions. With a given number of respondents, this should result in more accurate functions than the point-based concept of WTP. On the other hand a desired level of accuracy should be attainable using a smaller sample size. We use an incentive-aligned experiment with actual choices to test these hypotheses and measure the predictive reliability of the price-response functions. Hereby, we account for heterogeneity in consumer characteristics (e.g., uncertainty) and product-related characteristics (e.g., price level).

3 - The Economic Value of a Star: The Effect of Superfluous Ratings on Willingness to Pay

Steven Huff, Assistant Professor of Marketing, Brigham Young University, 613 TNRB, BYU, Provo, UT, 84604, United States of America, huff@byu.edu, Teck Ho

A growing body of literature confirms the intuition that product ratings influence preference. Most articles written on this subject assume, however, that the influence of product ratings on preferences is driven by changes in perceived quality. In fact, product ratings can influence preferences, as measured by willingness to pay (WTP), without affecting perceived quality. We demonstrate this through the use of superfluous ratings. A product rating is superfluous when it is presented simultaneously with all the quality information upon which it is based and thus provides no additional information about objective quality. In our main study, 153 subjects give their WTP for four products chosen out of a visible menu of twelve. This is done for five product categories. In the control condition, the menu contains only quality information for each product. In the treatment, a rating of one to four stars is added to the menu for each product, and subjects are truthfully told that these ratings are based completely on the quality information already provided in the menu (making them superfluous). Results suggest that the mere presence of product ratings in a menu increases WTP for the highest quality product by 8-15%. Similarly, WTP for the lowest quality product drops by 8-22%. We argue that this is due to a categorization effect. Ratings prompt individuals to mentally divide menu alternatives into discrete, ratings-based categories. Because category information is stored in memory as a set of within-category similarities and across-category differences, these similarities and differences tend to be exaggerated in memory when compared to uncategorized information. The exaggeration of differences across categories drives the expansion in the WTP range.

■ FA05

Lower Level - Room 0320

Decision Neuroscience: Recent Progress, Opportunities and Challenges

Cluster: Buyer Behavior

Invited Session

Chair: Carolyn Yoon, Associate Professor, University of Michigan, Ross School of Business, 701 Tappan St., R5374, Ann Arbor, MI, 48109-1234, United States of America, yoonc@umich.edu

Co-Chair: Willem J.M.I. Verbeke,Erasmus University, verbeke@few.eur.nl

1 - A Salesforce-specific Theory of Mind Scale: Tests of Its Validity by Multitrait- multimethod Matrix, Confirmatory Factor Analysis, Structural Equation Models, and Functional MRI

Willem J.M.I. Verbeke, Erasmus University, verbeke@few.eur.nl, Roeland C. Dietvorst, Marion Smits, Aad van der Lugt, Richard P. Bagozzi, Carolyn Yoon

Brain processes of salespeople are investigated in order to discover why some salespeople are better at interpersonal mentalizing than others. Based upon research on autism and neuroscience, we develop a model of brain functioning that differentiates better, from less, skilled interpersonal mentalizers. The convergent, discriminant, concurrent, predictive, and nomological validities of measures of the scale are established by use of four methods in four separate studies: confirmatory factor analysis, structural equation models, multitrait-multimethod matrix procedures, and fMRI. The study is one of the first to test the validity of measures of a scale not only in traditional ways but also by adopting procedures from neuroscience.

2 - Asymmetries in Intertemporal Choice: Neural Systems and the Directional Evaluation of Immediate versus Future Rewards

Eric Johnson, Professor, Columbia University, ejj3@columbia.edu, Bernd Figner, Jason Steffener, Amy Krosch, Elke U. Weber

Imagine that you are offered express shipping on your latest gadget. You are then asked how big a price reduction you would demand to change to regular shipping. People's answer to this question is twice what they would be willing to pay to change from regular shipping to express. This asymmetry in discounting ó relative impatience for delaying consumption and relative patience for accelerating consumption ó suggests differences in the underlying processes depending on the direction of the evaluation of immediate versus future rewards. Query Theory, a causal cognitive-process model of choice preferences, was recently proposed to explain this and other choice inconsistencies. Weber et al. (2007) showed that the directional asymmetry in discounting is caused by memory query order of reasons for immediate versus future consumption, which differs for delay versus accelerate decisions. We conducted an fMRI study (N =

21) investigating participants' neural activation underlying accelerate versus delay decisions, contrasting (a) choices between an immediate and a future reward with (b) choices between two future rewards. As predicted, we found hyperbolic discounting only in the delay, but not the accelerate condition, with more impatient choices if a reward was immediately available as opposed to when both rewards were available in the future. Consistent with these behavioral results, we found increased activity in anterior and posterior cingulate cortex, R posterior hippocampus, R middle temporal gyrus, and R superior frontal gyrus for trials involving immediate rewards in the delay compared to the accelerate condition. We also found marked involvement with hippocampus, particularly with immediate rewards, consistent with memory based views of value, such as query theory.

3 - Delaying Gratification Engages the Brain's Default Network

Richard Gonzalez, Professor, University of Michigan, gonzo@umich.edu, Chandra Sekhar Sripa, Luan Phan, Israel Liberzon

Choosing a larger, later reward over a smaller, earlier one requires thinking about or envisioning events that will occur in the future. Interestingly, a growing body of evidence implicates the brain's default network in moving one's perspective away from the immediate environment and instead thinking about alternative, future events. We tested the novel hypothesis that successful delay of gratification requires engagement of the default network using a delay discounting task and fMRI. Consistent with our hypothesis, we observed prominent activations in a number of default network regions in trials where participants choose between an immediate versus delayed reward, with greater activation in default network regions significantly associated with choice of the delayed reward.

4 - Functional Imaging of Diminished Self-control

William Hedgcock, University of Iowa, william-hedgcock@uiowa.edu, Kathleen Vohs, Akshay Rao

Regulatory resource depletion research has consistently demonstrated that acts of self-control diminish individuals' ability to subsequently exert self-control. For instance, after exerting self-control, consumers subsequently spend more money (Vohs and Faber 2007), dieters overeat (Vohs and Heatherton 2000), and social drinkers drink more beer (Muraven, Collins & Nienhaus 1999). Researchers suggest that these varied kinds of self- control draw on a common resource, but little is known about the specific cognitive mechanisms associated with diminished self-control. This presentation will report findings from a functional magnetic resonance imaging (fMRI) study that may shed light on this important topic. Subjects in the study were asked to perform a task that was either regulatory resource demanding or easy while in an fMRI scanner. After performing this task, subjects were asked to choose options they preferred from a list of alternatives. Subjects were found to be more impulsive after performing the regulatory resource demanding task as measured by response time. Choices after the regulatory resource demanding task were faster than choices after the easy task. Subjects also had increased blood flow to areas of the brain associated with executive control during the regulatory resource demanding task. Subjects had greater activity in the anterior cingulated cortex (BAs 24/32) and dorsolateral prefrontal cortex (BA 9) during the regulatory resource demanding task relative to the easy task. Finally, an area of the dorsolateral prefrontal cortex, an area associated with response inhibition, had more activity during the regulatory resource demanding task and less activity during the subsequent decision task. Implications for this finding will be discussed during the session.

■ FA06

1st Floor - Room 1210

Customer Analytics

Cluster: Special Track: Interactive Maketing

Invited Session

Chair: Alan Montgomery,Associate Professor, Carnegie Mellon University, Tepper School of Business, 5000 Forbes Ave., Pittsburgh, PA, 15213, United States of America, alanmontgomery@cmu.edu

1 - A Model and Empirical Analysis for Managing Patient Compliance and Persistence in Pharmaceuticals

Scott Neslin, Professor, Tuck School of Business, 100 Tuck Hall, Dartmouth College, Hanover, NH, 03755, United States of America, scott.a.neslin@dartmouth.edu, Edward Rhoads, Paul Wolfson

We develop and estimate a stochastic model of patient compliance and persistence regarding pharmaceutical drugs. Persistence refers to whether a patient continues with therapy, i.e., whether the patient continues to obtain refills of the drug after obtaining an initial prescription. Compliance refers to whether the customer obtains a refill on time, given he or she does in fact obtain a refill. We develop a simple stochastic model of this behavior, drawing on models of customer value developed by Schmittlein, Morrison, and Colombo (1987), Fader and Hardie (2004), and Fader, Hardie, and Lee (2005). The model consists of a geometric distribution governing persistence, and a geometric distribution describing compliance. The rate parameters that characterize these processes are in turn a function of observed patient characteristics and unobserved patient characteristics that can be correlated between the two processes. We estimate the model using patient-level data for 260 drugs and conduct two analyses: (1) We show how key parameters of the model are related to drug characteristics, and (2) We show how changes in drug characteristics would influence the number of days of therapy lost either through lack of persistence or lack of compliance. We discuss our findings, and how the model can be used to identify customers at risk of non-persistence and/or non-compliance, or recommend changes in product characteristics or communications (e.g., concerning side effects) that will improve compliance and persistence.

2 - Customer Retention Dynamics in a Contractual Setting: The Paradox of Increasing Loyalty

Peter Fader, Professor, University of Pennsylvania, 3730 Walnut St., Philadelphia, PA, 19104, United States of America, faderp@wharton.upenn.edu, Bruce Hardie

One of the most strongly held tenets in customer relationship management is that customers become more loyal (i.e., less likely to depart) as they gain tenure with a particular firm. Many retention strategies, loyalty programs, etc., are built directly upon this seemingly universal observation. But is it really true? We posit that it is easy to mistakenly infer "negative duration dependence" (i.e., a decreasing tendency to churn over time) when, in fact, most customers may actually be increasingly likely to depart over time. This apparent paradox is driven by the intertwined effects of heterogeneity and duration dependence, both of which are not well understood (or accounted for) by practicing managers. In order to sort out these effects, we develop a simple but flexible discrete-duration model - the beta-discrete-Weibull. Using a variety of actual and simulated datasets, we demonstrate how easy it is for one of these effects to be mistaken for the other. Furthermore, we show (using real data) that when both factors are taken into account, there is little evidence to support negative duration dependence as the predominant dynamic trend. Finally, using readily available summary statistics (such as the aggregate retention rates from the first few time periods) we show how analysts can begin to tease apart the two effects and offer useful diagnostics about each of them.

3 - Do Vendors Benefit From Program Induced Marketing Actions in A Multi-vendor Loyalty Program?

Matilda Dorotic, Doctoral Candidate, University of Groningen, P.O. Box 800, Groningen, 9700 AV, Netherlands, m.dorotic@rug.nl, Dennis Fok, Peter Verhoef, Tammo Bijmolt

Despite the abundance of studies on loyalty programs [LPs] in general, not much is known about: (a) the effectiveness of particular marketing actions within a LP; and (b) multi-vendor loyalty programs [MVLPs]. A multi-vendor design provides customers with benefits of convenience, faster point collection and wider redemption opportunities, and provides participating vendors with cost efficiency and potential spill-over effects within the network. MVLPs frequently undertake marketing actions for partners in the programs. These actions have an own effect on focal vendor's performance, and may also have an effect on other partners (i.e. cross-vendor effect). Scarce and mixed evidence is available on the effectiveness of marketing actions in MVLPs and particularly on the existence of cross-vendor effects. Only Lemon and Von Wangenheim (2008) provide some initial evidence of cross-vendor effects for an airline LP. Using econometric modelling of a unique database we analysed performance of five large vendors within a MVLP, over 141 weeks. The database provides information on store patronage, store spending and particulars of undertaken marketing actions which differ in volume, duration, type and communication channel. Our findings suggest that marketing actions across MVLP partners may prove less effective than what is commonly believed in literature. We find mixed support for the own effects of marketing actions on customer spending and patronage. The effectiveness of various aspects of marketing actions is debatable. Moreover, our results provide no support for the existence of cross-vendor effects, which run counter the arguments that a multi-vendor network may provide partners with the benefits of increased effectiveness and positive synergies.

4 - User Profiling Using Web Browsing Data

Alan Montgomery, Associate Professor, Carnegie Mellon University, Tepper School of Business, 5000 Forbes Ave., Pittsburgh, PA, 15213, United States of America, alanmontgomery@cmu.edu

This research considers how to predict a user's characteristics based upon their web browsing behavior. Generally, these characteristics are demographic variables, attitudes or behaviors. For example, a website may wish to predict whether a user is an expert or novice in their knowledge of a product, male or female, or interested in purchasing a particular product within the next month. User profiling techniques are often employed for targeted advertising. In this study we show how clickstream data can be used to profile users. A unique aspect of clickstream data is that it has dynamic information, users visit a small number of websites repeatedly, but also the number of websites visited has a long-tail. These elements of clickstream data have not been leveraged in previous user profiling techniques. To improve the efficiency and accuracy of user profiling we develop a categorical time series model with latent dynamic elements. We calibrate our model using a sample of users with known characteristics and clickstream data to predict the unknown characteristics of users who have known clickstream histories. Our data includes over 20,000 individuals from a ComScore panel. Our results show that with a single month of usage information many user characteristics can be predicted with a high accuracy. Even with incomplete information these systems can be quite effective.

■ FA07

1st Floor - Room 1220

Social Influence: Network Effects

Cluster: Social Influence
Invited Session

Chair: Hee Mok Park,University of Michigan, 701 Tappan Street, Ann Arbor, MI, 48109, United States of America, heemok@umich.edu

1 - Who Are the Customer Evangelists? How Worthy are They? - A Network Model of Customer Referral Value

Guillermo Armelini Wilde, Assistant Professor, ESE-University Los Andes, Av. Plaza 1905, Santiago, Chile, garmelini.ese@uandes.cl, Erica Salvaj, Julian Villanueva

That word of mouth (WOM) has a pervasive impact on consumers' behavior has been well documented in previous research. For that reason, there is growing interest among scholars in understanding not only what drives WOM, but also to identify individuals with high referral propensity. One way to address this issue is by estimating the so-called customer referral value (CRV), defined as the economic value that a customer is likely to generate due to his/her recommendation during a certain period of time. In this paper we propose a new methodology to estimate CRV using social network analysis in the design of the model and event history analysis in its statistical validation. Comparing with other approaches we show that our model is more robust. In addition it is flexible and easy to implement, and it accurately reflects the role of social interactions in people likelihood to recommend. To test our methodology, we leverage a novel dataset that combines the dynamics of social relationships among a set of customers during ten years, with their consumption patterns in this period of time. Results show a low correlation between customer profitability and CRV. Our findings also indicate that highly connected people and those with a social structure featured by strong ties relationships (spouse, friends, etc) are more likely to have a larger CRV. Conversely, and in line with previous researches, customer profitability was mainly driven by behavioral outcomes such as cross-selling and frequency in service usage, but not for actor's network centrality and individual's expertise with the product. As a result we don't find a causal relationship between characteristics of opinion leaders and customer profitability. Limitations and managerial implications are also discussed.

2 - Peer Effects In Casino Gambling

Hee Mok Park, University of Michigan, 701 Tappan Street, Ann Arbor, MI, 48109, United States of America, heemok@umich.edu, Puneet Manchanda

Casino gambling has become a major "entertainment" industry in the United States in the past two decades. While it is indeed possible that casino gambling provides entertainment, it is also possible that it leads to undesirable personal outcomes. A major motivation for casino gambling that has been documented in the literature is the influence of peers. This influence is seen to be higher for casual and recreational gamblers. In this research, we use a unique panel datasets on frequent gamblers at a single casino property to examine the role of peers. Using a variety of rules to infer peer presence, we look at gambler behavior alone and with a peer to isolate the peer effect. Preliminary results indicate that players tend to gamble longer but bet at a slower rate when playing with peers. We discuss implications for consumers and policy makers.

3 - Judging Borrowers by the Company They Keep: Value of Social Networks in Online Peer-to-peer Lending

Mingfeng Lin, PhD Candidate, University of Maryland, 3330 Van Munching Hall, University of Maryland, College Park, MD, 20742, United States of America, mingfeng@rhsmith.umd.edu, Siva Viswanathan, Nagpurnanand Prabhala

Online peer-to-peer (P2P) lending, where individual lenders provide unsecured loans directly to individual borrowers without the intermediation of financial institutions, has experienced rapid growth in recent years. A defining feature of these online lending markets is the ability of participants to create networks of friends and groups. Based on data gathered from one of the leading online P2P lending marketplaces, our study investigates if these online social networks are indeed valuable, and if so, what aspects of these networks generate value for participants. Specifically, we examine how the structural and relational aspects of these networks affect three important transactional outcomes: the likelihood of a borrower obtaining funding; the interest rate for funded loans; and the risk of default. We find that while structural measures such as degree centrality do not impact transactional outcomes, the relational embeddedness of a participant has a significant impact on her outcomes. More interestingly, we find that the value of a borrower's social network is not only dependent on the relational embeddedness, but also on the lender's ability to verify such embeddedness. Our study is among the first of its kind to quantify the value of social networks in a financial marketplace, and our findings provide valuable guidelines for firms seeking to leverage online social networks and communities for commerce.

4 - The Influence of Local Network on Innovation Adoption

Sangman Han, Sungkyunkwan University, School of Business, Seoul, Korea, Republic of, smhan@yurim.skku.ac.kr, Jacob Goldenberg, Don Lehmann, Kyng Young Ohk, Jang Hyuk Lee

Previous research has shown that the adoption process is social and thus an individual adoption decision is highly influenced by social peers and relationship (Goldenberg, Han, Lehmann and Hong 2009). A few studies have found that the individual adoption process is governed by group adoption decisions (Jones and Ritz 1991, Kim and Srivastava 1998.), but these studies focus on cases where group adoption precedes individual adoption within that group. Consider the case of social networks, groups of clusters in which some individuals are densely linked to each other. It is plausible to expect that the decision dynamics within such clusters is different from those within clusters where the connections are sparse. In this paper we suggest that the individual adoption decision is influenced by the properties of the clusters to which the individual belongs to. We test the influence of the local neighborhood (local network cluster) on individual adoption, and show that it plays a significant role. We demonstrate that these clusters are entities whose influence on adoption is stronger than the additive effect of individual relations with other individuals in this cluster. We also show that the behavior of some network clusters closely mirrors that of the entire network and therefore can be used as predictors of the success or failure of the overall adoption process.

■ FA08

1st Floor - Room 1230

Decision-Making: Managerial

Cluster: Managerial Decision-Making and Decision Support
Invited Session

Chair: Oleg Urminsky, Assistant Professor, University of Chicago Booth School, 5807 S. Woodlawn Ave, Chicago, IL, 60637, United States of America, ourminsk@chicagogsb.edu

1 - Values of VMI (Vendor-managed Inventory) for Different Demand Patterns

Bowon Kim, Professor, KAIST Graduate School of Management, 87 Hoegiro Dongdaemoon-Gu, Seoul, 130-722, Korea, Republic of, BowonKim@business.kaist.ac.kr, Chulsoon Park

Vendor-managed inventory (VMI) arrangement is important supply chain coordination between a vendor (supplier) and a retailer (manufacturer). In this paper, we examine how the pattern of demand for the end product affects the VMI relationship. More specifically, we consider three different scenarios of demand pattern, i.e., a Bass diffusion, a monopolistic, and a competitive demand function. We model a VMI system, where a vendor and a retailer enter such a relationship. The retailer sells a final product to the end customer, who demands it following one of the demand functions considered. The retailer must decide how much to charge the customer for the final product and how much to pay the vendor: we assume the retailer pays the vendor only when the sale to the end customer is completed. In addition, the retailer must do some minor internal work on the product supplied by the vendor before the product becomes a finished one that can be sold to the customer. On the other hand, the vendor supplies its product to the retailer's premise as inventory. The vendor manages the inventory and thus bears the inventory holding cost. It has its own effective capacity, which causes a quadratic production cost function. In addition, the vendor must satisfy the service level set by the retailer: we assume a 100% service level by imposing that the inventory at any time inside the retailer's premise be enough to meet the demand at the time. Therefore, the vendor's decision variable is how much to produce and supply the product to the retailer so as to satisfy the service level requirement. We develop a differential game model to solve the decision problems of the vendor and the retailer, assuming they are also faced with different costs of capital to fund their operations.

2 - Assessing the Value of Marketing Theory in Marketing Knowledge Acquisition: Stakeholder Perspectives

Scott Dacko, Associate Professor of Marketing and Strategic Management, Warwick Business School, University of Warwick, Coventry, CV4 7AL, United Kingdom, S.G.Dacko@warwick.ac.uk

The domain of marketing knowledge is rich with theories, concepts, principles, paradigms, and techniques. Yet how these and other potentially diverse aspects of marketing knowledge are valuedóindividually and collectivelyóby key stakeholders in the field of marketing has received little study. The purpose of this paper is to understand better how marketing theory and other areas of marketing knowledge are viewed by two key stakeholder groups seeking a better understanding and appreciation of marketing. Exploratory factor analyses of both managerial and student views on the value of a range of 17 different areas of marketing knowledge are conducted as a means to identify major factors of value to each group in their respective quests to understand and appreciate fully the domain of marketing. In this context, the findings suggest that marketing theory is one aspect of a broader factor of value to each stakeholder group and that such a factor uniquely complements several other areas of marketing knowledge acquisition. Additional findings are presented and discussed and the implications for multiple marketing stakeholders concerned with the effective acquisition of marketing knowledge are raised.

3 - Cost /Benefit Considerations in Reducing Consumer Uncertainty

Joe Urbany, Professor, University of Notre Dame, 372 Mendoza College of Business, Notre Dame, IN, 46556, United States of America, urbany@nd.edu, Bill Bearden

Consumers experience uncertainty in many ways in decision-making and consumption. There are increasingly calls to arms for helping consumers deal with complexity, suggesting opportunities for competitive advantage. However, firms who seek advantage by simplifying and reducing consumer uncertainty appear to be the exception rather than the norm. In this paper, we consider first why consumer demand for "clarity" in the marketplace seems to outstrip supply, organizing a framework of the costs and benefits facing firms who seek to reduce consumer uncertainty in choice and consumption. An important issue that emerges is that firms may misestimate the positive returns from reducing consumer uncertainty. Two studies examine how consumers value the provision of information that clarifies the definition of quality in a choice context. In a study of choice between two brands of mobile phone service (a lower quality/price brand and a higher quality/price brand), we manipulate the source of the quality ratings information. That information is said to come from the web sites of either the high quality (HQ) brand or the LQ brand, or a neutral third party. One hypothesis is that choice of the LQ brand should decline when it clarifies the degree of its inferiority to the HQ brand. This is countered by alternative hypotheses centered around the value of understanding/trust, as well as decision weight effects. Results reveal that the LQ brand's provision of quality ratings does not hurt its choice share relative to the case when the HQ brand provides the quality information. In fact, it appears to help under certain circumstances, as we find some subjects placing a high value on the understanding conveyed by the brand, even when in doing so the brand reinforces its lower quality.

4 - Almost on Target: Absolute vs. Relative Error in Subjective Assessment of Prediction Accuracy

Oleg Urminsky, Assistant Professor, University of Chicago Booth School, 5807 S. Woodlawn Ave, Chicago, IL, 60637, United States of America, ourminsk@chicagogsb.edu

Managers often decide how much to rely on predictions based on how accurate prior predictions were. However, little is known about how the relative accuracy of predictions is evaluated when they are not directly comparable (e.g. two predictions of different outcomes). I document a robust quasi-proportionality effect in assessing predictive accuracy, such that judgments are not based solely on a function of absolute errors, leading to counterintuitive assessments of accuracy. In one study, I demonstrate that the error in predicting an election outcome is seen as more accurate when framed relative to the winning votes than when the exactly same error is presented relative to the losing votes (and therefore compared to a smaller actual outcome.) Judgments are likewise inconsistent with a simple reliance on proportional error. In another study, participants were asked to identify the more accurate prediction in pairs of predicted test scores, and the same absolute errors had more effect on assessments when the actual scores were lower. In contrast, proportional errors had more effect when the actual scores were higher. Across a wide range of stimuli in multiple studies (test scores, election results, product sales, weather), the best predictor of which estimate is more accurate was shown to be a combination of both the absolute and proportional errors, contrary to the assumptions underlying least squares modeling methods. Lastly, the effect generalizes to confidence about one's own estimates. Marketing mangers generated larger confidence intervals, in absolute terms, for higher selling movies, but smaller confidence intervals in proportional terms. Implications for the implementation and acceptance of model-based decision support systems are discussed.

■ FA11

2nd Floor - Room 2210

Competition: Strategy

Cluster: Competition

Invited Session

Chair: Axel Stock,University of Central Florida, 565 Eastbridge Dr, Oviedo, FL, 32765, United States of America, astock@bus.ucf.edu

1 - Brand Extensions in Markets with Preference Based Segmentation

Yogesh Joshi, Assistant Professor, University of Maryland, 3301 Van Munching Hall, College Park, MD, 20742, United States of America, yjoshi@rhsmith.umd.edu, David Reibstein, John Zhang

Firms often need to decide how narrow or broad the scope of their brand should be. Some firms choose a narrow scope and are careful to not stake a claim in the competitor's turf, whereas other firms offer a broad scope and introduce innovations that encroach on the competitor's turf. We investigate the conditions under which these strategies are optimal, when firms face distinct market segments and are able to distinguish between own and rivals' customers.

2 - Dynamic and Competitive Effects of Direct Mailings: A Charitable Giving Application

Bas Donkers, Erasmus University, School of Economics, H15-19, P.O. Box 1738, Rotterdam, 3000 DR, Netherlands, donkers@ese.eur.nl, Philip Hans Franses, Merel van Diepen

The authors propose a dynamic direct mailing response model with competitive effects. Purchase and promotion history are incorporated to map the dynamic competitive interactions amongst the firms sending those mailings. The authors investigate the impact of direct mailings on the revenues of each firm and its competitors over time. The model accounts for endogeneity of the mailing decision and for unobserved heterogeneity across households. The model is considered in a charitable giving setting, where households often receive many direct mailings of different charities within a short period of time and competition is strong. The authors construct a unique database by merging the databases of three large charity organizations in the Netherlands. This results in household level data on the direct mailings received and the donations made by each household to each of the three charities. The results show that a charity's own mailings are short-run substitutes, that is, an extra mailing cannibalizes the revenues of subsequent mailings. Furthermore, competitive charitable direct mailings tend to be short-run complements, that is, the direct mailings increase the total pie that is divided among the charities. In the long run these effects die out. The results are also interpreted from a behavioral perspective.

3 - Positioning and Pricing in Markets with Network Externality

S Sajeesh, Assistant Professor of Marketing, Baruch College, CUNY, One Bernard Baruch Way, New York City, NY, 10010, United States of America, s.sajeesh@baruch.cuny.edu, Jagmohan Raju

We develop an analytical model which incorporates network externality on consumers' purchase behavior and then study the model's implications for firms' positioning and pricing strategies. It extends the traditional Hotelling model by accommodating consumers' desire for uniqueness as well as conformity. We model the change in willingness to pay (due to the effect of network externality) for each consumer to be dependent on their location vis-‡-vis the location of the firm. Specifically, we assume that the effect of network externality is higher (either positive or negative) on those consumers who are located ěcloser' to the firms. With positive network externality, we show that product differentiation increases where as in negative externality market the product differentiation is lower. Also, the price competition is lower in a positive network externality market compared to a market where no network externality exists.

4 - Competition with Environmentally Friendly Products

Axel Stock, University of Central Florida, 565 Eastbridge Dr, Oviedo, FL, 32765, United States of America, astock@bus.ucf.edu

The ever increasing concerns about global warming and environmental destruction have opened up new opportunities for marketers. Indeed, in many product categories we see "green" alternatives with the most visible being hybrid cars like the Toyota Prius. However, the academic Marketing literature says little about the conditions under which to introduce environmentally friendly products. In order to fill this gap we develop a game theoretic model where two firms compete for a market consisting of green and brown consumers. We study both the case of horizontal and vertical differentiation between firms. Interestingly, we find conditions under which more environmental awareness does not lead to more green products offered.

■ FA13

2nd Floor - Room 2230

Brands and Branding: Brand Equity

Cluster: Brands and Branding

Invited Session

Chair: Janell Townsend, Assistant Professor, Oakland University, 348 Elliott Hall, Rochester, MI, 48114, United States of America, townsend@oakland.edu

1 - Consumer-based Brand Equity Measure: Bayesian Modeling of a Multi-facet Multi-dimensional Construct

Luming Wang, University of Alberta, School of Business, Edmonton, AB, T6G 2R6, Canada, luming@ualberta.ca, Adam Finn

Consumer-based brand equity (CBBE) is a multi-dimensional construct (e.g., brand awareness and perceived quality) with multiple facets of variation (i.e., brands, consumers, and dimensions), making its measurement more complicated than recognized in existing scales. A new structural measurement model is proposed that recognizes (i) the primary purpose of CBBE is to scale brands, (ii) CBBE measures have multiple facets, and (iii) CBBE has formative and reflective relationships with its dimensions. Multiple models are proposed for the structure of the relationship between the underlying brand equity construct and its specific formative and reflective dimensions. These include models with alternative hierarchical structures to the linear relationships between the underlying brand equity construct and its specific dimensions, and models without any hierarchical structure. The latter includes a multi-facet multi-unidimensional model in which CBBE is no more than a profile of the independent dimensions. We use a Bayesian modeling framework and multiple scale items for each of the dimensions to fit the models to a data set in which consumers are crossed with soft drink brands. The Bayesian framework provides the flexibility to estimate both hierarchical structures to the dimensions and other facets, such as item characteristics and respondent traits, in one implementation. Using Bayesian criteria for model comparison, we will determine whether multi-facet models with hierarchical structure accounting for the dimensions perform best in fitting CBBE data.

2 - The Point of No Return: Do Brands Recover Distribution?

Michael W Kruger, EVP Strategic Initiatives, Information Resources, Inc., 150 N. Clinton St, Chicago, IL, 60661, United States of America, mike.kruger@infores.com

When consumer packaged goods (CPG) brands suffer a loss in retail distribution, can they recover? Looking at a set of brands that suffered retail distribution, how many of them recovered the lost distribution? This study examines a set of over 10,000 CPG brands with strong distribution, of which over 1,000 had distribution declines of more than 10%. We look at how often these brands were able to recover their previous distribution over the next 3 years, and some factors that change the odds of recovery.

3 - Advertising, Brand Equity, and the Generation of Financial Resources

Alexander Himme, University of Passau, Innstrasse 27, Passau, 94032, Germany, alexander.himme@uni-passau.de, Marc Fischer

Advertising increases brand value by creating brand awareness and brand attachment. Managers and scholars in turn refer to the positive impact strong brands have on the expected level and stability of future cash flows. By signaling more stable future cash flows to investors brands may also decrease a firm's cost of capital. In general, both components of the WACC, the cost of equity and the cost of debt, determine the potential for a firm to generate future financial resources. These financial resources in turn define the investment level of marketing activities, which are required to sustain and grow the brand. This study models the complete chain of effects of advertising, brand equity, and the ability of firms to finance their marketing expenditures. We provide propositions about how brand equity influences the disposable financial resources of a firm directly and via the cost of capital. We also hypothesize feedback effects from financial resources to advertising and brand equity. Thus, our study points out to marketing and finance managers how managerial decisions can be improved by considering the impact of advertising and brand equity on the terms of financial resources. We test our propositions by using time-series data from a broad sample of B2C- as well as B2B-companies. Brand equity data are obtained from the Interbrand Group. Cost of equity and cost of debt are approximated by a firm's systematic risk and its credit spread, respectively. Disposable financial resources are measured by a firm's operating cash flow. Controlling for several accounting metrics and industry-specific effects, the estimation results provide support that advertising and brand equity significantly influence the disposable financial resources of a firm, and thus grow its firm value.

4 - Performance Implications of Brand Investments

Janell Townsend, Assistant Professor, Oakland University, 348 Elliott Hall, Rochester, MI, 48114, United States of America, townsend@oakland.edu, Rajendra Srivastava, Sengun Yeniyurt

Prominent marketing scholars propose that market-based investments like advertising result in the development of intangible market based assets such as brand strength. If managed effectively, brand strength can be leveraged to enhance the productivity of marketing spend, resulting in superior marketplace performance. This perspective is an amplification of the literature demonstrating a direct relationship between marketing actions and market response where the development of brand strength is considered as an intermediary step in the process. Marketing mix elements have both a direct impact on brand performance, and are expected to have an indirect effect via interaction with components of brand strength as well. In the short term, outlays on fundamental marketing processes result in improvements in market performance, and can ultimately be recorded in financial statements. Over the long run, the returns from continued investments are not only visible in measures of market performance, but they also create intangible market based assets. The greater the built up value of these assets that currently aren't reported in financial statements, the greater the impact of investments on those measures that are reported. We examine the effects in the U.S. automotive market with a large data set spanning all major brands from 1997-2003, and with over 40,000 observations. Results confirm that marketing mix elements impact marketplace performance both directly and indirectly via brand strength, and indicate that the effects vary across short and long term measures of brand performance.

■ FA14

2nd Floor - Room 2240

Marketing Strategy

Cluster: Marketing Strategy

Invited Session

Chair: Yang Liu, PhD Student, University of Illinois at Urbana-Champaign, 417DKH, 1407 W. Gregory, Urbana, IL, 61801, United States of America, yangliu4@illinois.edu

1 - "Selling" Business Models of Internet Start-Ups - An Experimental Study of Exit-Strategies

Michel Clement, Professor Dr., University of Hamburg, Von-Melle-Park 5, Hamburg, 20146, Germany, michel.clement@uni-hamburg.de, Jan U. Becker, Markus Noeth

There are many examples of companies buying start-ups that are not running profitable businesses. The reasons why companies buy unprofitable start-ups are often based on strategic goals. We have interviewed several founders and learned that many of them never really had the goal to run a profitable business, but they try to gain potential strategic relevance by providing free services which may lead to large user bases. These large user bases become a strategic threat to many "traditional" players in the industry - which then might try to buy the start-up. Using experiments with managers we analyze (1) why start-ups are able to sell unprofitable business models (marketing the company) and (2) why they are able to sell their businesses to (irrational) high prices. Our results show that once an initial bid for the company has been placed, the start-ups are using this bid to initiate an auction which leads to the winner's curse and irrational high bids.

2 - Business Models and Radical Innovation

Chirag Patel, Assistant Professor of Marketing, Grenoble Ecole de Management, 12, Rue Pierre Sémard- BP 127, Grenoble, 38003, France, chirag.patel@grenoble-em.com, Christophe Haon

Following radical technological change, do firm business models affect market success of the radical innovation? Past literature on radical innovation has focused on the financial and technological antecedents of radical innovation. In doing so, the crucial role of business models has been overlooked. The development of a new business model is a key response to radical technological change because radical innovations create a new market infrastructure which requires development of new ways of doing business. In this paper, we make three contributions to the past literature. First, we study the effect of business models on market success of the firm's radical innovation. Second, we create a categorization of business models based on the concepts of 'position within a value chain' and 'direction of information and product flow within the value chain'. Third, we measure business models objectively using archival data from the online retailing sector. We use arguments based on network theory to hypothesize that business models designed to extend and support the basic benefits of the radical innovation are likely to have greater market success for their radical innovation as compared to business models that do not do so. For example, the basic benefit of online book retailing for customers is the ability to buy books and obtain information from the retailer at anytime and anyplace. In this context, a business model that allows two way flow of books and information between value chain members (like offline vendors, authors, publishers) and the final customer would extend and support the basic benefits of online retailing. This framework provides managers with guidelines for designing successful business models following radical technological change.

3 - Concurrent Communications: Aligning Sales Training Programs & the Marketing Message

Natalie Clark Winter, Associate Professor, California Baptist University, 8432 Magnolia Avenue, Riverside, CA, 92504, United States of America, nclark@calbaptist.edu

The need for a sales training program has been recognized in both small and large companies as the competitive climate in personal selling intensifies. Oftentimes, training programs are conducted by sales managers, human resource personnel, and product experts with little or no relation to recognized andragogical methodologies. In addition, sales training often focuses on the strategies and techniques of successful salespeople and may or may not bare any relation to the marketing message that the organization is utilizing to attract and retain customers. This paper seeks to develop a model by which organizations can plan their sales training program to ensure that effective sales behavior is learned and practiced while at the same time ensuring that the value proposition that the organization conveys in its nonpersonal marketing communications is reinforced and emphasized. In doing so the organization creates better alignment between its sales training program and its marketing message allowing a more successful implementation of an integrated marketing communications program.

4 - Competition Between Professionals and Amateurs: A Two-sided Market Story

Yang Liu, PhD Student, University of Illinois at Urbana-Champaign, 417DKH, 1407 W. Gregory, Urbana, IL, 61801, United States of America, yangliu4@illinois.edu

TV, internet and other media platforms are the well-known two-sided markets. Technology development has made it possible for the program content consumers to be the content providers. In this article, we construct a model to study the competition between the media platforms, where the type one platforms broadcast the contents that are professional made, and the type two platforms show the contents that are user made. Therefore the programs shown on type two platforms may be more customized than the programs shown on type one platforms. We assume agents on both sides of the platforms are heterogeneous. We analyze the competition under different quality settings between the two types of platforms. We have the following results. First, we find when the type two platforms provide higher quality contents than the type one platforms, both types will be benefit from type two platforms' customization. Second, when the type two platforms provide lower quality contents than type one platforms, only type one platforms will gain from type two platforms' customization.

■ FA15

2nd Floor - Room 2320

Customer Loyalty: Methodology

Cluster: Customer Satisfaction, Loyaly, and Lifetime Value
Invited Session

Chair: Kanghyun Yoon, Assistant Professor, Long Island University, 720 Northern Blvd, Brookville, NY, 11548, United States of America, kanghyun.yoon@liu.edu

1 - Targeting Prospective Customers Predicted to be Loyal Beyond a Threshold Time

Douglas MacLachlan, Professor & Chair, Dept of Marketing & International Bus., Foster School of Business, University of Washington, Seattle, WA, 98195-3200, United States of America, macl@u.washington.edu, Joo Heon Park

Modeling customer retention is an important issue in CRM. If companies can predict whether or not a prospective customer will be loyal, they can improve profitability by only targeting those who are likely to be retained longer than a particular time period. It is often difficult to correctly specify retention models for a variety of reasons; e.g., causal factors are unknown or unmeasured, model has unknown functional form, and so forth. Bodapati and Gupta (JMR,2004) presented a counterintuitive result that, with very large samples, a binary regression (they termed a direct approach) to identify and target customers with a misspecified response model achieves better predictive performance than a continuous regression (an indirect approach). But binary regression cannot be applied to a censored model such as that used to predict retention time, because censored data cannot be effectively dichotomized. In this paper, we propose a new method called discretized regression that shares with binary regression its dichotomization feature, but it can be applied to censored data. The discretized regression provides prediction properties robust to misspecification. We show with both simulated and real data sets that the discretized regression method predicts more accurately than continuous regression under misspecification and predicts as accurately as continuous regression under correct specification. Marketers who are not sure of retention time model specification can confidently use the discretized regression method in order to determine which prospective customers to target for retention.

2 - Predicting Customer Churn: Towards a Marketing-Oriented Loss Function

Aurelie Lemmens, Associate Professor, Erasmus University Rotterdam, Burgemeester Oudlaan 50, Rotterdam, 3000DR, Netherlands, lemmens@ese.eur.nl, Christophe Croux

Considerable part of the marketing literature deals with binary classification issues. One of the most frequent topics envisioned as a classification task is consumer choice modeling. In this respect, an increasingly popular issue in marketing concerns the prediction of customers' probability to churn, i.e. to defect from the company. In general, most models used in this setting are designed to minimize the error or misclassification rate. This criterion assumes that all customers are given the same importance and no distinction is made between correctly predicting the churn probability (or risk) of a customer belonging to a high-risk segment or predicting the churn probability of a customer belonging to a low-risk segment. However, in practice, this perspective turns to be inappropriate and does not match the marketing objectives. The churn prediction task is indeed often used as a basis for the implementation of a marketing retention strategy through which a portion of the customers (e.g. the 10% most likely to churn) are targeted with special incentives with the intention to reduce their churn probability. In this context, correctly predicting and targeting the high-risk customer segment is key for the success of the retention program. In this presentation, we propose a churn prediction model accounting for such types of customer heterogeneity, specifically designed for the proper implementation of marketing retention strategies.

3 - Differential Impacts of Brand Loyalty on Purchase Decisions of When, What, and How Much

Kanghyun Yoon, Assistant Professor, Long Island University, 720 Northern Blvd, Brookville, NY, 11548, United States of America, kanghyun.yoon@liu.edu, Kyuseop Kwak, Thanh Tran

On the basis of consumer's purchase behaviors, many marketers in the past have segmented consumers into two groups such as loyals (also called variety avoiders or repeaters) and non-loyals (also called variety seekers or switchers). However, considering that consumers' underlying motivations in making their repeat or switching behaviors are diverse, such dichotomous classification is not sufficient to capture consumer heterogeneity and further segmentation of consumers regarding the motive underlying consumers' behavior is required. For instance, non-loyal or switching consumers who are characterized by a low repeat purchase rate (e.g., low market share of a specific brand) tend to buy different brands due to either price promotions or satiation/boredom with the current brand. Therefore, we propose to further segment non-loyal consumers (i.e., switchers) into two sub-groups: deal-prone switchers and variety seekers. In contrast, consumers, who exhibit frequent repeat purchase behaviors and tend to purchase the same brand repeatedly, may be motivated by either attractive price incentives offered by loyalty programs or a brand's particular non-monetary features. Thus, two sub-groups of repeat consumers can also be identified depending on their price sensitivity: deal-prone loyals and value-conscious loyals. Different motivation and levels of brand loyalty may show differential impacts on brand choice and quantity decision. Given a new taxonomy with four types of consumer groups, this study is interested in evaluating how the four types of consumers respond a firm's choices of strategic marketing mix and as a result, impact the firm's performance, given competitive interactions among brands. Based on our empirical findings, managerial implications will be discussed.

Friday, 10:30am - 12:00pm

■ FB01

Lower Level - Room 0210

New Products: Diffusion II

Cluster: New Products and Product Policy
Invited Session

Chair: Yuri Peers, Erasmus University Rotterdam, Erasmus School of Economics, Room H09-16, P.O. Box 1738, Rotterdam 3000 DR, Netherlands, ypeers@ese.eur.nl

1 - The Effect of Online Word of Mouth on New Product Diffusion: An Example of Taiwan Box-Office of American Movies

Ching-I Chen, Assistant Professor, Department of International Business Studies, National Chi Nan University, No.1, University Rd., Puli, Nantou Hsien, Taiwan - ROC, chingichen@ncnu.edu.tw, Kuo-Cheng Chang

Online word of mouth (WOM) has been paid more and more attention as an important information source used in purchase decisions due to the fast development of computer-mediated communication. It has lots of advantages for firms such as low communication cost, wide communication range, and convincing communication contents generated by consumers themselves about evaluation and experience sharing. The objective of this study is to explore how the diffusion pattern of products made in home country but sold in host country is influenced by the online WOM of consumers in both countries. The Bass diffusion model which assumes that the diffusion pattern is determined by coefficient of innovation (p) and coefficient of imitation (q) is adopted in this research. The online WOM from the home country displayed in foreign language and conveyed by foreign websites to local consumers can be considered as a mass-media communication and may have impacts on coefficient p, and the online WOM within the host country can be considered as an interpersonal communication and may have impacts on coefficient q. This research collects weekly Taiwan box-office figures of American movies and online WOM about the movies from Taiwan and American movie websites. Most of movies are introduced in Taiwan after they have been introduced in America. The empirical results show the time lag of introduction between two countries can accelerate the effect of positive online WOM from American on coefficient, p and the effect of positive online WOM from Taiwanese on coefficient q is varied by different types of movies. This research offers a strategic guideline for firms to make promotion strategy from a digital marketing perspective.

2 - An Agent-based Model for Incorporating the Effect of Consumer and Brand Interactions on Diffusion

Mary E. Schramm, Kent State University, P.O. Box 5190, Kent, OH, 44242, United States of America, mschramm@kent.edu, Kevin J. Trainor

Adoption decisions, and the resulting diffusion of innovations, occur in a complex, adaptive system. These decisions are influenced by the interactions among consumer characteristics, the innovation's characteristics, and social influences. As a newer methodology, agent-based modeling (ABM) has the potential to advance diffusion research since the researcher can program the model with the many characteristics and interactions that reside in real-world systems. In ABM, consumer and product characteristics are defined at the individual, or agent, level to reflect population heterogeneity. Its ability to model interactions is especially valuable, since emergent results that are not evident when studying system elements individually are revealed. In this study, an agent-based diffusion model with consumer and brand agents was developed to simulate the diffusion process for a durable good. The model's output includes brand and product category diffusion curves that allow the study of diffusion at micro (brand) and macro (product category) levels. Interactions among consumers and between consumers and brands are reflected in the model. They are operationalized by calculating a consumer adoption threshold value which translates to adoption probability. Simulations completed in this study demonstrate ABM's ability to provide insights at the brand and product category level based on different brand and attribute scenarios. The model also successfully demonstrates ABM's ability to reveal emergent results.

3 - Social Identity and Multivariate Visual Diffusion

Eric Bradlow, K.P. Chao Professor, The Wharton School, 3730 Walnut Street, 761 JMHH, Philadelphia PA 19104, United States of America, ebradlow@wharton.upenn.edu, Jonah Berger, Blake McShane

We are interested in the role that visual (social) identity plays in product adoption. How does the type of people who own and are seen to own a particular product/service influence others' likelihood of purchase? For example, might men be less likely to buy a sporty coupe automobile if they observe lots of women are driving it? Might 20-30 yr olds be less likely to buy a new Element-type vehicle if it is being purchased and driven by senior citizens? Further, might these cross-group effects be more likely in certain car categories as opposed to others? To address these questions, we have acquired data on over 26 million automobiles sold throughout the U.S. from January 1999 till January 2008. We use Bayesian probability models to identify whether the adoption of a given make and model by one social group can be explained by previous visual adoption by another social group. Furthermore, since behavioral research suggests that social contagion is a local phenomenon (that is, an individual's purchase decision for a given product depends in part on whom else he actually sees using that product), we incorporate local spatial effects in our model. In addition, we are able to determine how these patterns vary across both geographic areas as well as across makes, models, and categories of cars. Finally, since our main hypotheses surround visual diffusion, we relate the degree of local diffusion to correlates (e.g. density, sunny days, etc.) that represent visual diffusion potential.

4 - The Use of Mixed-frequency Data in Diffusion Models

Yuri Peers, Erasmus University Rotterdam, Erasmus School of Economics, Room H09-16, P.O. Box 1738, Rotterdam, 3000 DR, Netherlands, ypeers@ese.eur.nl, Dennis Fok, Philip Hans Franses

High frequency data on the diffusion of durable products and services are usually not available at the beginning of the diffusion process, while as time proceeds such data do become available. This discrepancy in the frequency of observations can lead to two outcomes. First, the data may be aggregated towards a lower frequency, which means a loss of information. Second, the low frequency data at the start may be ignored, and this may lead to estimation problems due to left censoring. In this paper we propose a novel method to deal with such left censoring, where we explicitly use the mixed frequency data. We demonstrate that some estimation methods, like those proposed in Srinivasan and Mason (1986), can simply be modified to deal with mixed frequencies in the context of a Bass model. In this method only knowledge of the timing of the start of the process is needed. For other estimation methods we show that simulation methods are needed. With a variety of examples we show that the use of mixed-frequency data improves estimation and forecasts of diffusion models, as compared to estimation and forecasting of the model with left censoring or with aggregated data.

■ FB02

Lower Level - Room 0220

Channels: Governance II

Cluster: Channels

Invited Session

Chair: Vishal Kashyap, Xavier University, 3800 Victory Parkway, Cincinnati, OH, 45202, United States of America, kashyapv@xavier.edu

1 - Bundling of Equipment Sales and Technical Consulting Services Contracts in Industrial Markets

Sourav Ray, Marketing, McMaster University, DeGroote School of Business, Mains Street W., Hamilton, ON, L8S4M4, Canada, sray@mcmaster.ca, Mrinal Ghosh, Tirthankar Roy

Product offerings in industrial marketplaces often embody substantial amount of engineering and technical know-how. This know-how is usually manifest in two forms: (a) the tangible product - product capital and (b) technical after-sales consulting advice - human capital. In this research, we complement existing work in marketing and economics by using a contracting perspective to investigate the bundling of these two forms. Specifically we ask: When would we find human capital bundled (i.e. purchased together) with product capital in a procurement contract between industrial buyers and their equipment vendors? Crucially, in a departure from previous work, our unit of analysis is not at the product-line level (when would a vendor offer bundled versus unbundled offerings) but at the contracting level (when would we observe a bundled versus unbundled contract). Using the organizing principle of the Coase Theorem, we argue that bundling versus unbundling are alternative institutional arrangements and that contracting parties choose the contract form that offers higher joint value under a given set of antecedent conditions. We develop a framework that shows how coordination problems emanating from various product, customer and vendor characteristics make bundling a favorable option in certain circumstances. Refutable hypotheses are tested using data obtained from procurement contracts for complex industrial equipment and machinery in four different industry sectors. We also test the normative performance implications of our framework. Implications for research and practice are developed.

2 - When do Vendors Choose to Offer Systems versus Components

Kellilynn Frias-Gutierrez, Doctoral Candidate, University of Arizona, Eller College of Management, 1130 E. Helen St., Tucson, AZ, 85721, United States of America, kmg3@email.arizona.edu, Shantanu Dutta, Mrinal Ghosh

In this paper we explore issues pertaining to the "scope of the firm" by investigating where a firm chooses to participate in the value chain (or what product form architecture does a firm choose to offer). Specifically, we ask: When does it make sense for a firm to be in systems (where the firm configures and sells the final end-product itself) versus components (where customers, or other intermediaries, combine the firm's component with other complementary components to build the final end-product) markets? In the tradition of Coase and Williamson and drawing on related work by John et al (1999) and Novak and Wernerfelt (2008), we treat these choices as alternative institutional designs and argue that the crucial driver of this decision is whether the firm (choose systems) or the market (choose components) is more effective in coordinating the design, development and supply of the end-product. We hypothesize how technology, customer, and firm-specific resource factors differentially impact the ability of the firm to coordinate these activities. Data provides good support to our refutable predictions. We also test the performance implications of this choice. Our core theoretical contribution is to show how the efficiency rationale embodied in the Coase Theorem can provide insights at product-line level (instead of transaction level) decisions and provide evidence on why firms, and the industries they compete in, might be organized the way they are.

3 - Contracts, Governance, and Channel Member Compliance

Vishal Kashyap, Xavier University, 3800 Victory Parkway, Cincinnati, OH, 45202, United States of America, kashyapv@xavier.edu, Kersi Antia, Gary Frazier

In response to increasing competition, forward thinking manufacturers/brand owners must work to reduce intermediary opportunism while increasing compliance by their intermediaries. In this context, contractual terms (that is, completeness, and the concessions granted to channel partners) and the governance mechanisms that are deployed in their wake (monitoring and incentives) have yet to receive the attention they deserve. This is particularly important, given that compliance and opportunism likely have overlapping yet distinct antecedents. The present study integrates archival and survey data from three different sources (actual contracts, archival marketing mix- and performance-related information, and surveys of downstream intermediaries) to specify a multilevel structural equations model of deployed contracts, the consequent governance behaviors, and their consequences in terms of inducing channel member compliance. In doing so, we shed light on how upstream suppliers may use multiple governance tools to elicit their downstream intermediaries' compliance while reducing channel member opportunism in letter and spirit.

4 - Brand Externalities and Intra-chain Pricing Variation: The Effect of Organizational Form

Arturs Kalnins, Cornell University, 545D Statler Hall, Ithaca, NY, 14853, United States of America, atk23@cornell.edu

Within many of the multi-outlet branded chains that dominate the retail and services landscape, the organizational form (e.g., company management, franchising) used to manage an outlet varies from site to site, as do prices at those sites. I propose that organizational form and prices may be systematically related due to brand externalities. In particular I emphasize a previously unexamined contrast in the relevant externalities between high-quality and lower-quality brands. Using price and organizational form data from more than 25,000 branded U.S. hotels affiliated with 102 distinct brandsóover 94% of the branded populationóI find that, consistent with the brand externality arguments, company-managed locations have higher prices within high-quality chains, while franchisees price higher in the lower tiers. To control for the possible endogeneity of organizational form, I estimate Heckman-style treatment models with a control function as well as panel data models with establishment-level fixed effects. I conclude with implications for policy, academia and practitioners.

■ FB03

Lower Level - Room 0230

Advertising: Consumer Response

Cluster: Advertising
Invited Session

Chair: Norris Bruce, Associate Professor and Area Coordinator, Marketing, University of Texas at Dallas, P. O. Box. 830688, SM 32, Richardson, TX, 75083, United States of America, norris.bruce@utdallas.edu

1 - A Bayesian Model of Treatment Effects in a Pre-post Study

Ling-Jing Kao, Santa Clara University, 500 El Camino Real, Santa Clara, CA, 95050, United States of America, lkao@scu.edu

A pre-post experiment, where the measurements of dependent variables are collected from respondents before and after giving treatments, is one of the most popular approaches for studying treatment effects in marketing. However, classic statistics approaches such as ANOVA are not appropriate for some marketing applications in which measurements (e.g., price sensitivity) are covered by discrete choices and cannot be collected from consumers directly. In this paper, a Bayesian approach is proposed to study multiple treatment effects when pre and post measurements are covered by discrete observations. By specifying the relationship between pre and post measurements under a random-effect framework, the proposed approach allows researchers to study treatment effects on a consumer‚Äôs brand preference and sensitivities to merchandising variables. The proposed model is illustrated with a panel data of consumer packaged goods collected in an experiment of information acceleration (Urban, Weinberg, and Hauser, 1996). The result shows that respondents' intrinsic brand preferences for new item are influenced most by TV commercials. Respondents learn the key differentiated product attributes primarily from TV commercials and printed ads.

2 - New and Enduring Empirical Generalizations on Advertising Elasticity

Raj Sethuraman, Southern Methodist University, 6212 Bishop Boulevard, Dallas, TX, 75205, United States of America, rsethura@mail.cox.smu.edu, Gerard Tellis

Assmus, Farley, and Lehmann (1984) - AFL, provided the first empirical generalizations on advertising elasticity. In particular, they meta-analyzed 128 advertising elasticity estimates from 16 studies published between 1962 and 1981 and provided useful generalizations on the patterns of advertising elasticities. Nearly 25 years have passed since that publication. This period (1981-2008) has witnessed significant changes on many fronts that may have an impact on the effectiveness of advertising. First, the marketing environment is changing with greater competition, globalization, the advent of the Internet, and the ability of the consumer to opt out of commercials through devices such as TiVo. Second, the data and the methodology for estimating advertising elasticities are increasing in sophistication. It would therefore appear prudent to update the empirical generalizations by including data from studies published between 1981 and 2008. This study conducts a meta-analysis of 641 brand-level advertising elasticity estimates obtained from 46 studies published between 1960 and 2008 and presents several new and enduring empirical generalizations on advertising elasticities. New empirical generalizations are those that are either not reported in the previous meta-analysis by AFL 1984 or have been modified. Enduring empirical generalizations are those results that have not changed from the AFL 1984 analysis. Questions related to time trend in advertising elasticities and the ratio of long-term to short-term advertising elasticities are also investigated.

3 - Hierarchical Effects of Advertising: A Bayesian Approach

Huseyin Karaca, PhD Student, Northwestern University, Marketing Department, 2001 Sheridan Road, Evanston, IL, 60208, United States of America, h-karaca@kellogg.northwestern.edu, Richard Briesch, Lakshman Krishnamurthi

Even though the role of advertising on brand choice has long been studied in the marketing literature, most of these studies have utilized ‚Äúmain effect‚Äù type of models that have focused on the direct effects of advertising on choice. Consumer behavior theory, on the other hand, conjectures that consumers move through a number of separate stages of behavior before they finalize a purchase decision. As such, there are several models in consumer behavior theory that establish a hierarchical process in relating advertising to consumer outcomes. In these models, hierarchical effects take place when the relationship between advertising and consumer outcome variables is mediated through other variables. One such framework argues that the effect of advertising on purchase behavior is mediated through brand awareness. Aside from the appealing theoretical properties of these models, showing the mere existence of hierarchical effects in empirical studies has been a difficult task. In this paper, we build a model to test this framework. In particular, we test the hypothesis that advertising first exercises its influence on brand awareness, and via awareness on actual purchase. Using a unique data set that we compiled from three sources of information, we estimate our model in a Hierarchical Bayesian setting. We find empirical support for a hierarchical relationship between advertising and brand choice that is mediated through brand awareness. Ignoring this mediating role of awareness can result in biased estimates for the effects of advertising. To the best of our knowledge, this paper is one the first papers to show an empirical evidence for the practical existence of hierarchical effects of advertising.

4 - A Dynamic Factor Model for Understanding the Intermediate Effects of Advertising on Sales

Norris Bruce, Associate Professor and Area Coordinator, Marketing, University of Texas at Dallas, P. O. Box. 830688, SM 32, Richardson, TX, 75083, United States of America, norris.bruce@utdallas.edu, Kay Peters, Prasad Naik

We present a new approach that enables managers to extract information contained in "soft" metrics such as ad recognition, memorability, humor, purchase intention and utilize it to predict brand sales. Two novel aspects of the proposed approach are as follows. First, we incorporate dynamic evolution of the three factors —- cognition, affect, experience —- over time. Such dynamics are ignored in previous studies partly because most multi-factor studies used either cross-sectional data or laboratory experiments, and partly because the appropriate method for extracting dynamic factors with stable correlations is not available in the extant literature. Second, based on the theory of discrete algebraic Riccati equations (DARE), we develop a new method to estimate stable correlations amongst dynamically evolving factors. We illustrate this method by applying it to market data on soft and hard metrics (e.g., GRPs, sales) and demonstrate its usefulness in not only understanding the dynamic factor structure and predicting brand sales, but also furnishing evidence that the underlying factors are not orthogonal as implied by previous static models. Finally, we discuss the implications for researchers and managers.

■ FB04

Lower Level - Room 0240

Pricing: Perception

Cluster: Pricing
Invited Session

Chair: Jun Bum Kwon, Doctoral Student, University of Wisconsin - Milwaukee, 3202 N. Maryland Avenue, Milwaukee, WI, 53211, United States of America, junbum@uwm.edu

1 - Decoding Luxury

Daniel Langer, Dr., University of Mainz, Hohenstaufenstrasse 3, Duesseldorf, 40545, Germany, langer@marketing-science.de, Oliver Heil

Luxury is something rare and hedonic, difficult to acquire or use. It provides the perception of unique experiences in combination with enhancement or reinforcement of the social position. In short, luxury is an emotional social marker and differentiator. Contrasting common beliefs, we suggest that luxury goods satisfy deep needs of people. Our concept of added luxury value (ALV) explains economically why people are willing to pay high prices. It is a value caused by a luxury signal and composed by specific aspects of luxury, such as being a head-turner, signaling social dominance, being the ultimate protector, etc. That is, our research aims to decode important aspects of luxury. More precisely, based on a review of various literatures related to luxury, a new and operational definition of luxury is produced. Various propositions and hypotheses are derived and condensed into a conceptual framework. The framework explicitly considers various important stages of luxury purchasing and luxury consumption, luxury signaling and added luxury value. Primary data were collected in Europe, USA, Japan, China allow initial testing of a subset of all research hypotheses in this project. A new index of luxuriousness was calculated allowing a categorization of numerous luxury products. Our results include a defined set of strategies for managers to manage luxury more profitably. That is, our findings provide managers with comprehensive toolsets and strategies to manage luxury in a more competitive, profitable and sustainable way.

2 - Reference Price Mechanisms and Gain-loss Effects at the Market Level

Jun Bum Kwon, Doctoral Student, University of Wisconsin - Milwaukee, 3202 N. Maryland Avenue, Milwaukee, WI, 53211, United States of America, junbum@uwm.edu, Purushottam Papatla, Jean-Bernard Kazmierczak

Past research suggests that price is likely to play a strong role in consumers' brand choice decisions. Findings in the literature also suggest that consumers are likely to evaluate the price of each brand from two perspectives: the actual price of the brand and the gap between the price and a reference price. Most of the literature on reference prices, however, has been at the individual level rather than at the market, level. This is a major gap in the literature since, typically, brand managers may be more interested in market-level effects of reference prices rather than individual ones. Thus, for instance, Sony's manager of plasma televisions may want to understand which competing brand(s) of plasma televisions act as points of reference and how the gap between Sony's and their prices affect the sales and market share of the brand. Our research attempts to provide such insights by investigating reference prices and their roles at the sales and market share level. Specifically, we investigate the following issues using weekly sales data on the television category from various European markets: 1.For a model of a brand with specific product attributes, which brand(s) act as points of reference? 2. How does the gap between the brand's price and the prices of the reference brands affect its sales and market share? 3. Which mechanism of reference price formation, Internal Reference Price, the External Reference Price or, possibly, a different mechanism, can best explain the effect of reference prices on brand sales and market share? 4. Do the reference brands, reference price formation mechanisms and the effect of reference prices vary across various types of markets such as different geographic regions or different types of channels?

3 - Examining Reference Price in Repeated B2B Transactions

Hernan Bruno, Assistant Professor of Marketing, INSEAD, Boulevard de Constance, Fontainebleau, 77305, France, hernan.bruno@insead.edu, Hai Che, Shantanu Dutta

Reference price phenomenon is well-documented in the studies on consumer packaged industries, but it has not yet been studied in the Business-to-Business (B2B) markets. Transactions in B2B markets are intrinsically different from those in consumer markets because —for example— price is often decided during the transaction between buyer and seller. If buyers and sellers are using reference prices in their negotiated transactions, we expect reference prices to influence both the quantity demanded as well as the observed prices. In this paper, we study reference price effects in customer quantity demand as well as in price outcome in B2B market transactions. Using actual transactional data from a B2B market, we simultaneously model the pricing and quantity outcome of a transaction. We test the presence of reference price effects using different specifications of reference price (e.g. using previous experienced prices, using market prices, etc.). We find strong evidence that reference price effects exist in both the pricing and quantity setting. Particularly, we find that reference prices differentially affect the transaction outcome (price and quantity) depending on whether the price is higher or lower than the reference price (i.e. the price is perceived as a "gain" or a "loss"). In addition, we find that these results are moderated by the previous experience of the customer with the product and the frequency of interactions between the customer and the salesperson. The implications of these findings are discussed.

4 - Price Expectations and Purchase Decisions: Evidence From an Online Store Experiment

Sudipt Roy, Assistant Professor of Marketing, Indian School of Business, Gachibowli, Hyderabad, 500032, India, Sudipt_Roy@ISB.edu, Amar Cheema, Tat Chan

We study the formation of (a) price expectations that consumers form before being exposed to store prices (PRE), and (b) price expectations that consumers form for the next purchase occasion after being exposed to store prices (POST). A lab study with real purchases allows us to disentangle the effect of these two price expectations (PRE & POST) on the purchase decision. In the model we simultaneously estimate PRE and POST formation, and their impact on purchase decisions, using a latent class analysis to allow for consumer heterogeneity. The estimation results reveal that there exist two distinct classes. For the smaller (27% of the total) "forward-looking" class, POST (future expectations) affects purchase more strongly than the PRE (the reference point). This class is also more responsive in incorporating store prices in forming price expectations. In contrast, the larger (73% of the total) class is influenced more by PRE than by POST. We call the latter class "transaction-utility driven" because studies in a transaction utility framework show that consumers feel a psychological gain or loss due to the difference between current prices and PRE. This transaction-utility driven class is less likely to use current prices in updating the price expectations and its purchase decisions are significantly affected by promotion displays inside stores. Consumers are more likely to belong to the forward-looking class if the purchased item is one of their favorite brands. This study helps managers in forming appropriate pricing and promotion strategies when they want to individually target forward-looking or transaction-driven classes in specific retail situations.

■ FB05

Lower Level - Room 0320

Consumer Behavior: Decision-Making I

Cluster: Buyer Behavior

Invited Session

Chair: Nevena Koukova, Assistant Professor of Marketing, Lehigh University, 621 Taylor Street, Bethlehem, PA, 18015, United States of America, nkoukova@lehigh.edu

1 - Account Aversion: When More Debt is Preferred to Less

Scott Rick, Post-Doctoral Fellow, University of Pennsylvania, 3730 Walnut Street, 560 Jon M. Huntsman Hall, Philadelphia, PA, 19103, United States of America, srick@wharton.upenn.edu, Cynthia Cryder

Decades of consumer behavior research have focused on understanding why consumers over-spend with credit. Although we now have important insights into the psychological mechanisms that underlie the accumulation of credit card debt, consumer researchers have only recently begun to examine how consumers manage and repay existing debt (e.g., Stewart 2009). We add to this new literature by examining whether the extent to which debt is spread over multiple accounts (vs. concentrated in few accounts) influences feelings toward debt and repayment behavior. Consistent with the shape of the Prospect Theory value function, we predicted that consumers would prefer their debt to be concentrated, even when they would benefit (financially) by spreading. Two experiments supported our hypothesis. In the first experiment, subjects considered how happy they would be holding one of two sets of three credit cards (debt per card: $450, $0, $0 [concentrated set] or $200, $100, $100 [spread set]; all cards have the same APR). Although more debt was held in the concentrated set, subjects were significantly more happy with the concentrated set than with the spread set. In the second experiment, New York Times readers were asked how they would use a windfall ($100 or $1,000) to pay down two credit card accounts (Card 1 balance: $125 at 10% APR; Card 2: $1,025 at 20% APR). Regardless of the size of the windfall, normatively the entire windfall should be allocated to the high-interest account. However, when subjects could not come close to paying off their high-interest account ($100 windfall condition), they allocated a significantly smaller proportion of their windfall to the high-interest account than when they could (nearly) pay off their high-interest account ($1,000 windfall condition).

2 - Situation Dependent Mental Representations of Consumer Decision Problems

Benedict G.C. Dellaert, Professor of Marketing, Erasmus University Rotterdam, Burgemeester Oudlaan 50, Rotterdam, 3000 DR, Netherlands, dellaert@ese.eur.nl, Theo A. Arentze, Harry J.P. Timmermans

Depending on the contextual situation in which decisions are made, consumers may construct different mental representations of a given decision problem to help them interpret the situation and evaluate alternative courses of action. To investigate these mental representations and how they vary across situations, the authors propose a causal network structure that includes both abstract benefits and concrete attributes of alternatives. The structure allows for formal representations of how benefit and attribute activation may shift between situations, and of the impact of situation-specific requirements on consumers' evaluation of decision alternatives. Hypotheses derived from the framework are tested using data on consumers' mental representations of a complex shopping trip decision problem across four shopping contexts differing in terms of opening hour restrictions and shopping purpose. The results provide support for the proposed structure and hypotheses.

3 - Being Hot or Being Cold: The Influence of Temperature on Judgment and Choice

Hee-Kyung Ahn, PhD student, University of Toronto, 105 St. George Street, Toronto, M5S 3E6, Canada, hee.ahn05@rotman.utoronto.ca

In describing the distinction between cognition and affect, psychologists and behavioral decision researchers have often used thermal concepts such as "hot" and "cold" (Loewenstein 1996; Metcalf & Mischel 1999; Simonson, Carmon, Dhar, Drolet & Nowlis 2001). This metaphoric association between the two mental systems and temperature raises a number of interesting questions. This research investigates whether physical temperature can trigger different decision outcomes that theories of two interactive systems (e.g. hot/cool framework) predict. In addition, I demonstrate that not only an actual experience of temperature, but also temperature priming (e. g., pictures and words) can induce different decision outcomes. In this field study conducted in a spa, more participants in the cold room chose the cognitive-cold option (e.g., detective story movie, 3-year savings account and larger-later reward), while more participants in the hot room chose the affective-hot option (e.g., romantic comedy, 1-year savings account and smaller-sooner reward). The willingness-to-pay results showed that, in the hot room, participants were more lenient regarding their spending associated with each product category than in the cold room. In addition, the results in the field study were replicated in two laboratory experiments by using slideshows (i.e., winter vs. summer, experiment 1) or by exploiting the sentence scrambled task (experiment 2) as different priming methods.

4 - Fantasies and Expectations as Advertising Tools

Nevena Koukova, Assistant Professor of Marketing, Lehigh University, 621 Taylor Street, Bethlehem, PA, 18015, United States of America, nkoukova@lehigh.edu, Shweta Oza

Many times thoughts about future events, experiences or behaviors determine our present actions. For example, being optimistic about one's likelihood to lose extra weight may increase motivation and successful performance. An intriguing question to ask is whether thinking about the future leads to the same actions in the present, even when it is done using different thought forms. In this research, we take a goal-theoretic perspective to understand consumer choice and its underlying processes. In three studies we investigate the effect of form of thinking about the future (i.e., expectations and fantasies) on brand evaluations and behavioral intentions in the context of advertising messages. We demonstrate that valence moderates the effect of form of thinking about the future on brand evaluations and behavioral intentions. We also examine the underlying process and show that the effect is driven by the differential motivation to act induced by the different thought forms. Finally, we propose a boundary condition for the effect of form of thinking about the future on evaluations and behavioral intentions, and show that activation of implemental mindset moderates this effect.

■ FB06

1st Floor - Room 1210

Product Reviews/WOM

Cluster: Special Track: Interactive Maketing
Invited Session

Chair: Wendy Moe,Associate Professor, University of Maryland, 3469 Van Munching Hall, College Park, MD, 20742, United States of America, wmoe@rhsmith.umd.edu

1 - A Framework for Linking the Dimensions of Online Word of Mouth to Firm Performance

Shyam Gopinath, Doctoral Student, Department of Marketing, Kellogg School of Management,Northwestern University, s-gopinath@kellogg.northwestern.edu, Lakshman Krishnamurthi, Jacquelyn S. Thomas

With the rapid spread of the use of the internet and advancement in search engine technologies, online word of mouth, also called consumer generated media (CGM) has exploded. It is not surprising that some firms are wondering how to track and manage CGM and are being forced to re-examine the role of CGM on customer purchase decisions and customer-brand relationships. This research focuses on WOM in online communities (OWOM). Using a rich panel dataset of conversations of individual posters over time we investigate how the nature of individual posts relate to individual customer behaviors and resulting firm performance. We develop a customer level metric based on active and passive customer behaviors that are articulated by customers in online forums. We refer to this metric as our Buzz-Action Score. Given the individual level Buzz-Action score we derive two aggregate level metrics. We demonstrate the value of these metrics by showing how they relate to actual market performance.

2 - eWOM and Risk Return in Online Markets: A Joint Study on Seller Review and Product Review

Jianan Wu, jiananwu@lsu.edu, Jie Sun, Yinglu Wu, Yang Zhilin

One important source of information for consumers risk assessment in online shopping is third party interpersonal communications such as online word-of-mouth (eWOM). Particularly in consumer-centric online markets (e.g., eBay), eWOM is the solo source for consumers to determine their risk preferences. As such, eWOM is frequently credited to have significant impact on prices consumers are willing to pay and such impact is often moderated by consumers risk attitude. There are two major types of eWOM in online market: those on sellers or seller reviews (e.g., at eBay) and those on product or product reviews (e.g., at Amazon.com). The extant literature of empirically assessing eWOM impact focuses on either the seller reviews or the product reviews. Although the studies of seller reviews often address their impact on prices, those of product reviews focus on sales volumes (e.g., sales rank) instead. We develop a modeling framework in which we study the joint impact of both seller reviews and product reviews. We find that the joint impact of both seller reviews and product reviews are continent upon consumers risk attitude. We test our hypotheses using a primary data from a controlled experiment and a secondary data from online markets both internally and externally.

3 - Modeling the Helpfulness of Online Reviews

Susan Mudambi, Marketing Department, Temple University, 324 Speakman Hall 1810 North 13th Street Philadelphia, PA, susan.mudambi@temple.edu, David Schuff

Consumers are increasingly turning to online customer reviews as part of the purchase decision process for a wide variety of goods and services. Although many sites, such as Amazon.com, ask site users to indicate whether the review is "helpful" or not, the nature of review helpfulness is not fully understood. We develop and test a model of customer review helpfulness. An analysis of 1587 reviews from Amazon.com, and supported by qualitative research, indicated that factors affecting perceived helpfulness include review balance and review depth, with the product type playing a moderating role. For experience goods, consumers find balanced reviews more helpful than extreme reviews. For search goods, no difference in helpfulness between balanced and extreme reviews was detected. For both product types, review depth was positively associated with helpfulness, although this effect was stronger for search goods. We discuss the implications of our findings for both theory and practice.

4 - How Much Does a Good Product Rating Help a Bad Product? Modeling the Role of Product Quality in the Relationship Between Online Consumer Ratings and Sales

Wendy Moe, Associate Professor, University of Maryland, 3469 Van Munching Hall, College Park, MD, 20742, United States of America, wmoe@rhsmith.umd.edu

Many factors can signal product quality to consumers. In the e-commerce environment, consumers often look to user-provided reviews as a signal of quality. However, user-provided reviews have been shown to be subject to dynamics and social influences. As a result, they are often an imperfect signal of quality. Typically, one would expect that a higher quality product would both experience greater sales and receive more positive ratings, and the existing research seems to suggest that this is generally the case. But in a world where marketers strategically manipulate discussion forums and consumer reviewers are subject to social influences, posted ratings may not always reflect the true underlying product quality. In these cases, the relationship between ratings and sales is likely weakened. In this paper, I model user-provided product ratings and separate the effects of dynamics and social influences from an underlying, latent measure of product quality. I then incorporate this measure of product quality into a model of sales. The empirical results show that while the relationship between sales and ratings is strong for higher quality products, ratings have a minimal (if any) effect on sales for lower quality products. These results have significant implications for our understanding of word-of-mouth effects and how they may vary across product of different quality levels.

■ FB07

1st Floor - Room 1220

Social Influence: Modeling

Cluster: Social Influence
Invited Session

Chair: Gal Oestreicher-Singer, TAU, Ramat Aviv, Tel Aviv, Israel, galos@post.tau.ac.il

1 - The Design of Web 2.0 Communities: Trading off Differentiation with Network Size

Kaifu Zhang, INSEAD, Blvd de Constance, Fontainebleau, France, kaifu.zhang@insead.edu, Miklos Sarvary

Internet community - or 'web 2.0'- websites are becoming an increasingly important class of Internet applications. The success of IC websites depends crucially on user participation and social interaction. In this paper, we study the community building strategies of IC websites. Specifically, we ask the question whether sites should pursue an open community policy and attract diverse users, or maintain a 'specialist' community composed of similar users. Our analysis reveals that the generalist strategy is an offensive strategy to fight for market dominance, while the specialist strategy is a defensive strategy that secures market share despite the market dominance by a powerful incumbent. As such, sites' strategic choices are dependent on market history. Generalist sites may switch to the specialist strategy when they fail to achieve market dominance. We explain why the observed market structures are very different for different IC markets, and show how market structure is determined by the community building strategies of competing sites. Interestingly, we find that sites may deliberately induce industry shake-out even if they can coexist in the market. Industry shake-out may occur as either a prisoner's dilemma outcome, or an efficient outcome that maximizes joint profit. Our study supports a number of recent trends in the IC markets, such as the trends of industry shake-out and acquisition, as well as the 're-positioning' of many generalist IC websites.

2 - Modeling the Structure and Dynamics of Word-of-Mouth Dialogues

Kerimcan Ozcan, International University of Japan, Grad. School of Int. Management, Niigata, Japan, ozcan@iuj.ac.jp, Venkatram Ramaswamy

Whereas much of the early literature on word-of-mouth (WOM) emerged at the margins of theoretical frameworks analyzing some other phenomenon, more recent studies have started to take WOM as the focal construct of interest. Nevertheless, WOM itself is still a black box waiting to be unpacked to reveal its transports and inner mechanisms. What we need is longitudinal analyses of simultaneously recorded psychometric and linguistic data from WOM dyads, which in effect requires us to model word-of-mouth in terms of its dialogic properties. Hence, in an experimental setting of a multi-attribute decision-making task, we captured both linguistic and psychometric data from a full cycle of WOM, i.e. before, during, and after, with 120 dyads. Modeling the WOM process as a sequence of smaller stretches of topical exchanges, which themselves are structured into turns taken by participants, we suggest several directions for unlocking WOM processes. WOM dialogues open with higher level constructs such as attitude/intention for exploration of common ground or opportunity assessment. More important and favorable attributes are raised earlier and concrete constructs (favorability) are preferred over more abstract ones (importance). Introduction of extreme valued attributes for discussion can be instrumental as a rhetorical strategy. Long and intensively argued exchanges result in reciprocal adjustments. Thus, the internal mechanics and contents of a WOM dialogue are largely determined by the situational dynamics of the interaction, but regularities in openings and closings, topic management, turn-taking, argumentation tactics, correlation and hierarchy of constructs, and social exchange strategies can be used to chart the likely trajectories and outcomes of WOM dialogues.

3 - Willingness to "Pay" to Social Media Websites - Theory and Evidence from an Online Radio Website

Gal Oestreicher-Singer, TAU, Ramat Aviv, Tel Aviv, Israel, galos@post.tau.ac.il, Lior Zalmanson

Online content consumption has grown dramatically in recent years. One of the attributes of the media websites is the User Generated Content sites that is being voluntarily contributed and freely consumed. Another attribute is the social elements built into the website which enable and encourage the users to create a virtual community. Our research focus on a business model widely used in user generated content sites - the Premium Subscription, e.g., a monthly fee that brings functional, social and infrastructure benefits the subscribers. This paper study the interplay between content consumption, local social interaction (e.g., interaction with one's immediate friends), involvement in the global (site wide) social community and the consumer's willingness to pay for premium subscription. Using a unique dataset from an online radio station, that offers free content as well as a premium subscription, we are able to show, that after controlling for music consumption (the website's "structural" content) and demographics, social involvement and content contribution activities are associated with a significant increase in the willingness to pay for a premium subscription. Moreover, our results indicate, that global social activities such as group membership and journal posting are more highly correlated with the subscription decision then the local social involvement (as indicated by the number of friends) and the content consumption. Our work results represent new evidence of the importance of global social activities as a prediction variable in determining the consumers' willingness-to-pay for online content.

■ FB08

1st Floor - Room 1230

Decision Support Systems I

Cluster: Managerial Decision-Making and Decision Support
Invited Session

Chair: Alan Dybvig, Dybvig Consulting, 77 Adams Drive, Princeton, NJ, 08540, United States of America, alan@dybvigconsulting.com

1 - A Marketing Mix Decision System for a Consumer Good in a Cross-cultural Environment: A Fuzzy Goal Programming Approach

Debasis Pradhan, Assistant Professor, XLRI, C H Area, Jamshedpur, India, debasis@xlri.ac.in, Bijay Krushna Mangaraj

This paper introduces a decision system that can determine marketing mix of a consumer good for different markets. It has been argued that cross-cultural differences influence marketing mix decisions. Multiple numbers of decision criteria have been taken into consideration with respect to various resource and conditional constraints for the purpose. These criteria are conflicting, non-commensurable and imprecise in nature for which fuzzy logic based modeling has been considered for a suitable decision making process. An interactive fuzzy multiple-objective programming technique with a competitive-cum - compensatory aggregation operator has been utilized for the purpose. A case study has been taken in Indian context to highlight the applicability of the model in real life marketing situation.

2 - Relative Importance of Predictors: Effectiveness of Random Forests vs. Johnson's Relative Weights

Dimitri Liakhovitski, Senior Quantitative Consultant, MarketTools, 300 Campus Drive, Florham Park, NJ, 07932, United States of America, DL7631@gmail.com, Yegor Bryukhov

Marketers frequently need to determine relative importance of multiple predictors of an important dependent variable (DV), e.g., relative importance of product attributes in driving purchase intent/frequency, of drug characteristics in driving physician prescription intent, or of customer service aspects in driving customer satisfaction. This is frequently a difficult task because predictors are intercorrelated. A Monte-Carlo study was conducted to compare the effectiveness of two computationally efficient and publicly available methods for determining relative importance of intercorrelated predictors: Johnson's Relative Weights (a rigorous approach) and Breiman's Random Forests (a heuristic approach). Each technique was used to analyze 100 samples for each of 14,400 cells of the experimental design. The design was based on manipulating the following factors: number of predictors, correlation among predictors in population, population R squared or proportion of variance in the DV explained by predictors, mean of fl coefficients across predictors in population, standard deviation of fl coefficients across predictors in population, number of observations per predictor, and reliability of measurement. To define the "true" relative importance of predictors in each simulated population, we used Budescu's method. Budescu defines predictor importance in a theoretically meaningful way, as average increase in R squared associated with that predictor across all possible regression submodels. Predictor importances determined by Relative Weights and Random Forests were compared to true predictor importances in population. The advantages/disadvantages of each method as well as the implications of the results for practitioners of marketing science are discussed.

3 - Next Generation Response Modeling: Mixed Integer and Linear Programming

Alan Dybvig, Dybvig Consulting, 77 Adams Drive, Princeton, NJ, 08540, United States of America, alan@dybvigconsulting.com

Since its inception in 1970 with Little's seminal article, "decision calculus" models (viz. models with qualitatively-developed response curves) have employed a variety of mathematical programming techniques to solve. These have included dynamic programming, linear programming, integer programming and non-linear programming. However, a mix of integer and linear programming (MILP) has never been employed. Neither have MILP techniques been used by marketing science practitioners, more broadly, a literature search confirmed. This presentation will describe the implementation of response modeling functionality in a MILP modeling product (previously used for supply chain network design). The implementation replaces the traditional object function of contribution margin with profit which extends the application of response modeling to virtually all SIC codes. A variety of potential practitioner applications will be described as well as the results of a demonstration model.

■ FB09

1st Floor - Room 1240

Forecasting

Cluster: Marketing Methodology
Invited Session

Chair: Stefan Hattula,Research Assistant, University of Mannheim, Department of Marketing, L 5, 1, Mannheim, 68131, Germany, stefan.hattula@bwl.uni-mannheim.de

1 - Forecasting Television Ratings

Peter Danaher, Professor, Melbourne Business School, 200 Leicester St, Carlton, Melbourne, Vc, 3053, Australia, p.danaher@mbs.edu, Tracey Dagger, Mike Smith

The advertising media environment has changed enormously in the past 15 years. Network television has lost huge ground to cable TV, and the number of channels has soared from 4 to over 100. The Internet has taken a large share of media spend in the past 5 years and now mobile phone advertising is gaining a foothold. Print and radio media have lost ground to the new electronic media. Despite this state of flux in media, television, as a whole, remains the dominant player globally for advertising spend. Since television advertising time is purchased on the basis of projected future ratings, and ad costs have skyrocketed, there is increasing pressure to forecast TV ratings accurately. Previous forecasting methods are not generally very reliable and many have not been validated, but more distressingly, none have been tested in today's multichannel environment. In this study we compare 6 different forecasting models, ranging from naÔve to Bayesian model-averaging methods. We also compare two time periods from the same market, one from 1992-1995 and the second from 2004-2008. In the first time period there are only 3 dominant channels, while in the second period the 3 large channels remain, but a further 67 have been added to the lineup, making it more typical of today's viewing environment. We find that relatively straightforward regression models perform as well as more sophisticated models in out-of-sample forecasts. Models that use historical data naively, which are commonly used in industry, do not forecast as well as any econometric models. We find that using random effects for TV programs makes substantial gains in forecast accuracy, and that the use of program genre also improves forecasting and assists in competitive analysis of channel offerings.

2 - Modeling Long-term Sport-related Success - Implications for Sponsorship Decisions

Stefan Hattula, Research Assistant, University of Mannheim, Department of Marketing, L 5, 1, Mannheim, 68131, Germany, stefan.hattula@bwl.uni-mannheim.de, Maik Hammerschmidt, Hans Bauer

Sponsoring has become a widely used communication instrument. As such initiatives are often associated with intangible outcomes, marketing managers are under increased pressure to justify their investments in this area. Recent findings show that the financial success of the sponsoring firm resides with the success of the sponsored party over time. However, particularly in sport sponsoring, literature on modeling long-term success is scarce. Such a model could support managers in choosing optimal sponsorship activities. Our study develops a predictive model for sport-related success operationalized as the final league ranking of sport clubs at the end of a season. First, based on time-series data for 7,154 German soccer matches we calibrate an ordered logit regression model for forecasting short-term performance. The identified endogenous (built on past values of dependent variable) and exogenous drivers (built on information on situational factors) allow predicting the probability of a win, draw or loss in the next match. Second, by using the results of the regression model, we simulate the long-term performance over a whole season and consequently forecast the teams' final league rankings. Our model exhibits a high predictive validity with expected and actual final ranks being correlated with $r = .624$ ($p < .001$). Our results indicate that sport success is mainly driven by rational information (e.g., on team quality or the importance of a match for championship or relegation). Hence, intangible variables like media-pressure are overemphasized in explaining the success of sponsored parties. Our study provides actionable indicators that help firms to better anticipate both short-term and long-term success and hence to improve effectiveness of sponsorship engagements.

3 - Improving the Profitability of Direct Marketing: A Quantile Regression Approach

Xi Zhang, Lingnan University, Hong Kong, Department of Marketing & In't Business, Lingnan University, Tuen Mun, Hong Kong, Hong Kong - ROC, zxxchina613@hotmail.com, Jian Zhou, Geng Cui

Direct marketing is to target consumers who are most likely to respond. A number of target selection methods have been employed to select potential customers. These methods either only consider the customer response probability and ignore the profit issue or assume that the estimates of profit are homogenous across customers when considering the expected amount of profit. Furthermore, the traditional analytical techniques based on ordinary least squares (OLS) regression, which focus on the average customer, cannot examine the differences of various customer groups or account for customer heterogeneity in profitability estimates. This study applies quantile regression to predicting customer profit and seek to improve the profitability of direct marketing by focusing on the high profit customers who are the mostly to purchase. Quantile regression is not sensitive to outliers and can examine different quantiles of the profit distribution. However, parametric assumptions of linear quantile regression oversimplify the modeling problem as the shape of profit distribution is always unknown. Thus, this study also explores the nonparametric quantile regression using smoothing splines and the kernel method. The solution takes two steps: (1) estimation of probability of response by logistic regression and (2) estimation of upper quantiles in the distribution of profit given occurrence of response by parametric and nonparametric quantile regressions. By applying the laws of probability, the results from the above two steps are combined for response and profit forecasting. The findings can help direct marketers augment the profitability of marketing campaigns and have meaningful implications for solving target marketing forecasting problems given the constraint of limited resources.

■ FB11

2nd Floor - Room 2210

Competition: Competitive Response

Cluster: Competition

Invited Session

Chair: Debabrata Talukdar, Associate Professor, State University of New York at Buffalo, 215E Jacobs Management Center, State University of New York at Buffalo, Buffalo, NY, 14260, United States of America, dtalukda@buffalo.edu

1 - Immediate and Dynamic Competitive Reactions to Price Promotions

Wei Li, Erasmus University Rotterdam, Molukkenstraat 36 A, Amsterdam, 1094 BL, Netherlands, adele.lee@gmail.com, Dennis Fok

This study investigates the differences in immediate and dynamic competitive reactions to price promotions across brands in retailing markets. To this end a hierarchical Bayesian model is used. The first layer is an ordered probit model, which examines the immediate and dynamic competitive reactions of one brand towards the market; the second is a linear regression model, which associates the competitive reactions with prices and market shares of the brands involved as well as some category characteristics. A Bayesian method is used to estimate the parameters of the model. The model is applied to weekly sales data of 100 brands in 25 categories over 7 years. We find that there are only a small number of reactions in the market and even fewer dynamic reactions. However we still find many significant moderating effects on the competitive reactions. For immediate reactions, a defender is more likely to react to those attackers who have large market shares. However, if the defender's share is smaller than that of the attacker, the distance in market share is important - the greater the share disadvantage of the defender relative to the attacker, the less likely it is that the defender will react. Brands in categories that are characterized by a large size and strong concentration are more likely to react to each other's price promotions. While brands in categories with a large number of brands and very differentiated products are less likely to react. For dynamic reactions, brands who have a small price distance are more likely to react to each other.

2 - Acknowledging that an Entrant is a Close Competitor: Why Incumbents May Defer Defensive Responses?

Yu Wang, Assistant Professor of Marketing, University of Texas at Dallas, SOM, 800 West Campbell Rd., SM32, Richardson, TX, 75080, United States of America, yuwang@utdallas.edu, Nanda Kumar, Duncan Simester

Empirical studies reveal that many incumbents do not respond immediately when faced with a new competitor. We offer an explanation for why incumbents may defer a response by arguing that a response can exacerbate the competitive threat by legitimizing the entrant. The argument recognizes that customers are often poorly informed about whether an entrant's product is a close substitute. Incumbents who engage in a defensive response reveal that a response is necessary, implicitly acknowledging to their customers that it faces competition. Analytical findings suggest that an incumbent may initially defer a defensive response to avoid confirming that an entrant offers a legitimate substitute. However, once sufficient customers have learned about the attributes of the entrant's product, the incumbent will respond to enable it to compete more aggressively for these informed customers. The argument is quite general and applies to any type of defensive response. We test the out of equilibrium beliefs of the model experimentally. We find that the actions of the incumbent does in fact serve as a cue of the entrant's quality. Consumers tend to view the entrant's product more favorably when the incumbent responds with a price cut vis-a-vis the case when the incumbent does not respond. Interestingly, what appears to matter is whether or not the incumbent lowers price in response to entry; the magnitude of the price reduction does not have a significant effect.

3 - Cointegration Analysis of Brand and Category Sales - Implications for Long Term Strategy

Purna Chandra Padhan, Assistant Professor, XLRI, C H Area, Jamshedpur, India, pcpadhan@xlri.ac.in, Debasis Pradhan

The recent advances in times series analysis has wide variety of applications in marketing field. An attempt has been made, in this paper, to analyze the long run cointegration relationship between brand, category sales and competition in the industry of number of FMCG products in Indian markets. After conducting Johansen-Juselius cointegration test, we found that in the long run all the three variables are interrelated and follow some common trend. Results of Granger Causality tests have inferences regarding causality. The paper argues that results will vary with different cultures and solicits a relook.

4 - Effects of Multiple Line Extensions on Category Dynamics

Debabrata Talukdar, Associate Professor, State University of New York at Buffalo, 215E Jacobs Management Center, State University of New York at Buffalo, Buffalo, NY, 14260, United States of America, dtalukda@buffalo.edu, Vijay Ganesh Hariharan, Sri Devi Duvvuri

Consumer packaged goods (CPG) categories are continuously bombarded with line extensions from existing brands in a given category. These line extensions not only increase the presence of the "parent" brands introducing them, but also cause several simultaneous changes in the competitive dynamics among brands in the category. In this study, we classify line extensions into four groups based on their nature (novel or imitative) and type (national or store brand) of brand that introduce them. We investigate the category dynamics with a Hierarchical Bayes Vector Autoregressive (HBVAR) model. Our modeling framework allows us to accommodate and evaluate multiple structural breaks in time series data. Our analysis uses a comprehensive consumer transaction data set from 26 retail stores and covers about 20 CPG categories over a 275 week time period. Our results suggest several strategic insights for manufacturers and retailers with regard to category management.

■ FB12

2nd Floor - Room 2220

The Marketing-Finance Interface I

Cluster: Marketing and Finance

Invited Session

Chair: Xueming Luo,Eunice & James L. West Distinguished Professor, Associate Professor of Marketing, University of Texas at Arlington, UTA Department of Marketing, Box 19469, Arlington, TX, 76019, United States of America, luoxm@uta.edu

1 - New Product Alliances and Firm Stock Prices: Direct and Feedback Effects

Sudha Mani, Assistant Professor, University of Texas at Arlington, UTA Department of Marketing, Box 19469, Arlington, TX, 76019, United States of America, smani@uta.edu, Xueming Luo

Firms widely engage in new product alliances to mitigate the risks of product development and boost financial returns. However, prior research has rarely addressed the financial impact of new product alliances, let alone the possible effects of stock prices as market intelligence on future new product alliances. To test our hypotheses we use a rich dataset of 403 firms, 2,528 new product alliances between 1974 and 2004 in the biopharmaceutical industry. We specify a three-stage least squares (3SLS) estimator to simultaneously assess the effect of firm's stock return, stock risk, and new product alliances. We innovatively show that the benefits of product alliances may outweigh the hazards of opportunistic behavior because product alliances not only increase stock return but also decrease stock risk. In addition, these effects are heterogeneous across firm size and collaborative interdependence. Interestingly, we also find we find that firms with higher stock return and lower stock risk engage in more new product alliances in the subsequent period, thus highlighting some feedback effects emanating from stock prices to future product alliance strategy. We extend the marketing-finance literature by investigating the impact of product alliances on return and risk (DV) simultaneously in a systems view. Even though return and risk are interrelated, they provide independent information on the expected performance of the firm. Abnormal stock returns do not fully account for the stability of cash flows, and, therefore, examining stock risk is of interest to investors.

2 - The Impact of Marketing Alliances on Firm Value Creation: The Moderating Role of Network Characteristics

Vanitha Swaminathan, Assistant Professor of Marketing, University of Pittsburgh, Pittsburgh PA, vanitha@katz.pitt.edu, Christine Moorman

Prior research finds that the announcement of marketing alliances tends to produce no effect on firm abnormal returns in a high-tech context. This paper reexamines this issue and investigates whether the characteristics of a firm's network of alliances impacts the firm value created from the announcement of a new marketing alliance. Drawing on three theoretical rationalesónetworks multiply alliance benefits, networks facilitate alliance compliance, and networks signal firm and alliance quality, we investigate whether network centrality, network density, network efficiency, network reputation, and marketing alliance capability influence firm abnormal returns. We examine this question using an event study which examines announcements for marketing alliances in a high-tech industry. Results indicate, in general, that marketing alliances create positive abnormal returns for the firm. Further, the firm's network impacts the level and significance of these returns. Specifically, network efficiency and network density have the strongest positive impact when they are moderate; network reputation and network centrality have no effect. These results point to the greater role of relational network characteristics as opposed to size/status-based benefits. Further, marketing alliance capability, which reflects a firm's ability to manage a network of previous marketing alliances, has a positive impact on value creation. Hence, network characteristics can selectively serve as strategic mechanisms that influence the short-term abnormal returns accruing from new marketing alliances announced by the firm.

3 - Brand Portfolio Strategies and Risk to Firm Value

Liwu Hsu, Doctoral Student, Boston University, School of Management, Boston, MA, 02215, United States of America, liwuhsu@bu.edu, Shuba Srinivasan, Susan Fournier

The marketing discipline is increasingly interested in linking marketing activities to financial performance and firm value. This paper explores the effects of two types of brand portfolio strategies - Branded House and House of Brands - on shareholder value and risk. Previous empirical research has shown that a Branded House (House of Brands) architecture is correlated with higher (lower) values of Tobin's q (Rao, Agarwal, and Dahlhoff 2004). However, the implicit conclusion of this research in favor of out-performing Branded House strategies is difficult to reconcile with managerial theories-in-use governing choices between alternate portfolio strategies. It is generally accepted that if a company launches a new product under a Branded House strategy and the new product fails, the company risks damage to its established corporate brand. Similarly, if a public relations crisis befalls a brand within a Branded House architecture, all brands in the portfolio can be tainted. Investors are particularly sensitive to the events that threaten the corporation. Research to date has not considered risk when estimating portfolio strategy effects. We address this gap by assessing the effects of brand portfolio strategies on three components of shareholder value: levels of returns, systematic risk, and idiosyncratic risk. We develop a two-stage methodology. In the first stage, we adopt the sample from Rao et al. (2004) paper and estimate the Carhart four-factor financial model to assess the three components of firm value. In the second stage, we use an event study methodology to evaluate the impact of a crisis event on the three components of firm value. We expect that Branded House versus House of Brands strategies will have different impacts on firm value, systematic risk, and idiosyncratic risk. We expect that the Branded House strategy will be associated with higher levels of risk, particularly in the event of a crisis.

4 - Convexity and Abnormal Return

Alina Sorescu, Associate Professor, Texas A&M University, Mays Business School, 220 Wehner Building, 4112 TAMU, College Station, TX, 77843, United States of America, ASorescu@mays.tamu.edu, Haipeng (Allan) Chen, Sorin Sorescu, Michael Tsiros

We identify a systematic computational error due to the neglect of convexity, an error that can lead to suboptimal consumer choices in the marketplace. Specifically, we believe that consumers are unable to correctly evaluate the average of a random variable when the variable appears in the denominator as opposed to the numerator, behaving as if $1/E(X)$ is equivalent to $E(1/X)$. First we mathematically determine the direction and magnitude of the error. Then in two lab experiments, we find evidence consistent with the existence of the error, and that the error decreases when respondents become motivated to process the numerical information and when they are aided by a calculator. Finally, we find that the market value of U.S. stocks deviates from their fundamental value in a manner consistent with the convexity neglect error. The abnormal returns, however, are significantly less pronounced for stocks covered by analysts, suggesting a possible moderating role of expertise in the manifestation of the error.

■ FB13

2nd Floor - Room 2230

Brands and Branding: Brand Extensions

Cluster: Brands and Branding

Invited Session

Chair: Joseph Chang, University-College Professor of Marketing, Vancouver Island University, Faculty of Management, 900 Fifth Street, Nanaimo, BC, V9R 5S5, Canada, changj@viu.ca

1 - Competitive Branding Strategy for Product Lines

Vineet Kumar, PhD Candidate, Carnegie Mellon University, Tepper School of Business, Pittsburgh, PA, 15213, United States of America, vineetk@andrew.cmu.edu, Tansev Geylani, John Hulland

In this paper we explore the strategic factors that drive companies to create new brands for their products. We model a vertically differentiated duopoly market with each firm producing two products: a flagship product, which carries the established brand name, and a new product, which may carry the new or the established brand name. Our model takes into account the distinctions in consumers' perceptions of new products introduced under the (established) flagship brand name and new products introduced under the new brand name. Specifically, when new products are introduced under the flagship brand name, consumer perceptions of both the flagship and new products are affected (spillover effect). Using this framework, we examine the following questions: (1) Why do we observe some firms release new products under a newly created brand name whereas others continue to utilize their flagship brand names? (2) With vertical differentiation, how do the high quality firm's incentives to create a new brand name differ from those of the low quality firm? Our results show that when the quality difference between the flagship and new product is high and the spillover effects are large, this results in the creation of a new brand by a high-end producer. We examine both simultaneous and sequential product introductions as well as different representations of consumer heterogeneity and illustrate how these affect branding choices.

2 - Brand Hierarchies and Brand Performance

Douglas Bowman, Goizuete School of Business, Emory University, 1300 Clifton Road, Atlanta, GA, 30322, United States of America, Doug_Bowman@bus.emory.edu, Vijay Viswanathan

A brand hierarchy is a common form of brand architecture where brand relationships form a tree-like structure as in, corporate brand - family brand - individual or product brand, and possibly a brand modifier and/or brand ingredient. Strategic decisions include the breadth (horizontal brand extensions) and depth (vertical brand extensions) of the hierarchy, and what levels of the hierarchy to emphasize. We develop theory for how breadth and depth moderate the effectiveness of brand building efforts through advertising and carry out an empirical test using data on the U.S. automobile market. Sample results include our finding that advertising at each of level of the brand hierarchy has a positive effect on sales of the individual brand, and that this effect is moderated by the extent and nature of breadth and depth of brand extensions in the brand hierarchy. Our results show the importance of accounting for the breadth and depth of brand extensions in a brand hierarchy when studying brand performance. Insights from this study can better help marketers tailor their marketing activities in ways that better account for their specific branding strategies.

3 - A Real Options Approach to Valuing Brand Leveraging Options: How Much is Starbucks Brand Worth?

Francesco Baldi, University of Rome, Via del Castro Laurenziano, 9, Rome, Italy, fbaldi72@gmail.com, Lenos Trigeorgis

Building on the notion that brand is an intangible, market-based asset that can be leveraged with options to expand and extend the brand, we propose a new, real options-based approach to valuing brand equity that explicitly takes into account the staged process of developing and managing a firm's core (or parent) brand, the managerial flexibility incorporated in its life-cycle and the way brand value may be extracted if option-like characteristics of brand expansion and extension are recognized. Options thinking may enable capturing the value of marketing flexibility to leverage the brand which is not properly accounted for by traditional brand evaluation methodologies. The practical relevance of our approach is validated in the case of an actual business application where the experiential brand of Starbucks is appraised and its relative impact on share price properly determined.

■ FB14

2nd Floor - Room 2240

Cause, Charity, and Not-for-Profit Marketing II

Cluster: Marketing Strategy

Invited Session

Chair: V. Mukundadas,Professor and Director, Chandragupt Institute of Management Patna (CIMP), Patna, Bihar, 800001, India, vmknd.das@gmail.com

1 - Going Beyond Carrots and Sticks: The Effectiveness of Demarketing

Amir Grinstein, Dr., Ben-Gurion University, Beer-Sheva, Beer-Sheva, Israel, gramir@bgu.ac.il, Udi Nisan

Whether demarketing is an effective policy/social marketing tool (compared with economic incentives - "carrots" or regulations - "sticks") is still unclear and empirical studies on this topic are scarce. We study how demarketing was successfully employed in the context of water preservation, examining a unique natural experiment where no other policy tool was employed during the examined period and actual consumer behavior was observed. We further show that wealthier households, more educated ones and those with fewer children responded more positively to the demarketing effort but that in more educated families, children were actually agents of the behavioral change. Finally, we are able to compare the hypothetical effect of the price tool on consumer behavior to that of demarketing, demonstrating the effectiveness of the latter.

2 - Optimizing Direct-marketing Strategies for a Public Broadcasting Institution: An Adaptive Control Application

Elizabeth Durango-Cohen, Assistant Professor, Illinois Institute of Technology, 565 W. Adams Street, Chicago, IL, United States of America, edc@iit.edu, Pablo Durango-Cohen

The latest federal budget proposal calls for cutting in half the $400 million budget for the Corporation for Public Broadcasting, a nonprofit corporation that distributes federal money to public television and radio stations. It is too earlier to know if such a significant funding cut will be approved by Congress. What is clear is that public broadcasting stations will continue to rely on member contributions to raise an ever-increasing share of their operating budgets ó to mitigate against the dearth in funding increases of the past several years. Historically, stations raised money through frequent on-air drives, but as this need increased, stations realized that there were diminishing returns on increasing the number of drives. Moreover, there was a recognition that strategies consisting of tailored actions that targeted population segments could be more effective in terms of increasing revenues. To that end, we develop a quantitative modeling framework that: 1. Identifies member segments within the station's listening community based on demographic, socio-economic, as well as behavioral response data; 2. Categorizes potential marketing actions toward each of the segments, and their impact on funds raised; and 3. Determines the optimal policy to maximize long-run, expected net revenue raised. An important feature of the proposed work is that the framework can be applied to a broad range of marketing problems. The catalog mailing industry is a particularly important and closely-related example. Analytically, we develop/implement an instance of the Expectation-Maximization(EM) Algorithm to cluster the target population into homogeneous segments, and to optimize (revenue-maximize) the marketing strategy for each segment.

3 - Antecedents and Consequences of Corporate Societal Marketing: An Exploratory Study From India

V. Mukundadas, Professor and Director, Chandragupt Institute of Management Patna (CIMP), Patna, Bihar, 800001, India, vmknd.das@gmail.com, Saji K. B.

Most marketing practitioners have now gained implicit faith in the theory that what is good in the long run for society is good for business. This principle is in fact the basis on which most proponents of corporate societal marketing (CSM) expound their views. Other aspects of the CSM viewpoint are its emphasis on communication between the business and its environment in the form of feedback mechanisms, consultations and negotiations between competitors, consumers and government agencies. The validity of the CSM concept has been explored further in many of the contemporary researches, which have taken the notion of CSM further. The use of CSM appears to be on the rise in accordance with the increasing recognition of the vast potential of CSM programmes. In the present research that is exploratory in nature, the CSM is defined to encompass the firm-level marketing initiatives having at least one non-economic objective related to social welfare by employing the resources of the firm and/or its partners. For the exploration purpose, the research employed the case study method comprising of a series of seven carefully chosen organizational case studies from an emerging market like India. The present paper, which is an offshoot of the ongoing research by the authors, reports the antecedents and consequences of CSM. The paper is also successful in developing a theoretical framework for assessing the CSM process effectiveness, which could be further considered for empirical validation in the emerging market context.

■ FB15

2nd Floor - Room 2320

Customer Loyalty: Metrics

Cluster: Customer Satisfaction, Loyaly, and Lifetime Value
Invited Session

Chen Lin, Emory University, 1300 Clifton Road NE, Atlanta, GA, 30322, United States of America, chen_lin@bus.emory.edu, Douglas Bowman

1 - Like Lemmings to the Sea: An Investigation of Social Network Effects in Customer Churn Behavior

Michael Haenlein, Associate Professor, ESCP-EAP Paris, 79, Avenue de la Republique, Paris, 75011, France, haenlein@escp-eap.net

In recent years, several researchers have analyzed social network effects in new product adoption behavior. It has been shown that social contagion impacts individual-level adoption decisions (e.g. Manchanda et al. 2008) and several statistical approaches have been proposed to take account of such effects in innovation diffusion models (e.g. Valente 2005). Yet, not much is known about the existence of similar effects with respect to product disadoption. While research in the area of human resource management provides an indication that people follow their friends under certain conditions (Krackhardt and Porter 1986; Krackhardt and Porter 1985), no research has formally investigated this claim in the Marketing field. Specifically the cellular phone industry lends itself to such an investigation as customer churn represents a major challenge in this setting and improving the predictive accuracy of customer churn models has been shown to result in substantial financial gains (Neslin et al. 2006). My research intends to address this question. Using two datasets provided by a major player in the European cellular phone industry consisting of 8.200 and 3.200 actors respectively, I investigate whether customers are more likely to churn when one of their friends churned previously. Using a series of Cox regression models with time-dependent covariates, I show that customers are significantly more likely to cancel their contract when one of their friends churned before them. These effects remain robust when controlling for customer covariates (age, gender, martial status, socio-demographic segmentation) and other variables related to customer churn (service plan, acquisition channel) as well as different definitions of social proximity/ tie strength.

2 - Can Brand Equity Explain Excess Behavioral Loyalty?

Sang-Uk Jung, PhD Student, University of Iowa, 108 PBB S247, Iowa City, IA, 52242, United States of America, sanguk-jung@uiowa.edu, Tom Gruca, Lopo Rego

Brand strategists suggest that brands with high levels of brand equity enjoy higher levels of loyalty from their customers. This assertion poses an interesting measurement challenge. To properly understand the relationship between brand equity and loyalty, we need a benchmark to control for differences in brand loyalty due to factors other than brand equity. To this end, we test the relationship between brand equity and loyalty using the notion of excess behavioral loyalty. Excess behavioral loyalty is the difference between the actual share of category requirements (SCR) and the level predicted by a Dirichlet model fitted to brand level data. To identify the factors influencing this deviation, we first computed the deviations from the Dirichlet norm for each brand and then conducted a regression analysis of this brand-level data using independent variables such as market share, positioning (e.g. a niche or change of pace brand), purchase volume and retail marketing mix strategies (see Bhattacharya 1997). In our first study, we replicate the existing research using over 5000 brand-level observations for packaged goods brand sold in the U.S. across all retail outlets (i.e. grocery, mass, drug). We confirm that the results of prior research extend to a much larger universe of packaged goods brands. In our second study, we analyzed a subset of 1000 brands for which we have measures of brand equity from Equitrend. Overall, our results provide some interesting insights into the situations under which brand equity does and does not provide additional explanatory power beyond that provided by market share.

3 - On the Relationship Between Risk Aversion and Cross-category Brand Loyalty

Lutz Hildebrandt, Humboldt University Berlin, Spandauer Str. 1, Berlin, 10178, Germany, hildebr@wiwi.hu-berlin.de, Nadja Silberhorn

It is accepted knowledge that the brand is one of the key factors to generate profitability because brand loyalty is regarded as the strategically important condition to obtain a sustainable competitive advantage. The research on cross-category brand loyalty, however, until now has only been investigated in a few studies. We simultaneously inspect brand purchase behavior in more than one category, and determine whether it is possible to explain cross-category brand loyalty. Our focus lies therein to identify the drivers and their impact on cross-category brand loyalty. Some general statements on the relevance of cross-category brand loyalty may be derived from the theoretical research and empirical work on the factors which explain single-category brand loyalty. From the customer's perspective, the brand reduces the risk and simplifies the decision process. As multiple empirical studies found that consumers consider brand loyalty as the best risk reducing strategy for certain products, we especially investigate the impact of the consumers' personality trait of risk aversion on cross-category brand loyal purchase behavior. Single-category brand loyalty measures can serve as valuable starting basis when it is about measuring cross-category brand loyalty. When calculating a cross-category brand loyalty measure, there are the quantitative, temporal, and reference aspect of purchase to be decided on. Our data set covers purchase from various retail outlets and corresponding survey data on demographics, values, and attitudes. We conduct several regression analyses for food and non-food brands, and take the monthly shopping baskets as units of analysis.

4 - The Impact of Loyalty Program Introduction on Retail Chain Performance

Chen Lin, Emory University, 1300 Clifton Road NE, Atlanta, GA, 30322, United States of America, chen_lin@bus.emory.edu, Douglas Bowman

Despite the proliferation of loyalty programs in a wide range of industries, the impact of such loyalty programs on the sales performance of retail chain stores has long been difficult to assess. While attitudinal and behavioral marketing research show mixed supports for loyalty program effectiveness at customer level, there is little solid empirical evidence on how loyalty program influence store performance over time at program-specific level. This paper provides an empirical investigation of the impact of loyalty program introduction on retail chain sales and profits at the loyalty program level with cross-sectional and time-series panel data from Dominick's Finer Foods. It demonstrates that the payoff for loyalty program is worthwhile as loyalty program leads to higher profit margins for retailers with higher prices charged. Though the program itself may be associated with a slight decline in sales, the effect becomes more positive and significant after taking into account other marketing mix variables such as promotion, price and store brand. Furthermore, we propose two explanations, consumer price sensitivity and category-specific attributes, that may drive the change in sales and profit margins. We therefore track the evolution of consumer price elasticity and identify the profit-driving categories according to the penetration and frequency dimension.

Friday, 1:30pm - 3:00pm

■ FC01

Lower Level - Room 0210

New Products: Diffusion and Word-of-Mouth

Cluster: New Products and Product Policy
Invited Session

Chair: Philip Stern,Bangor Business School, p.stern@bangor.ac.uk

1 - Social Interactions Over the Life Cycle: The Adoption of the Toyota Prius

Noriko Kakihara, PhD Student, Stanford GSB, 938 Clark Ave,. Apt. 50, Mountain View, CA, 94040, United States of America, noriko.kakihara@gmail.com, Sridhar Narayanan, Harikesh Nair

We study social interactions over the lifecycle of a new product. Our main empirical question is how the effect of social influence changes with the diffusion of a product. We identify two opposing effects of social pressure on adoption. Adoption of some kinds of new products may be driven by a desire for exclusivity on the part of adopting consumers. If this ,Äúsnob effect,Äù is strong, adoption by others can slow diffusion by reducing the exclusivity of the product. Social interactions manifest as negative effects in such situations. For new products with significant quality uncertainty, purchases by others in the community can also raise awareness of product existence and serve as signals about true product quality. If this ,Äúquality updating effect,Äù is strong, social interactions can have positive effects on adoption. We hypothesize that snob effects are likely to play a larger role for early adopters, and that quality updating will play a stronger role for late adopters. We investigate these effects using a rich dataset containing transaction level data of purchases of the Toyota Prius hybrid automobile in California. Our data contains individual-level detail on the entire history of adoption of the Prius in the state. Our preliminary results reveal that social interactions are negative in the early part of the lifecycle, and are positive in the later part. The results are robust to spurious correlation, and control for common unobservables.

2 - Predictors of Viral Marketing: The Dominant Role of Behavioral Intention over Source Credibility

Dave Bussiere, University of Windsor, 401 Sunset, Windsor, ON, Canada, bussiere@uwindsor.ca

Consumers participate in word-of-mouth conversations to exchange information about products and services. These conversations allow consumers to pass on post-purchase and post-usage advice to other consumers so as to enhance future purchase decisions. Research has shown that these word-of-mouth conversations are important because they are viewed by the message receiver as credible - and therefore lead to a change in behavioral intentions. Viral marketing is an attempt by a business to spark the word-of-mouth dynamic through a marketing stimulus. By definition, it depends on the willingness of consumers to pass on messages that have been passed on by others. Based on exploratory qualitative research, we develop a model that explores the impact of message persuasiveness, source credibility and behavioral intention on likelihood of passing on a viral marketing message. Using an experimental design and structural equation modeling, we test the model. The model implies that while message persuasiveness and source credibility influence intentions to pass on the viral message, the impact of the received message on behavioral intentions dominates the model. The results hold for positive and negative viral messages. Gender issues are also analyzed. We discuss the implications of the model and highlight potential research.

4 - Factors Affect Use Diffusion of New Products with Network Externalities

Tomoko Kawakami, Associate Professor, Kansai University, 3-3-35 Yamate-cho, Suita, Japan, ktomoko@ipcku.kansai-u.ac.jp, Kazuhiro Kishiya

Along the advance of digital technology, relative importance of new products with network externalities has been enhanced. For those products, consumption doesn't end at the point of purchase but continues after purchase by adding complementary products and may stimulate another purchase of the updated version in future. Therefore, the authors focus on the use-diffusion dimension rather than the traditional adoption-diffusion paradigm only. The authors develop a conceptual model to investigate the determinants of use dimension after purchase based on the literature of Technology Acceptance Model (TAM), network externality and use-diffusion model. They also empirically test the model using the data about home video games collected from over 400 households in Japan. The results indicate the level of effects of such determinants as perceived usefulness, perceived ease use, indirect/direct network externalities, positive word of mouth on the use dimension defined by the rate of use and variety of the purchased new products.

4 - Predicting the Innovator

Philip Stern, Bangor Business School, p.stern@bangor.ac.uk, Malcolm Wright

Who are the members of the innovator segment for new products? Despite considerable research in this area, a striking characteristic of innovators was identified over 30 years ago. In work since often overlooked, Taylor (1977) found innovators tended to be heavy buyers of the parent category. This controversial result has major implications for both theory and practice yet has not, to our knowledge, been replicated. We therefore examine the extent to which heavy buyers dominate the innovator segment, adopting a research design that overcomes some of the limitations of Taylor's original study. Using a unique database we examine the behaviour of British General Practitioners in prescribing radically new drugs and me-too later entrants over an eight year period. As a control, we examine innovative purchases by households for three new packaged goods using panel data. We find regular patterns of innovation among heavy category buyers, although they vary somewhat between categories. More generally, the widespread extent of early purchasing challenges some of the assumptions which underlie the concept of an "innovator segment".

■ FC02

Lower Level - Room 0220

Channels: Strategy

Cluster: Channels
Invited Session

Chair: Tae Kyun Kim, PhD Student, University of Southern California, 3660 Trousdale Parkway, ACC 306, Los Angeles, CA, 90089, United States of America, taekyunk@usc.edu

1 - The Implications of Distribution Channel Structure for Product Information Disclosure

Hongyan Shi, PhD Student, UIUC, Room 350, 1206 S. Sixth St., Champaign, IL, 61820, United States of America, shi3@uiuc.edu, Yunchuan Liu

In this paper, we study the effect of distribution channel structure on product information disclosure. We show that under certain conditions, the manufacturer can be more likely to disclose its product information in a decentralized channel than in a centralized channel. Interestingly, consumer welfare and social welfare can be higher in a decentralized channel than in a centralized channel. In addition, the manufacturer might optimally not disclose its product information when the product quality is low but disclose when the product quality is high.

2 - Multi-brand Retailing and Comparison Shopping

Sridhar Moorthy, Professor, University of Toronto, 105 St. George St., Toronto, On, M5S3E6, Canada, moorthy@rotman.utoronto.ca, Yongmin Chen

This paper analyzes the incentives for multi-brand retailing created by comparison shopping concerns. We show that these incentives may be strong enough to justify distributing a product through a competitor's retail outlets in preference to your own.

3 - The Relative Power of Manufacturers and Retailers in the Auto Industry: A Generalized Nash Bargaining

Tae Kyun Kim, PhD Student, University of Southern California, 3660 Trousdale Parkway, ACC 306, Los Angeles, CA, 90089, United States of America, taekyunk@usc.edu, Sivaramakrishna Siddarth, Jorge Silva-Risso

Over the past decade, researchers in marketing and economics (e.g. Berry, Levinsohn, and Pakes, 1995; Sudhir, 2001; Petrin, 2002) have studied the US automobile market with models that ignore the distribution channel and the dealer network. We propose a generalized Nash bargaining model to study profit sharing between manufacturers and multiple exclusive retailers in the U.S. automobile industry. We estimate the model on automobile transaction data across multiple product segments and multiple time periods. The model explicitly recognizes that manufacturers in the automobile market have multiple tools to influence demand and profit, rather than price alone, which, if ignored, can bias estimates of price coefficients. The model will provide insights into the relative channel power of different channel members and seek to address the following specific questions. (1) How does retailer competition affect channel profit in the automobile industry? (2) How is profit shared between manufacturers and retailers and how does this change over time and across different automobile segments (e.g. premium mid-size sedan, SUV, truck)?

■ FC03

Lower Level - Room 0230

Advertising: Internet

Cluster: Advertising

Invited Session

Chair: Makoto Abe,Professor, Graduate School of Economics, The University of Tokyo, 7-3-1 Hongo, Bunkyo-ku, Tokyo, 113-0033, Japan, abe@e.u-tokyo.ac.jp

1 - The Effect of Advertising on Word-of-mouth

Sarit Moldovan, Technion - Israel Institute of Technology, Faculty of Industrial Engineering and Ma, Technion City, Haifa, 32000, Israel, moldovan@ie.technion.ac.il, Don Lehmann

This paper explores how different ad attributes generate word-of-mouth communication (WOM) about the ad and the advertised product. We use a set of studies, and different methods such as surveys, experiments, and field data analysis, to show that different ad characteristics (such as creativity, reliability, and sex-appeal) lead to different reactions to the ad, including WOM about the advertised product, WOM about the ad, and purchase intent. Study 1 used 400 participants that rated 21 print ads on 22 various characteristics of the ad and the product. These items converge into 5 ad factors and 2 product factors. Results indicate that different ad characteristics had different effects on product WOM, ad WOM and purchase intent. For example, ad creativity significantly increased the amount of WOM about the product and about the ad, but did not affect the valence of the WOM (positive or negative). While ad creativity had a small influence on purchase intent, this influence was found to be fully mediated by ad WOM. This result is consistent with previous studies that indicated that creativity does not affect purchase intent, but that creative ads lead to more attention, cognitive elaboration and recall, and suggests that people who viewed these ads have the will and ability to spread WOM about them. Study 2 has replicated these findings in a field study that followed actual viewing and forwarding of 53 online TV commercials. Results are consistent with Study 1. Study 3 is intended to replicate these results using online views and comments on the ad. Understanding how the ad can generate WOM may lead to a better understanding of the ultimate effectiveness of the ad.

2 - Intent and Interest: The Attention Economy of Search and Web Advertisement

Alexander White, PhD Student, Toulouse School of Economics, Manufacture des Tabacs, 21, Allee de Brienne, Toulouse, 31000, France, alexander.white@univ-tlse1.fr, Kamal Jain

Two types of online advertising, search and display, use strikingly different techniques to target and attract consumers. Despite these differences, both compete for a single scarce resource: user attention. We analyze the competition between search engines (SEs) and content-based websites (CBWs) to transform attention into revenue. We show that, since search results and web content are often complementary goods for a user, SEs and CBWs face two distinct coordination problems when designing their advertising strategies. The first is the classic problem of double marginalization among sellers of complements. The second potential problem is new: the need to efficiently allocated demands to a given user for her attention. Because of this second issue, the market for user attention exhibits surprising behavior when competition increases. In particular, heightened competition among a given type of site (SEs or CBWs) may cause social welfare to decrease by giving the other type of site incentive to make more inefficient demands for the user's attention. These coordination issues also give rise to an interesting set of contracting issues, which we analyze. While SEs and CBWs have incentive, ex ante, to commit to limit the extent of their advertisement, the feasibility of enforcing such commitments, ex post, is dubious. Our model predicts that, if technical means for enforcing such commitments cannot be developed, SEs will have incentive acquire content that competes with that of CBWs.

3 - Diagnosing Websites and Analyzing Visitors' Navigation Patterns From Log Files

Makoto Abe, Professor, Graduate School of Economics, The University of Tokyo, 7-3-1 Hongo, Bunkyo-ku, Tokyo, 113-0033, Japan, abe@e.u-tokyo.ac.jp

A well designed website allows visitors to accomplish their intended tasks effortlessly with smooth navigation. It can prevent viewers from needless site exit and facilitate repeat visits. Utilizing data from visitors' viewing patterns in log files, the first objective of this research is to obtain an easy-to-interpret site structure that can be used to diagnose the website. A method to visualize site structure in multidimensional space, in which visitors' navigation patterns are jointly plotted, is presented. The second objective is to predict visitors' next page transition or site exit, so that an appropriate action can be taken in real time (such as adaptive page customization) for marketing purposes. A model for step-ahead web page prediction is proposed, accounting for the difference in visitors' viewing patterns. The prediction model incorporates viewer heterogeneity by obtaining information from visitors who visited the same pages - an idea similar to collaborative filtering in recommendation engines. The empirical result with a test site shows that it is sufficiently accurate (50.3%) in predicting page transitions. Prediction of site exit was even better with 100% of the exit predictions and 90.8% of the continuation predictions being correct. The result was compared against other models, such as logistic regression, decision tree, and neural network, for predictive accuracy.

■ FC04

Lower Level - Room 0240

Pricing: Tariffs

Cluster: Pricing

Invited Session

Chair: Eva Ascarza,PhD Candidate, London Business School, PhD Programme, Regent's Park, London, NW1 4SA, United Kingdom, eascarza@london.edu

1 - Demand Uncertainty and Three-Part Tariffs

Ping Xiao, Assistant Professor, National University of Singapore, Department of Marketin, Business School, 1 Business Link, Singapore, 117592, Singapore, bizxp@nus.edu.sg, Tat Chan, Chakravarthi Narasimhan

In many industries such as wireless and internet services consumers are required to make the choice decisions before their actual demand is realized. In this paper we study the optimality of three-part tariffs, a pricing strategy commonly observed in industries, when consumers are uncertain about the amount they would consume when they make the choice decisions. We construct a model of a monopolist that faces heterogeneous consumers and explore when three part tariffs would be preferred over all-or-nothing and two-part tariffs. Without demand uncertainty, we find all-or-nothing tariffs can be as efficient as three-part tariffs in helping firm extract consumers' surplus. With demand uncertainty we find three-part tariffs dominate both all-or-nothing and two-part tariffs. It implies that demand uncertainty drives the optimality of three-part tariffs. Moreover, firm's profit under demand uncertainty increases with low type's probability of having a positive demand shock and low type's usage variations, while firm's profit under demand uncertainty decreases with high type's probability of having a positive demand shock. It might increase or decrease with high type's usage variations when high type consumers and low type consumers' probability of having positive demand shocks are in different ranges. When demand uncertainty exists, the firm makes higher profit. Meanwhile both high type and low type consumers pay more. However, high type consumers' surplus is higher, and low type consumers' surplus depends on the demand uncertainty parameters.

2 - Doing More with Less: Price Discrimination with Three-part versus Two-part Tariffs

Hemant Bhargava, Professor, University of California Davis, One Shields Ave, Graduate School of Management, Davis, CA, 95616, United States of America, hemantb@ucdavis.edu, Adib Bagh

Our research aims to understand factors that make a pricing scheme efficient at price discrimination. A salient aspect of price discrimination is how intensively should a firm price discriminate. Increasing the intensity increases profit, but this profit computation ignores the costs of tariff management, costs of tariff design, and costs of managing multiple customer segments (Dhebar, 1993). These costs increase with the number of offers and amount of segmentation, while profit gains exhibit diminishing marginal returns (Miravete, 2004). Therefore, the "true" optimal level of price discrimination is below that of the fully nonlinear tariff, and firms do limit the intensity of price discrimination in practice. For instance, telecommunications firms face millions of customers but differentiate between them with only a handful to few dozen tariff choices. A pricing scheme is one that is efficient at price discrimination if it expends lower tariff management costs to achieve some profit. We compare menus of two-part tariffs (2PTs) and three-part tariffs (3PTs), pricing schemes that are popular for telecommunications products, parking, on-demand computing services, health care plans, etc. We show that 3PTs are more efficient at price discrimination than 2PTs. A compact specification using 3PTs generates higher profit than a much larger tariff menu of 2PTs; it also has lower tariff management cost. In the extreme, even a single 3PT outperforms the optimal larger menu of 2PTs. This result yields the following insight: price discriminating through the use of an additional instrument - an independent dimension of heterogeneity—-is more efficient than price discrimination through the use of multiple offers that are subject to customers' self-selection constraints.

3 - Pricing Structure and Preferences: How does Tariff Structure Affect Consumption for Access Services?

Skander Esseghaier, Associate Professor, Koc University, CASE #173, Rumeli Feneri Yolu, Istanbul, 34450, Turkey, skander@ku.edu.tr, Raghuram Iyengar, Kamel Jedidi, Peter Danaher

Firms introducing new access services often grapple with the choice of a pricing structure: should they charge on the basis of usage only (per-use), or charge an additional access fee (two-part tariff)? Would usage behavior differ under different pricing structures? Economic theory suggests that, conditional on participation, access fees should have no impact on usage. Recent research in behavioral decision theory, however, indicates that people are sensitive to past fixed costs when making current consumption decisions. Therefore, this study investigates how the pricing structure of access services (per-use versus two-part tariff) impacts the utility users derive from usage. We develop a model where users' preferences depend on the pricing structure: the parameters of the utility function are allowed to differ across pricing structures. We account for the trade-off in expenditure between the focal service and other products by explicitly linking the consumption of the service with an outside good. This allows us to jointly model the "whether" and "how much" to consume decisions, thereby accounting explicitly for attrition. Using data from a field experiment, we find that the model parameters do depend on the pricing structure: for the same usage level, users in the two-part tariff condition derive a lower utility from consumption. Moreover, ignoring the impact of the pricing structure on users' preference structure overestimates the utility that a user in the two-part tariff condition derives from usage. This leads firms to charge higher than optimal access fees and generating higher levels of churn among users. Model fit is substantially better when the impact of the pricing structure on users' preference structure is accounted for as compared to when it is ignored.

4 - When Talk is Cheap: An Analysis of Subscriber Behavior Under Two- and Three-part Tariffs

Eva Ascarza, PhD Candidate, London Business School, PhD Programme, Regentís Park, London, NW1 4SA, United Kingdom, eascarza@london.edu, Anja Lambrecht, Naufel Vilcassim

In many service industries, firms introduce three-part tariffs to replace or complement existing two-part tariffs. While both two- and three-part tariffs have been studied in the extant literature, to our best knowledge there have been no empirical studies of customer choice and usage when both types of tariffs are on offer and it is unclear whether three-part tariff usage can be well predicted based on observed behavior on two-part tariffs. Given a unique data set from a mobile telephony operator, we investigate customer switching and customers' usage behavior under the two types of tariffs. We find empirically that customers who switched to a three-part tariff significantly "over-use" compared to their prior two-part tariff usage and attain a level of consumption that cannot be explained by a simple shift in the budget constraint or an explanation based on substitution between different types of calls. To account for this change in level of usage, we propose that the "free" minutes of a three-part tariff introduce an additional dimension of the service into the customer's choice and usage decisions. While on the three-part tariff, the customer learns about this dimension and adjusts her choice and usage behavior accordingly. Such an additional dimension of a three-part tariff, compared to a two-part tariff, is consistent with behavioral research that postulates that customers attach a special value to "free" products. Our results show that the proposed model reflects significantly better the actual usage behavior relative to a model that only adjusts for a change in the budget constraint: 88.2% of switchers have a greater satiation level on a three-part than on a two-part tariff. Our results have important managerial implications for pricing and tariff design.

■ FC05

Lower Level - Room 0320

Consumer Behavior: Decision-Making II

Cluster: Buyer Behavior

Invited Session

Chair: Gerald Häubl,University of Alberta, School of Business, Edmonton, Canada, gerald.haeubl@ualberta.ca

1 - Consumer Information Search: A Meta-Analysis

Moutusi Maity, Assistant Professor, Indian Institute of Management Bangalore, Rm 206, Block A, Faculty Offices, Bannerghatta Road, Bilekahalli, Bangalore, 560076, India, moutusi.maity@iimb.ernet.in, George Zinkhan

In this study, the authors synthesize previous empirical studies on consumer information search (number of studies = 65; total sample size (n) = 87,453; and number of r's = 323), through a meta-analytic review of information search literature. A total of 74 variables are uncovered (25 variables are reported more than 4 times each, while 49 variables are not reported less than or equal to 4 times each). Our units of analysis are bivariate correlations (25 r's) that are unaffected by the estimation procedure or model specification; hence, we seek systematic differences in the study characteristics. Moderator analyses (e.g., respondent type, study design, product type), on 11 variables that remain after homogeneity tests and weighted regression analysis, are undertaken. Our findings suggest that the moderators significantly affect the main effects and often there is a different direction to the relationship between the variable and information search in the context of the moderator. For example, our findings suggest that product type (search, experience, credence) moderates the effect sizes of various variables like cost (-0.0530 vs. -0.1059 vs. 0.2018), price dispersion (0.1113 vs. 0.1999 vs. 0.3944), and financial constraint (-0.0098 vs. 0.2537 vs. 0.0938) on information search are significantly different for the three types of products. Other such findings contrary to those accepted in extant literature are uncovered. We also find that a limited number of theoretical frameworks have been applied to provide explanation for the relationships between antecedent variables (28 variables) and information search (46 variables are provided only empirical support). The authors highlight important findings and offer implications for information search research and practice.

2 - Ambiguity Effect in Small Probability Promotions: Roles of Purchase Value and Promotion Budget

Qing Yao, Doctoral Student, Tsinghua University, Beijing, China, Room326,ShunDeBuildingTsinghuaUniversity, Beijing, 100084, China, yaoq.06@sem.tsinghua.edu.cn, Rong Chen, Ping Zhao

Companies may specify the promotion reward as a precise claim. In contrast, imprecise claims where there is an element of ambiguity are also widely used by retailers. Marketing managers may choose among varied levels of promotion rewards with different probabilities, with reward stated precisely or imprecisely. Scholars pioneered in this issue have not considered very low or small probability situations. In practice, to be attractive, the potential stimuli for probabilistic marketing incentives including sweepstakes, lucky draw and scratch cards are typically large, e.g. winning $1m. Instead, the associated probabilities are often very small, or even be perceived as zero. Theoretically speaking, findings associated with small probabilities are often not in line with 'normal' low probabilities. This paper investigates how consumers respond to precise versus imprecise promotion rewards at varied probabilities including small ones and whether the effect is contingent on purchase value and promotion budget. Our experiment shows that at a small winning probability, promotion with imprecise reward is more attractive than precise reward. For high value purchases, small probability promotion with imprecise reward performs better than 100% probability promotion with precise reward; however, the difference is shortened or even reversal for low value purchases. Furthermore, for high value purchases as promotion budget increases, ambiguity effect becomes stronger and imprecise rewards are preferred across different probabilities. The findings enrich the literatures on tensile versus precise prices, overweighting of small probabilities and decision making under ambiguity, and provide useful insights to managerial practices. The work is supported by NSFC (No.70872057 and 70632003).

3 - Predicting Consumer Choices - An Explication of the Status Quo Bias

Hanna Roemer, Doctoral Student, University of Mainz, Jakob-Welder-Weg 9, Mainz, 55099, Germany, roemer@marketing-science.de, Oliver Heil

How consumers adopt new products remains one of the most important research questions in marketing. In most consumer decision situations the consumer must choose between switching to a new product or stick with the current product, i.e. keep with the status quo. Numerous papers have shown that consumers express a surprisingly strong preference to remain in the status quo. Typically, this phenomenon is presumed to be reflective of loss aversion. Based on the notion that consumers use the status quo as a reference point, they weigh potential losses from switching larger than potential gains. Besides this cognitive miscalculation, the status quo effect is also dedicated to regret avoidance. Maintaining a status quo tends to be regretted less than changing it. Further, the status quo effect is a result of trade-off avoidance. Does the new product not clearly dominate the status quo, the product decision requires a trade-off decision, which is cognitively rather "expensive." This research condensed the aforementioned insights and results into the following research proposition. If a consumer sees no need for changing his current product but gets confronted with a new alternative, he only leaves this status quo, iff the new product alternative clearly dominates his status quo product. This implies that the new product has to perform at least as good as his current product on each and every subjectively relevant attribute and to perform better on at least one attribute. Note that if there is only one attribute that is perceived to perform less than the corresponding one of the "old" product, s/he will stay with his current product. This research proposition strongly simplifies the forecasting of many new product sales as our method shows.

4 - Behavioral Effects in Models of Consumer Product Search: The Importance of Local Influences

Gerald Häubl, University of Alberta, School of Business, Edmonton, Canada, gerald.haeubl@ualberta.ca, Benedict G.C. Dellaert, Bas Donkers

We introduce and test a behavioral model of consumer product search that augments a baseline normative model of sequential search by incorporating non-normative influences that are local in the sense that they reflect consumers' undue reliance on recently encountered alternatives. We propose two types of such local behavioral influences that, at each stage of a search process, can manifest themselves both in which of the products inspected up to that point is deemed to be the most preferred one (the product comparison decision) and whether to terminate the search at that stage (the stopping decision). The first of these influences is that consumers attend excessively to the attractiveness of the currently inspected product, at the expense of all others ("focalism"). The second proposed behavioral influence is that consumers overreact to the difference in attractiveness between the current product and the one encountered just prior to it ("local contrast"). Converging evidence from two experiments, which combine to guarantee both high internal and high external validity, provides support for the proposed behavioral influences. Our findings demonstrate that consumers' product comparison and stopping decisions in sequential product search are jointly governed by normative principles and by the proposed local behavioral influences.

■ FC06

1st Floor - Room 1210

Social Contagion and Epidemics

Cluster: Special Track: Interactive Maketing
Invited Session

Chair: Andrew Stephen, Assistant Professor of Marketing, INSEAD, Boulevard de Constance, Fontainebleau, France, AStephen05@gsb.columbia.edu

Co-Chair: Jonah Berger, Assistant Professor of Marketing, The Wharton School, University of Pennsylvania, Philadelphia, United States of America, jberger@wharton.upenn.edu

1 - Virality

Jonah Berger, Assistant Professor of Marketing, The Wharton School, University of Pennsylvania, Philadelphia, United States of America, jberger@wharton.upenn.edu, Katy Milkman

What about certain cultural items makes them spread like wildfire? Certain videos, websites, images, or news articles are more emailed than others, and everything from YouTube to the New York Times compiles lists of their most emailed content. But why do certain items make it to the top of the list while others do not? While some researchers have argued that cultural success is heavily random and depend little on the cultural items themselves (Salganik, Dodds, and Watts 2006), we demonstrate that characteristics of cultural items play an important role in their propagation and success. Just like birds with smaller beaks may be better able to take advantage of environment with smaller seeds, or giraffes with longer necks should be more likely to succeed when the only food is high up, particular aspects of online content may lead them to fit better with their environment and be successful. In particular, content must be shared across people to become viral, and using data on New York Times articles, we examine factors that lead articles to be emailed more. Even controlling for factors such as how long articles appear on the homepage, section where the article appears, or fame of the author, we show that characteristics of articles themselves have a large effect on diffusion.

2 - Contagion in Social Networks

Mark Newman, Professor of Physics, University of Michigan, Department of Physics & Center for the S, Ann Arbor, United States of America, mejn@umich.edu

Many things spread over networksónews, rumors, diseases, and so forth. The structure of social networks dictates patterns of spread and this talk will describe some recent work on understanding the connections between network structure and spreading processes. Of particular importance are the presence hubs in networks (nodes with many connections) and the phenomenon of transitivity (the friend of my friend is also my friend). By constructing mathematical models of the spreading process we show how these features can either enhance or reduce spread, and suggest ways in which systems can be tuned to improve the spread of information or reduce the spread of a disease.

3 - Tracing Social Influence Through Asset Transfers in a Virtual World

Lada Adamic, Assistant Professor, University of Michigan, School of Information, 1085 S. University Ave., Ann Arbor, MI, 48109, United States of America, ladamic@umich.edu, Brian Karrer, Eytan Bakshy

In the Virtual World Second Life, you can search for fun places to go on your own, or a friend or business can give you a landmark — a bookmark of location, that allows you to teleport directly there. If, upon arriving at that location, you would like your avatar to gesture a certain way, you need to retrieve that gesture from your inventory of assets. That gesture may have been given to you by a friend, or you may have purchased it from a store. Such transfer of assets and information presents a unique opportunity to compare diffusion via word-of-mouth to adoption resulting from broadcasts. By overlaying asset transfers over the network of friendship ties, we find that those assets spreading through the social network tend not to spread as widely, but do result in deeper cascades. This suggests the social networks are conducive to the transfer of niche products. We also examine the network properties of influencers, those individuals that many others adopt from directly.

4 - The Effect of Social Hubs on the Diffusion of Innovation

Danny Shapira, Hebrew University of Jerusalem, Jerusalem, Jerusalem, Israel, shabi6@phys.huji.ac.il, Jacob Goldenberg, Oded Lowengart

There has recently been great debate about the role and importance of social hubs, or individuals with exceptionally large number of social ties, in adoption processes. In this study we analyze the effect of social hubs on the penetration of new products. First, we evaluate the influence that hubs have on an innovation's diffusion dynamics. Next, we focus on the segment of hubs and explore the evolution of adoption rates in this segment and compare it with this process in the entire market. We show that both processes involve an acceleration effect: 1) hubs tend to speed up the growth process in the whole market and 2) the adoption rates inside the hubs' population are much larger than those in the rest of the market. Our results indicate that "seeding" hubs in a network increase the effect of word of mouth communication. This may offer a synthesis of the different views on social hubs role: when marketing effects (external forces) are lower the hubs influence on the NPV increases. In addition we show that the "influence area" of a hub, (number of ties) has a larger effect on the NPV than the strength of the ties. We use a two-segment case where individuals are either hubs or non-hubs and show that the ratio of hubs' degree to non-hubs' degree has the most significant impact on shortening life cycle - more than the probability of an individuals' neighbor to be a hub, the intensities of the external influence (e.g. sales promotion) or word-of-mouth communications. We examine our analysis using empirical data on the basis of a sample of 37,704 individuals who are part of a large online social network which offers variety groups of interest that share a common theme.

5 - Competing for Conversation: Social Epidemics and the Spread of Culture

Andrew Stephen, Assistant Professor of Marketing, INSEAD, Boulevard de Constance, Fontainebleau, France, AStephen05@gsb.columbia.edu, Jonah Berger

Social epidemics occur when a product, cultural item, trend, idea, or social movement "takes off" and achieves widespread prominence in a population or community. All social epidemics have to start somewhere, and in this paper we attempt to better understand some of the determinants of social epidemics in a marketplace setting by concentrating on the underlying social contagion process that drives epidemics. Specifically, we examine the interplay between characteristics of the items themselves that make them more or less inclined to spread between people, and characteristics of the social network of people to whom these items are introduced and among whom they can spread. Although past studies have examined these factors separately, we advocate looking at them together to help explain when social epidemics are more likely to occur. Also unlike past work, we consider the realistic situation where multiple items diffuse and "compete" for peoples' attention and, importantly, being chosen as conversation topics. We build a formal individual-level model of social contagion and product usage behaviors based on a set of psychologically realistic assumptions, and introduce a set of factors corresponding to different item and social network characteristics. We then vary these factors in a large simulation experiment in which cultural items are introduced into a social network of people who behave according to our model (with some heterogeneity). We find that the interplay between item and network factors plays a major role in driving the size and dispersion of social epidemics. We also find that although some factors make it harder for items to catch on, other factors can mitigate these problems and help epidemics occur "against all odds."

■ FC07

1st Floor - Room 1220

Social Influence: Consumer Behavior

Cluster: Social Influence
Invited Session

Chair: Xing Pan,University of California, Riverside, Anderson Graduate School of Management, 900 University Ave, Riverside, CA, 92521, United States of America, xing.pan@ucr.edu

1 - Using Influentials to Increase Health Campaign Efficacy

Kim Serota, Oakland University, Department Management and Marketing, School of Business Administration, Rochester, MI, 48309, United States of America, serota@oakland.edu, Franklin Boster, Christopher Carpenter, Kyle Andrews

The use of influential network members to facilitate the process of behavioral change is a long-standing goal of marketing and communication campaign designers. Although the methods for identifying influentials have been complex and costly, in a recent series of studies an efficient measure of three types of influentials was developed and validated. While previous self-report measures of opinion leadership have not measured the full scope of the construct, this scale identifies those who are well-connected, persuasive, and subject matter mavens. The current study examines the potential for utilizing individuals identified by the scale to increase the effectiveness of diffusion attempts. A Solomon Four Group design was employed in an experiment using the diffusion of health care information to modify existing health practices. The study was conducted at two universities; the first provided experimental participants while the other provided the control group. At the experimental university, a survey was used to administer the scale and identify key influentials (those with high scores on all three components are classified as 'superdiffusers'). Those identified as superdiffusers and willing to participate were trained in the objectives of the campaign and given information about the desired health behavior to be diffused (multivitamin use). Outcomes from the pretest-posttest panels and the posttest-only samples at both the experimental and control universities are compared in order to measure the relative effectiveness of a campaign when the information is disseminated solely by people with known opinion leader qualities. The study offers insights into the health marketing potential of the superdiffuser intervention.

2 - Perceived Awareness: A New Driver for Diffusion of Word-of-Mouth

Hikaru Yamamoto, Associate Professor, Seikei University, 3-3-1 Kichijoji-kitamachi, Musashino-shi, Tokyo, 180-8633, Japan, yamamoto@econ.seikei.ac.jp, Satoshi Nishida, Shinji Morioka, Shigetaka Yamakawa

Motivators of word-of-mouth (WOM) include various factors such as involvement levels, personal motives and a preference for certain types of information. In this research, we focus on the personal motives. A potential WOM sender feels a sense of superiority when he or she has information that only elite few know, thus has a motivation to send it to peers. However, when the topic is hardly known among the receivers, a WOM message may be recognized as irrelevant and may not be accepted. On the other hand, when the information is already a common knowledge, it has, of course, small value as WOM. Thus, a WOM sender is sensitive to the awareness level of the topic among receivers. The question is: when do people start and stop sending WOM? A WOM sender, in general, does not know the exact level of the awareness rate. He or she has only a perception of awareness levels. The goal of our study is to find upper and lower threshold of "gperceived awareness" for WOM communication behavior. Our study defines threshold as the proportion of the group that is aware of the product or service, and measure the threshold for WOM communication behavior. To achieve our goal, we collected (1) dyad of WOM sender and receiver, (2) data on whole network, and (3) perceived awareness rates of various products. Then, the threshold for WOM is estimated and diffusion process in the social network is examined. We believe the concept of "perceived awareness" is not only an important motivator which explains dynamics of WOM, but also a key indicator of consumers' expectation of a new boom often observed in marketing in practice.

3 - Social Effects on Customer Retention

Irit Nitzan, Tel-Aviv University, The Recanati Graduate School of Business, Tel-Aviv University, Tel-Aviv, 69978, Israel, iritnitz@post.tau.ac.il, Barak Libai, Eran Shir

Customer defection is of great concern to firms and the focus of many marketing studies, yet unlike the case of customer acquisition, its social aspects are largely unexplored. This study aims to assess the role of one's social network in the defection decision. A large-scale telecommunication data set is used to create social networks based on communication behavior among customers, and to follow customer retention behavior. Specifically, the following questions are addressed: (1) To what extent is defection a social phenomenon? (2) What are the individual and social network factors that affect the defection decision? (3) What is the unique social factor (WOM) when separating the economic-social aspects (network externalities)? and (4) To what extent is the social effect on retention similar to or different from that of product adoption? To answer these questions, Social Network Analysis is used to create the variables describing the individual social environment, and Survival Analysis is used to examine individual defection behavior.

4 - Consumer Information Processing and Decision Making Under the Influence of Online Word-of-Mouth: Experiments in a Virtual Art Gallery

Xing Pan, University of California, Riverside, Anderson Graduate School of Management, 900 University Ave, Riverside, CA, 92521, United States of America, xing.pan@ucr.edu, Thomas Novak

We study how consumers in social media environments integrate and process different information signals to infer product value and make choice decisions. In an interactive 3D virtual art gallery, we conduct experimental studies to examine the influence of brand label, product price, display position, and online word-of-mouth on product value perception and consumer choice. We expect that consumers using social media increasingly rely on word-of-mouth information to assess product value, and draw less inference from traditional information signals such as brand label, price level, and display position. This is because online-word-mouth is regarded as the most trustworthy and informative signal, so it can be most diagnostic in facilitating decision making. In contrast, brand label, price level, and display position, which are effective information signals from the product and seller in the conventional world, now have significantly reduced effectiveness in guiding consumers. With multiple sources of information, consumers now process them in a new hierarchical manner. When the information from online word-of-mouth is consistent with that conveyed by other signals, all information sources strengthen each other. However, when the information from online word-of-mouth is inconsistent with that conveyed by brand label, price, and display position, the latter will be significantly discounted or ignored. Interestingly, if the information from online word-of-mouth is equivocal in itself, consumers still perceive such information as diagnostic as it reveals heterogeneous consumer preferences and makes it possible to assess the fit of the product with personal interests. Our study contributes to the understanding of consumer choice behavior in social media environments and suggests changes to conventional marketing strategies.

■ FC08

1st Floor - Room 1230

Decision Support Systems II

Cluster: Managerial Decision-Making and Decision Support

Invited Session

Chair: Peter Boatwright,Carnegie Mellon Universtiy, 5000 Forbes Ave., Pittsburgh, PA, 15213, pbhb@andrew.cmu.edu

1 - Little's Law: A Useful Tool in Marketing?

John D.C. Little, Professor, MIT Sloan School, One Amherst St, Rm E40-165, Cambridge, MA, 02142, United States of America, jlittle@mit.edu

Little's Law is a theorem in queuing theory. In words, it says that under steady state conditions: (the average number of items in a queue) equals (the average arrival rate of items) times (the average time an item spends in queue). In recent years the same fundamental relationship has turned out to be useful in operations management but with a different vocabulary: (average work in process) equals (average output rate) times (average thru-put time). We start the exploration of marketing applications with a simple supermarket example.

2 - Where's the Beef? Estimating Inventory Position, Shrinkage, and Out-of-stocks

Peter Boatwright, Carnegie Mellon Universtiy, 5000 Forbes Ave., Pittsburgh, PA, 15213, pbhb@andrew.cmu.edu, Peter Stuettgen, Joseph B. Kadane, Sharad Borle

Stockouts are a major issue in the retailing industry, adversely impacting the core value proposition of grocery, drugstore, and other mass merchandisers, which is product assortment. Shoppers at larger grocers not only expect on certain trips to purchase numerous items at the store, but they often have specific items in mind that they expect the large format stores to have on hand. So the completeness of the variety of items ends up being a store choice variable for customers of large format retailers. At the same time, it is overly expensive for retailers to maintain sufficiently high inventory levels such that all items are always available. Estimates of out of stock levels in large format grocers are around 8%-10%. If all products in all time periods have this level of stockouts, most shoppers who purchase a large basket of items will be unable to find all of their preferred items at an individual store. Retailers can lose not only goodwill but revenues if shoppers take part of their business elsewhere. In order to manage inventories and assortments, inventory levels must be measured. Yet, retailers rarely track in-stock shelf position, due to the effort needed to collect this sort of data. While several papers have recently examined stockouts, models of stockouts have utilized datasets in which the occurrence of stockouts is known. In this paper, we propose a Bayesian model using only sales and shipment data to estimate the occurrence of stockouts. Allowing for unobserved product shrinkage of various types (e.g. spoilage, theft), estimation of inventory levels can require sophisticated inference. In this research, we specify a model to estimate stockouts, one simultaneously infers two related unobserved key quantities of interest: in-stock position and shrinkage. Due to the complexity of the data generating process, the resulting model is a system of equations that is non-trivial to estimate, although feasible with now-prevalent Bayesian modeling methods.

3 - Marketing Management Support Systems: Help That is Not Recognized?

Niek Althuizen, ESSEC Business School, Avenue Bernard Hirsch, BP 50105, Cergy-Pontoise, 95021, France, althuizen@essec.fr, Arnaud De Bruyn, Berend Wierenga, Gerrit Van Bruggen

Marketing Management Support Systems (MMSS) intend to improve decision making. To realize such improvements, it is necessary that they are used. Some authors argue that the use of MMSS in practice remains below potential (e.g., Lilien and Rangaswamy 2008). The Technology Acceptance Model (TAM) proposes that "perceived usefulness" is the most important driver of system usage. However, prior research suggests that decision makers may have difficulty recognizing the improvements in decision quality as a result of support system usage (Lilien et al. 2004; McIntyre 1982; Van Bruggen, Wierenga and Smidts 1996). This was confirmed by two earlier studies we conducted, involving different decision contexts and different MMSS. In both studies, we found no relationship at all between the objective quality and the perceived quality of the decision outcomes. This may hamper the use of MMSS in practice. In the present study, we test a comprehensive model of the factors that determine whether or not the support from a MMSS is recognized. Main elements of the model are the perceived usefulness of the MMSS and the link between its determinants, i.e., the perceived and objective outcomes of MMSS usage (decision quality and process efficiency). A lack of correspondence between the perceived and the objective outcomes will impair MMSS support recognition. We also suggest a number of potential moderators, such as task complexity and experience. The data are collected in an online decision support environment with MBA students as subjects. Their task is to solicit the most profitable donors for a charity organization with the help of a choice model. Based on the results, we provide recommendations for interventions that should lead to greater acceptance and utilization of MMSS.

■ FC09

1st Floor - Room 1240

Statistical Validation

Cluster: Marketing Methodology
Invited Session

Chair: Dan Putler,Associate Professor, Sauder School of Business, UBC, 2053 Main Mall, Vancouver, BC, V6T 1Z2, Canada, dan.putler@sauder.ubc.ca

1 - Determining the Type and Number of Clusters in Cluster Analysis: A New Approach

Dan Putler, Associate Professor, Sauder School of Business, UBC, 2053 Main Mall, Vancouver, BC, V6T 1Z2, Canada, dan.putler@sauder.ubc.ca, Tieshan Li, Charles Weinberg

Cluster analysis has long been used in applied marketing research. In practice, either hierarchical (e.g., Wards method) or partioning (e.g., K-Means) methods tend to be used by marketing researchers. Outside of marketing (particularly in the data mining area of computer science and bioinformatics) there has been an extensive amount of recent work done on developing new clustering algorithms (such as density based methods) that appear to be useful in marketing. These methods differ on the criteria used to form clusters, and thus the types of cluster shapes allowed. Typical questions that arise in the application of both these new methods and older methods (such as K-Means) is determining both the appropriate number of clusters and the clustering algorithms to use. A number of different so-called cluster validation measures have been developed to address these two questions. An issue that arises with all but one of the existing cluster validation measures is that they are derived based on assumptions concerning the appropriate shape of clusters (typically spherical or ellipsoidal), so they are biased against clustering methods that allow for arbitrary shaped clusters. Recently, Liu and Huang (2007) developed a cluster validation measure (Comp_Sepa) that eliminates this bias, however, the method suffers from other problems. To overcome these problems, we develop a new measure (called CpSp) and compare its performance to other cluster validation measures (including Comp_Sepa) using both simulated data and actual spatial point data for retail store locations for a Canadian city.

2 - When Statistical Validation Fails

Steven Shugan, Professor, University of Florida, Warrington College of Business Administr, Gainesville, FL, 32611, United States of America, Steven.Shugan@cba.ufl.edu

Researchers often seek to distinguish between valid models that assume actual relationships (structure) and incorrect models that assume incorrect underlying relationships. Scientific texts recommend testing competing predictions. However, ex post prediction is problematic, particularly with measurement error. Incorrect models can consistently out-predict valid models when prediction occurs on the same data as the estimation (i.e., over-fitting). Some split sample advocates recommend estimation on part of the sample (the in-sample) and doing predictive tests on the remaining hold-out or out-sample. However, others remain skeptical. We formalize this skepticism by constructing an incorrect model and proving it has a lower expected prediction error than the valid model in BOTH the in-sample and the out-sample. The reason is not a deficient estimation because we use the most popular estimation and allow every required condition to hold so these estimates should perform well. The reason is not a problematic structure because the actual structure is simply linear. The reason is not multi co-linearity, because the correct model has only one unknown parameter. However, the formal proof reveals the actual reason and suggests possible remedies.

3 - Merging Brand Equity and Product Feature Choice Experiments to Disentangle Variance Components

Christine Ebling, School of Marketing, P.O. Box 123, Haymarket, 2029 NSW, Sydney, Australia, christine.ebling@uts.edu.au, Jordan Louviere

Prior tests of the Erdem-Swait theory of brand equity (1998, JCP) focused on combining structural equation models with choice experiments, such as Swait, Erdem and Louviere (2006, IJRM). In this paper we combine a brand-anchored conjoint choice experiment (Louviere and Johnson, 1990, JR) with a traditional product feature choice experiment to test hypotheses about potential sources of variability between and within people and choice sets, as well as test hypotheses about brand equity constructs and brand/product choices. We compare several ways to estimate the statistical effects, such as WLS and HB, and we also compare sequential and simultaneous estimation. Our comparisons are more detailed and comprehensive than prior comparisons because we can estimate models for single individuals from both the brand-anchored conjoint brand equity choice experiment and the product feature choice experiment. This capability allows us to separate key variance components as well as test for cross-experiment effects of interest. We illustrate the approach using data sets for airline choices and audio equipment in Australia.

■ FC11

2nd Floor - Room 2210

Competition: Game Theory

Cluster: Competition
Invited Session

Chair: Hejun Zhuang,School of Business, University of Alberta, Edmonton, AB, T6G2R6, Canada, hejun@ualberta.ca

1 - Strategic Entry in Dynamic Markets

J. Miguel Villas-Boas, Professor, Haas School of Business, University of California, Berkeley, Berkeley, CA, 94720-1900, United States of America, villas@haas.berkeley.edu, Qiaowei Shen

In developing industries firms have to decide whether and when to enter the market depending on the state of demand, the existing firms in the industry, and the firm capabilities. This paper investigates a model of increasing demand, where firms decide when to enter the market anticipating the strategic behavior of other potential entrants, and the effects of entry on future potential entrants. The paper shows that the ability of early entry to deter future competitors' entry leads to firms to enter the market at a rate faster than demand is expanding. If firms enter the market depending on their fixed capabilities rather than depending on the firm circumstances at each moment in time, firms end up entering the market at a faster rate in the early periods. If there is the potential for many firms in the markets firms may be less likely to enter because of future entry if the uncertainty of firm entry results in few firms entering in the early periods.

2 - Investigating Horizontal Information Disclosure

Zheyin (Jane) Gu, Assistant Professor, SUNY Albany, 1400 Washington Ave., BA336, Albany, NY, 12222, United States of America, zgu@uamail.albany.edu, Ying Xie

This study develops a game-theoretical model to examine strategic decisions regarding horizontal information disclosure between two competitive firms offering products with asymmetric qualities. Recognizing that horizontal information disclosure causes polarization in consumer preferences, our investigation reveals different motives for different firms to disclose such information. The information disclosure the inferior product is driven by the margin-demand trade-off and the horizontal differentiation effect, whereas the information disclosure for the premium product is driven by the margin-demand trade-off and the quality advantage reclaiming effect. Interestingly, our analysis reveals partial free-riding between competitive firms, that is, only the firm with the inferior product has incentive to free ride the information disclosure for the premium product. On the other hand, the firm with the premium product is even more inclined to disclose information when the firm with the inferior product discloses too, than when it withholds information. Our results show that in the competitive marketplace, the firm with the premium product is more likely to disclose horizontal information than the firm with the inferior product. In addition, disclosing horizontal information allows firms to charge a higher price. Lastly, sequences in making information disclosure decisions influences equilibrium information disclosure strategy. In particular, both firms are more likely to disclose information when the firm with the inferior product decides on the information disclosure strategy first, than when the premium product decides the first. We also obtain empirical support for some of our theoretical predictions using sampling data from the pharmaceutical industry.

3 - Equilibria in a Hotelling Model: First-mover Advantage?

Amitash Sinha, University of Michigan, 701 Tappan St, Ann Arbor, MI, 48109, United States of America, amitash@umich.edu, Uday Rajan

We consider product positioning in a duopoly model. The consumer's net utility from a product depends on three factors: the location of product and consumer in product attribute space, a random utility term that captures idiosyncratic preferences, and the price of the product. Both firms choose their locations (i.e., product attributes), and then choose optimal prices. We study both simultaneous and sequential product positioning. Our model allows us to control the relative effect of the three factors on consumer utility. We find that for a first-mover advantage to exist in the sequential location game, price competition must be strong relative to the product attribute and idiosyncratic effects. In contrast, if price competition is moderate, and idiosyncratic and product attribute factors dominate consumer utility, the first mover is forced away from the market center and suffers a disadvantage. When the idiosyncratic factor dominates, price competition is weak and both firms locate at the market center. In the simultaneous location game, maximal differentiation occurs when price is the most important factor in determining consumer utility, while the tendency for minimal differentiation equilibria is stronger when price is less important and idiosyncratic factors dominate consumer utility. When product attribute factors are the important, there is an equilibrium with both players in the interior of the attribute space. By identifying the impact of price on consumer utility and equilibrium outcomes, our work extends a body of existing research (Rhee, 2006; Rhee, de Palma, Fornell and Thisse, 1992) that has focused on the impact of the importance of idiosyncratic factors on product positioning.

4 - The Effect of Online and Offline Distribution Strategies on Price Dispersion

Hejun Zhuang, School of Business, University of Alberta, Edmonton, AB, T6G2R6, Canada, hejun@ualberta.ca, Peter Popkowski Leszczyc, Yuanfang Lin

In contrast to early predictions of frictionless online markets, we still observe significant price dispersion even for homogeneous products. Reduced online search costs are expected to result in increased search and lower price differences, however, significant price dispersion remains and several studies have found the dispersion to be even higher than in traditional markets. This paper uses a game-analytical approach to study price dispersion in emerging and mature online markets. We model the optimal entry decision and pricing strategies of retailers, and consumer's optimal search rule, for consumers with different risk preferences. Different from previous research we construct a scenario with 3 retailers of different distribution formats (online retailers, offline retailers and multi-channel retailers) facing heterogeneous consumers with varying degrees of uncertainty for online and offline markets. Our study provides a rationale based on consumer uncertainty for the observed significant price dispersion in online markets which increases as competition intensifies. In a mature online markets (with low uncertainty), consumers with lower risk sensitivity search for the lowest prices, while consumers with higher risk sensitivities purchase from traditional stores. In emerging online market (with high uncertainty), no consumers will buy online, however, retailers still have an incentive to invest in the Internet as an advertising tool. Multi-channel retailers can charge higher online prices as consumers will benefit (reduced uncertainty) from the existence of their conventional stores. Online retailers, however, will need to differentiate from competitors; otherwise, the Bertrand competition with other online retailers derives profits equal to marginal costs.

■ FC12

2nd Floor - Room 2220

The Marketing-Finance Interface II and Panel Discussion

Cluster: Marketing and Finance

Invited Session

Chair: Xueming Luo,Eunice & James L. West Distinguished Professor, Associate Professor of Marketing, University of Texas at Arlington, UTA Department of Marketing, Box 19469, Arlington, TX, 76019, United States of America, luoxm@uta.edu

1 - Does Chatter Matter? Dynamics of Online Consumer Generated Content on Stock Performance of the Firm

Seshadri Tirunillai, tirunill@usc.edu, Gerard Tellis

Consumer generated content in the various online media provides valuable feedback on product market performance of the firm. Extant research on online word of mouth suggests different metrics have different impact on the performance of the firm. Prior research also suggests that the negative consumer voice could influence the firm's idiosyncratic returns, cash flow, and volatilities. In spite of these studies, there is no conclusive evidence for the influence of the various metrics of online content on the stock market performance of the firm. This study seeks to examine if there exists a direct relation between the online word of mouth and stock performance. If there exists a relation, what is the direction of causality? Further, we study the dynamics between the online content and stock returns such as the lag and long run impact. To this end, we use multivariate time series model to estimate the short and long term impact of the online word-of-mouth on the stock returns using online consumer content data across a five year period for six product markets and twelve brands collected from multiple websites. Analysis reveals that online word-of-mouth is strongly correlated to stock prices and stock returns. Among all the different metrics of word-of-mouth, volume (chatter) shows strongest relationship to stock returns. Negative metrics of online consumer generated content has a larger effect in the short run as compared to the positive metrics.

2 - Individual Brand Equity Outcomes as an Explanation for Firm Value and Risk

Vijay Viswanathan, Doctoral Student, Goizueta Business School @ Emory University, 1300 Clifton Road, Atlanta, GA, 30322, United States of America, Vijay_Viswanathan@bus.emory.edu, Douglas Bowman

The authors examine how the distribution of brand equity across individual brands in a multi-brand portfolio affects firm-level performance, specifically firm value and risk. The theory is based on the notion that the distribution of equity across individual brands affects future cash flows and thus the linkage between individual brands' equity levels and firm-level outcomes. The authors use a sample of 49 firms from the consumer packaged goods industry over a nine-year period from 1998 to 2006. After controlling for the effects of several important factors, the results show that a portfolio with predominantly low equity brands provides lower returns to the firm but with lower risk. On the other hand, a firm with a portfolio consisting mainly of high equity brands has higher value but also higher risk. However, such a firm could lower its risk by spending more on advertising. Insights from this study can help marketers build more efficient brand portfolios to achieve desired firm-level valuation and risk outcomes.

3 - To Make or Not to Make? Assessing Market Returns to Make or Buy Innovation

Abhishek Borah, University of Southern California, aborah@usc.edu, Gerard Tellis

Whether to make or buy has been widely researched and debated across disciplines such as strategic management, economics, marketing, and law (Geyskens, Steenkamp and Kumar 2006). However, comparing the payoffs of these alternate strategies for innovation has been difficult because of the difficulty of getting suitable data and identifying a suitable metric. The authors address this question by assessing abnormal stock market returns to make or buy events of firms during the initiation phase of a project and comparing the returns to events of buying innovations versus those to making innovation. They use the 3 Factor Model (Fama-French 3 factor) including the Carhart's momentum factor for assessing the returns on a sample of the top 36 publicly listed innovative firms according to Business Week/Boston Consulting Group's list of the top 50 innovative firms in 2008. The authors collect a unique dataset of 658 make and 423 buy innovation announcements by using sources such as Factiva, Capital IQ and company press releases for these firms for 5 years from 2002-2007. The authors find that the market rewards make innovation events and punishes buy innovation events. The authors find that make is significantly better than buy and the result holds even after controlling for factors such as firm size, research productivity and industry. Over the 5-day window surrounding the announcement, an average make event generates market returns of US$53 million whereas an average buy event leads to a loss of $3 million.

4 - Panel Discussion: Marketing and Firm Value: State-of-the-art, Future Research Directions, and Wall Street Implications

Moderator: Xueming Luo, Eunice & James L. West Distinguished Professor, Associate Professor of Marketing, University of Texas at Arlington, UTA Department of Marketing, Box 19469, Arlington, TX, 76019, United States of America, luoxm@uta.edu.
Panelists: Raji Srinivasan, Gerard Tellis, Dominique M. Hanssens, Don Lehmann

There is a growing consensus that marketing must be connected to finance. Both scholars and practitioners have long been concerned about the accountability of marketing expenditures. To rebuild confidence in marketing, researchers should analyze marketing's impact on stock prices in a new paradigm of assessing the value of marketing activities. Examples include (1) revealing the underlying processes and boundary conditions for the marketing-finance interface with financial analysts' earnings forecasts, coverage, investment recommendations, (2) evaluating the short-term , long-term, wear-in, wear-out effects of marketing actions on stock prices, as well as the feedback effects of stock prices on future marketing actions over time, and (3) employing more rigorous time-series models such as VAR, GARCH techniques. In so doing, future works can help build a more comprehensive and successful research agenda on the marketing-finance interface.

■ FC13

2nd Floor - Room 2230

Brands and Branding: Brand Identity

Cluster: Brands and Branding

Invited Session

Chair: Joseph Chang, University-College Professor of Marketing, Vancouver Island University, Faculty of Management, 900 Fifth Street, Nanaimo, BC, V9R 5S5, Canada, changj@viu.ca

1 - Measuring the Impact of Inter-attitudinal Conflict on Consumer Evaluation of Foreign Products

Nittaya Wongtada, Associate Professor, National Institute of Development Administration (NIDA), 118 Seri Thai Road, Klong Chan, Bangkapi, Bangkok, 10240, Thailand, nittaya@nida.ac.th, Gillian Rice, Subir Bandyopadhyay

In the modern era of globalization, consumers in most countries have the option to buy indigenous or foreign products. This often poses an interesting dilemma to consumers because they would like to buy locally-made products to support local industries, yet they may realize that foreign products can be superior to locally-made products in many respects, including quality, price and brand image. Thus, consumers' evaluation of foreign products can be shaped by general attitudes (e.g., consumer ethnocentrism), or country-specific attitudes which may be positive or negative (e.g., country of origin effect, animosity or affinity towards a country) or by brand-specific attitudes (i.e., special liking for a particular brand). Earlier researchers have studied how consumers' evaluation of foreign products is influenced by consumer ethnocentrism (see, for example, Shimp and Sharma 1987, and Swift 1989), country-of-origin effect (see, for example, Bandyopadhyay and Banerjee 2002, and Peterson and Jolibert 1996), and the animosity or affinity towards a country (see, for example, Ettenson and Klein 2005, and Oberecker et. al. 2008). While these studies offer valuable insights on the various determinants of consumers' evaluation of foreign products, very few studies investigate the combined effect of these determinants. In this study, we investigate the combined influence of the first two sets of attitudes (i.e., general attitudes and country-specific attitudes) on consumers' evaluation of foreign products. Using a large sample of Thai consumers, we demonstrate that their evaluation of American products varies at different levels of consumer ethnocentrism, a type of general attitude, and attitude towards the U.S.

2 - Does Coffee Help You Sell Paper Towel? Cross-effects of Sister Brand's Success on Brand Performance

JianJun Zhu, PhD Candidate, University of Iowa, S252 John PappaJohn Business Bldg, Iowa City, IA, 52246, United States of America, jianjun-zhu@uiowa.edu, Tom Gruca, Lopo Rego

CPG firms usually sell products across multiple store departments. The expansion of a product line may reflect consumer demands, e.g. creating a frozen or shelf-stable version of a perishable product. Multiple product lines may leverage economies of scale in manufacturing or distribution. Such firms may gain attention from retailers and increase their power in the channel. A question arises of how much influence overall product line breadth has on the success of individual products. For example, does a successful coffee brand actually help a company sell more paper products? Is the effect different if the sister brand were a non-food such as disposable batteries? Do firms who specialize in (non-) food products enjoy any advantage over those who sell in both types of categories? To answer these questions, we empirically study whether firms benefit from having multiple brands across different areas, i.e. food versus non-food categories. Using measures such as market share, penetration, loyalty and revenue premium, we model retail level brand performance as a function of a firm's performance in other categories. Our data include some 3,600 brands from over 700 firms sold in the grocery stores in the U.S. This study will provide generalizable insights into the effectiveness of firms managing products across multiple types of departments. Our findings have important implications for practicing brand managers and academic researchers in the brand management field.

3 - Perceived Entitativity of Family Brands

Joseph Chang, University-College Professor of Marketing, Vancouver Island University, Faculty of Management, 900 Fifth Street, Nanaimo, BC, V9R 5S5, Canada, changj@viu.ca, Yung-Chien Lou

Research in social cognition has recently paid a considerable amount of attentions to the influence of perceived entitativity on the impression formation of social groups. The concept of perceived entitativity was also just implemented to the research domain in family brand evaluations. Previous research results indicate that high (vs. low) entitative family brands are more favourably evaluated, and perceived entitativity yields asymmetric reciprocal effects on family brand evaluations, which parallel to the result of group perceptions in social cognition. As categorization is the basis of stereotyping and judgments, the research results also suggest that, as with social groups, family brands with various perceived entitativity are categorized differently, which leads to the asymmetric reciprocal effect on family brand evaluations. Therefore, this research examined the applicability of the eight entitativity measures in group perceptions for family brand evaluations. Nine measures of perceived entitativity including interaction, importance, outcomes, goals, similarity, duration, size, permeability, and the global measure of perceived entitativity are utilized to cluster 40 prominent family brands (e.g., Coca-Cola, Microsoft, IBM, etc.) selected from the Top 100 Global Brands of BusinessWeek. Seventy students participated in this research with laboratory settings. Research results indicate that these eight individual measures accounted for a substantial portion of the variation in entitativity, which subsequently classified these family brands into five different clusters. Based on the limitation of this study, three further studies are also developed, including a study of revision with better research design, a study examining the effect of self-identity on entitativity, and a study comparing cultural influences on perceived entitativity.

■ FC14

2nd Floor - Room 2240

Marketing of Fast Decay Products

Cluster: Marketing Strategy

Invited Session

Chair: Ashish Sood, Assistant Professor of Marketing, Emory University, 1300 Clifton Rd NE, Atlanta, GA, 30322, United States of America, ashish.sood@emory.edu

Co-Chair: Douglas Bowman,Goizuete School of Business, Emory University, 1300 Clifton Road, Atlanta, GA, 30322, United States of America, Doug_Bowman@bus.emory.edu

1 - The Role of Software Sharing in Indirect Network Effect Markets: Evidence on Competing Video Game Consoles

Vardit Landsman, Erasmus University, Rotterdam, Netherlands, landsman@few.eur.nl, Stefan Stremersch

Marketing researchers and economists have investigated the way in which the availability of complementary products (Software) affects the utility and sales of the corresponding core product (Hardware) in indirect network effect markets. Such prior research has used the size of the software catalog for a particular core product to represent software availability. However, interestingly, hardware firms that offer competing hardware platforms in such markets share software catalogs. The video game console industry is a case in point. We define catalog sharing as the extent to which competitive hardware catalogs overlap in terms of both title availability (sharing ëde facto'), and actual use of different titles by users of competing hardware (sharing ëde jure'). This paper examines the effect of catalog sharing on the market demand structure using an extensive data set from the video game industry.

2 - The Economic Value of Athlete Endorsers

Jeroen Verleun, Anita Elberse

Corporations pour large amounts of money into endorsement contracts with athletes. But what is the pay-off to such a strategy? Using an event study for a sample of 180 athletes and 347 endorsement deals, we examine the impact of a firm's decision to enlist an athlete endorser and any subsequent major achievements (such as a victory in a Grand Slam tennis tournament) by that athlete on (i) the firm's stock market valuation and (ii), for a subset of those athletes, sales of the endorsed brand and that of competing brands. We find that the stock market responds favorably to both types of events: a firm's stock market valuation increases with an average of 0.23% when it recruits an athlete endorser, and with an average of 0.14% each time one of its athlete endorsers achieves a major career milestone. Moreover, sales significantly increase following a firm's decision to employ the services of an athlete endorser - our results suggest that monthly sales for the endorsed brands increase with around 4% over the first six months, unlike sales for competing brands which do not change substantially - but we find little evidence that subsequent major athlete achievements further improve the endorsed brand's sales relative to rival brands' sales. We relate these effects to deal, athlete, firm, and fan characteristics. We conclude that athlete endorsements appear to be an effective marketing strategy, but that a careful matching of endorsers to brands is paramount.

3 - Optimal Pre- and Post- release Advertising for Short Lifecycle New Products

Prasad Naik, University of California-Davis, AOB IV, Graduate School of Mgmnt, UC Davis, Davis, CA, 95616, United States of America, panaik@ucdavis.edu, Natasha Foutz, Kalyan Raman

Advertising for short lifecycle new products, such as motion pictures, book publishing, and fashions, have unique patterns. For example, advertising often commences prior to movie releases, peaks at releases, and rapidly diminishes afterwards. Due to the short lifecycle and thus the narrow revenue windows of these products, the efficient allocation of billions of advertising dollars at both the pre-release and post-release stages is crucial for the success of these new products as measured by their profitability. A short lifecycle combined with the qualitatively different nature of the pre-release and post-release market for such products makes the determination of the dynamically optimal advertising policies a challenging problem and distinguishes it from prior work on optimal advertising policies for long lifecycle products. Prior studies have largely focused on examining the dynamic advertising quality and allocation of advertising budgets for mature product categories, with a few recent exceptions that have begun to examine advertising strategies for new products (e.g. Elberse and Anand 2005). In this research, we develop an integrated dynamic model of advertising and sales to model both the pre-release and post-release periods of a short lifecycle new product. We analytically solve the dynamically optimal pre- and post-release advertising spending problem policies. Furthermore we show how to determine the optimal pre-release spending horizon. We empirically validate our model in the context of the U.S. motion picture industry.

4 - Exploring Sales Patterns for Fast-Decay Product Categories

Douglas Bowman, Goizuete School of Business, Emory University, 1300 Clifton Road, Atlanta, GA, 30322, United States of America, Doug_Bowman@bus.emory.edu, Ashish Sood

Prior literature has identified the six key stages and turning points in PLC - commercialization, takeoff, introduction, slowdown, growth, and maturity (Golder and Tellis 2004). There are many other product categories other than entertainment products that this framework does not apply. Examples are videogames, software, concert tickets, books, movies, certain non prescription drugs, and fashion items. In all these categories, the standard stages and turning points of consumer durable goods are not evident. The underlying demand curve seems to be exponential instead of the bell curve. The takeoff occurs immediately or very soon after launch. Thus it may be impossible to differentiate between the commercialization and takeoff points. Sales decline substantially soon after the takeoff and there is no period of growth in sales. Even the period of maturity in sales is replaced by a period of near-zero demand of these products. As far as we know, there is no study on the critical stages and turning points of the PLC of products (and services?) with an underlying exponential demand/diffusion curve. This is the goal of the present project. We seek answers to the following questions: 1) What are the key stages and turning points in the PLC of products with fast decay in sales? 2) Are these stages predictable? Do these vary across different product categories and markets? 3) Is the sales decay smooth or do most products experience short spurts in sales? Are these spurts predictable? 4) What affects the size and frequency of these spurts? As a preview of our findings, we will show that sales curves tend to spike in the first few weeks and then monotonically decline after that. In some cases, there is a second or even third sales spike that occurs well after launch.

■ FC15

2nd Floor - Room 2320

Customer Loyalty: Programs

Cluster: Customer Satisfaction, Loyaly, and Lifetime Value
Invited Session

Chair: Andrea Godfrey, Assistant Professor, University of California, Riverside, Anderson Graduate School of Management, Riverside, CA, 92521, United States of America, andrea.godfrey@ucr.edu

1 - Loyalty Program Time Horizon: Effects of Policy Change on Consumer Behavior

Yuping Liu, Associate Professor of Marketing, Old Dominion University, College of Business & Public Admin, 2040 Constant Hall, Norfolk, VA, 23529, United States of America, yxxliu@odu.edu, Els Breugelmans

A loyalty program allows consumers to accumulate free rewards when they make repeated purchases with the offering firm. By doing so, it encourages repeated patronage and creates a customer lock-in effect. When designing a loyalty program, an important decision is the selection of an expiration policy with regard to accumulated points in a program account. This time horizon needs to be set in such a way that an average consumer feels motivated to participate and yet the financial liability from unredeemed points is minimized. Academic research on loyalty programs has been largely silent on this topic, either ignoring point expiration altogether or treating existing point expiration policy of the program under study as a given rather than as a design consideration. Bridging this gap in the literature, the current research compares the effects of an infinite vs. finite expiration policy. Using actual loyalty program data from multiple convenience store chains offering either a finite or an infinite time horizon, we study the effectiveness of such policies and how consumer reactions are moderated by their patronage levels. Furthermore, using a subgroup of stores that had completed a policy shift from an infinite to a finite time horizon, we examine how consumers respond to such a policy shift and identify the conditions under which such a shift may be beneficial to the firm.

2 - Impact of Loyalty Program Enrollment on Consumer Purchasing Behavior

Martin Boehm, IE Business School, c/ Serrano 105, Madrid, 28006, Spain, Martin.Boehm@ie.edu, Alberto Maydeu Olivares

Although evidence about the effect of loyalty programs on a consumer's purchasing behavior has begun to accumulate, the empirical research provides mixed results. This ambiguity may relate at least partly to data limitations which hinder the proper assessment of the effects of loyalty programs. A potential problem is that consumers who are already loyal may have a higher likelihood to enroll into a loyalty program. Simply comparing the behavior of loyalty program members with that of nonmembers thus cannot establish a conclusive causal relationship due to the so-called self-selection bias. Studying loyalty programs over time is one way how to alleviate this self-selection bias. So far, relatively few empirical studies have examined the longitudinal effects of loyalty programs. A recent study by Liu (2007) has advanced this area by examining dynamic post-enrollment effects on consumer behavior. The current research extends this work by studying the impact of loyalty program enrollment by comparing a consumer's before and after purchasing behavior. To determine whether the loyalty program enrollment affects a consumer's purchase behavior, we analyze variations in repeated data measurements. We formulate a piecewise regression model with random coefficients for a sample of 2036 consumers enrolling in the loyalty program of a major retailer. Our results indicate a strong positive impact on share of wallet during the month of enrollment. However, a sharp decrease one month after enrollment and a consecutive non-linear positive trend in the evolution of share of wallet after enrollment can be detected.

3 - The Impact of Relational Marketing Contacts on Customer Repurchasing Behavior

Andrea Godfrey, Assistant Professor, University of California, Riverside, Anderson Graduate School of Management, Riverside, CA, 92521, United States of America, andrea.godfrey@ucr.edu, Kathleen Seiders, Glenn Voss

As part of their customer relationship management programs, many companies target customers with customized messages, which we refer to as relational marketing contacts. Implementing relational marketing contacts typically requires significant financial investments in database systems, dedicated personnel, and direct marketing materials. Our research goal is to better understand the effectiveness of relational marketing contacts by investigating how customers respond to communications from companies they regularly transact with. We combine survey data with three years of customer purchasing records and contact history and use time-series analysis to examine the relationship between marketing contacts and customer repurchase over multiple periods. We examine how the number of contacts, the type of contact (e.g., reminders to visit, customer satisfaction inquiries, or targeted sales promotions), and the method of contact (e.g., phone, mail, or email) impact customer repurchase over time. We also determine how these effects vary across customers with different communication preferences and attitudes towards the company. The results indicate that the effect of relational marketing contacts on customer repurchasing varies across different types of contacts. The implication is that marketers can implement more effective communication strategies by managing contact frequency and type and matching the contact channel with customers' channel preference.

Saturday, 8:30am - 10:00am

■ SA01

Lower Level - Room 0210

New Products: Adoption

Cluster: New Products and Product Policy
Invited Session

Chair: Bryan Bollinger, PhD student, Stanford Graduate School of Business, 518 Memorial Way, Stanford University, Stanford, CA, 94305-5015, United States of America, bryanb1@stanford.edu

1 - Cumulative Timed Intent: A New Predictive Tool for Technology Adoption

Koert Van Ittersum, Georgia Institute of Technology, College of Management, 800 West Peachtree Street, NW, Atlanta, GA, 30308, United States of America, koert.vanittersum@mgt.gatech.edu, Fred M. Feinberg

Despite multiple calls for the integration of time into behavioral intent measurement, surprisingly little academic research examines timed intent measures directly. In three empirical studies, the authors estimate individual-level cumulative adoption likelihood curves - curves calibrated on self-reported adoption likelihoods for cumulative time intervals across a fixed horizon--of 478 managerial and 176 consumer decision makers, self-predicting whether and when they will adopt a relevant technology. A hierarchical Bayes formulation allows for a heterogeneous account of the individual-level adoption likelihood curves as a function of time and common antecedents of technology adoption. A special feature of the proposed model is that it allows the comparison of several well-known technology adoption models - theory of reasoned action (TRA), theory of planned behavior (TPB), technology acceptance model (TAM), and innovation diffusion theory (IDT) - which each support the data better than a base model including time as a lone covariate, but substantially less well than a model based on the calibrated individual-level adoption curves. Finally, using behavioral data collected during a two-year longitudinal study, empirical evidence is provided for the accuracy of cumulative adoption likelihood curves for predicting whether and when a GPS-based technology is actually adopted by 70 potential consumers. The results suggest great promise for future research on using and optimizing cumulative timed intent measures across a variety of application domains.

2 - An Experimental Choice Study of the Introduction of a New Product Feature on Attribute Preferences

Harmen Oppewal, Professor, Monash University, Department of Marketing, P.O. Box 197, Caulfield East, 3145, Australia, Harmen.Oppewal@buseco.monash.edu.au, David Waller, Paul Wang, Mark Morrison

An assumption made in many applications of stated preference modeling is that preferences remain stable over time and over multiple exposures to information about choice alternatives. However, there are many domains where this assumption can be challenged. One of these is where individuals learn about new products. This paper aims to test how attribute preferences as measured in an experimental choice task shift when respondents are exposed to new product information. The paper presents results from a study investigating consumer preferences for a new consumer electronics product conducted among four hundred respondents from a large consumer panel. All respondents received several choice tasks and were then able to read additional information about the new product. After this they completed an additional set of choice tasks. All choices were from pairs of new product alternatives that varied across eight attributes designed according to an orthogonal plan. The set of attributes comprised brand name, price, warranty, and various intrinsic product features including one feature that had not been available before in the market. Choice sets always included the option to choose a constant third, non-electronic product alternative. Using heteroscedastic logit modeling the paper analyses the shifts in attribute utilities and scale variances that result from the exposure to product information. The findings reveal how attribute utilities and scale variances vary across the before and after exposure conditions.

3 - Green Technology Adoption: An Empirical Study of the Southern California Dry Cleaning Industry

Bryan Bollinger, PhD student, Stanford Graduate School of Business, 518 Memorial Way, Stanford University, Stanford, CA, 94305-5015, United States of America, bryanb1@stanford.edu

New technologies are crucial to dealing with the problem of air pollution. However, even when cleaner technologies exist, the technology diffusion literature has demonstrated that diffusion of new technologies can be slow, even if the technology is superior to the status quo. The standard technology used in dry cleaning requires the use of perchoroethylene (perc), a toxic air and ground contaminant. There are alternative, environmentally friendly technologies available, but many cleaning facility owners are reluctant to purchase "green" equipment due to their uncertainty regarding the quality of cleaning and potential appeal to consumers. Dry cleaning equipment is a costly and durable good, so this uncertainty leads to barriers to technology adoption, as predicted by the theoretical literature. If it is possible to resolve the uncertainty behind the cleaner technologies, we can expedite the adoption process. This is the likely reasoning behind recent initiatives in California to provide dry cleaner owners with the opportunity to learn about green cleaning technologies at various demonstration sites. This paper analyzes the effectiveness of these initiatives and the broader government phase-out plans for perc by estimating a dynamic structural model of the replacement process for cleaning technology. The approach allows for the estimation of the underlying parameters that drive this process throughout the evolution of information and regulations in the industry. We can perform counterfactual analyses in which the effects of another state's regulatory regime can be analyzed for the California firms. The model can be adapted to other applications where regulatory involvement is necessary to facilitate the diffusion of a preferred technology.

4 - New FMCG Adoption

Trichy Krishnan, Marketing Faculty, NUS Business School, 1 Business Link, Singapore, Singapore, Singapore, krishnan@nus.edu.sg, Suman Ann Thomas

New product introduction in the grocery goods has not been studied in depth using a panel data. We develop an individual level model to track the adoption process of a new fmcg and use it to reveal interestign insgihts on how different segments of consumers differ in their adoption process and how this affects the major macro-level metrics used by fmcg companies. We show how ignoring the segment level information would mislead managers who fully rely on market level information. We also develop a macro-level model that heuristically sums up the individual level adtoption patterns.

■ SA02

Lower Level - Room 0220

Channels: Consumer Behavior

Cluster: Channels
Invited Session

Chair: Anita Basalingappa, Assistant Professor, MICA, MICA, Shela, Ahmedabad, Ahmedabad, 380058, India, anitab55@gmail.com

1 - Attitude of Shoppers and Retailers Towards Introducing a Common Market Identity

Anita Basalingappa, Assistant Professor, MICA, MICA, Shela, Ahmedabad, Ahmedabad, 380058, India, anitab55@gmail.com

This paper presents the attitude of shoppers and retailers towards using a common market identity card in place of loyalty cards. Common market identity is a single shopping identity card intended to replace individual retailers' loyalty cards. The moderating impact of apprehensions on convenience and utility of common market identity card across shoppers and retailers is explored through a survey using LISREL 8.5 version software.

2 - The Factory Outlet Channel: Opportunity or Threat

Gonca Soysal, Assistant Professor, University of Texas at Dallas, The University of Texas at Dallas, SM 32, 800 West Campbell Road, Richardson, TX, 75080, United States of America, gonca.soysal@utdallas.edu, Lakshman Krishnamurthi

In the last decade, factory outlets have gone through significant growth and change and have become an attractive channel for retailers. Once considered a dumping ground for unsold or defective merchandise, this channel has gained prestige as retailers started seeing it as a means to reach bargain-conscious consumers. Today, many retailers design and produce solely for the outlet stores and offer lower quality products at lower prices through this channel. This vertically differentiated channel can enable the retailer to achieve market expansion and increase sales. One potential concern the other hand is that, recently more and more consumers have been using multiple channels of the same retailer. Literature has mixed predictions about the behavior of consumers that make purchases through both the factory outlet channel and the original retail channel. A number of studies have suggested that in the retail context, multi-channel customers are more loyal and have higher expenditure levels than single channel customers. Brand extension research on the other hand, suggests that consumers' experience with the outlet channel (vertical brand extension) might be detrimental for the retail channel. Experience with lower quality products under the same brand name can result in reduced valuations and/or loyalty for the original brand and can make the consumers more value conscious reducing profitability. Using customer level transaction data from an apparel retailer we investigate behavior of multi-channel consumers through the factory outlet channel and the retail store channel. We aim to investigate to what extend the factory outlet channel synergizes with the retail channel and to what extend it cannibalizes the retail channel.

3 - What Drives Channel Choice in Grocery Shopping?

Junhong Chu, Assistant Professor, NUS Business School, 1 Business Link, Singapore, 117592, Singapore, bizcj@nus.edu.sg, Javier Cebollada, Pradeep Chintagunta

We use a unique dataset to study a household's decisions on where to shop, when to shop and how much to spend for grocery products in the same grocery chain's online and offline stores. We observe the same households that shop interchangeably in the online and offline stores and make a majority of their purchases in the chain. We relate a household's three shopping decisions to the household's need in each of its own top 30 categories, price promotions in each of those categories and their perishability. We allow all drivers of the shopping decisions to have channel-specific effects. We specify a multinomial probit model for store choice, a competing risk continuous-time proportional hazard model for trip timing, and a regression model for basket expenditure. We take a hierarchical Bayes approach to estimate the parameters of the proposed models. We find channel-specific effects of inventory levels and price promotions on all three decisions. Depletion of inventories of more important categories drives a household to the online store while depletion of inventories of less important categories drives a household to the offline stores. Price promotions accelerate visits to the offline stores, shorten offline inter-trip intervals and encourage cherry-picking trips to the offline stores, but do not affect online trip intervals and expenditure much. All these indicate the more planned nature of online shopping trips, which are influenced more by households' internal needs and less by the retailer's marketing activities. There is evidence of sorting of trips whereas households sort stock-up trips to the online store and fill-in trips to the offline stores.

4 - Adding Physical Store and Customer Channel Migration: An Individual Level Analysis of Demand Change

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We explores how adding a physical store changes an existing consumer's demand of a previously catalogue only company. We want to investigate how a consumer's purchase, cancellation and channel selection decisions are influenced by the added channel and whether the magnitude of the influence differs across customers. Applying Bayesian hierarchical multinomial probit model to 7 years' worth of individual level transaction data and obtain two major findings. Those who live closer the store shift most of their cancellation from remote channel to store. Those who live far from the store still conduct their cancellation remotely. In net, company-wide item cancellation probability is decreased after store opening. Store opening increases overall purchase probability for those customers who live close to the store. For these customers, we identify a direct positive effect of store opening on increasing purchase probability due to channel expansion. We also detect an indirect positive effect of increasing demand through ease of cancellation at the store; those who live close to the store are more likely to make a store purchase when cancelling an item. The most striking result is that people who live closer to the store are also more likely to make a remote purchase when cancelling an item than those who live farther away, indicating anticipation of easy return to the store facilitates remote purchase decision. Based on these findings we conclude that adding a physical channel has differed effect on the company's demand. In the area that's close to the store, increased store demand is more than lost demand in the remote channel, hence compensation effect trumps the cannibalization effect; whereas it's the opposite in the area that's far away from the store.

■ SA03

Lower Level - Room 0230

Advertising: Strategy

Cluster: Advertising

Invited Session

Chair: Moon Young Kang,PhD Student, University of Wisconsin-Madison, 975 Unviersity Ave, 4260 Grainger Hall, Madison, WI, 53706, United States of America, mkang@bus.wisc.edu

1 - Portfolio Construction: The Efficient Diversification of Marketing Investments

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Efforts in the marketing sciences can be distinguished between the analysis of individual customers and the examination of portfolios of customers, giving scarce theoretical guidance concerning the strategic allocation of promotional investments. Yet, strategic asset allocation is considered in financial economics theory to be the most important set of investment decisions. The problem addressed in this paper is the application of strategic asset allocation with the aim of improving the financial results of investment in direct marketing promotions. This research investigated the components of efficient marketing portfolio construction which include multiattribute numerical optimization, stochastic Brownian motion, peer index tracking schemes, and data mining methods to formulate unique investable asset classes. Three outcomes resulted from this study on optimal diversification: (a) reduced saturative promotional activities balancing inefficient advertising cost and enterprise revenue objectives to achieve an investment equilibrium state; (b) the use of utility theory to assist in the lexicographic ordering of goal priorities; and (c) the solution approach to a multiperiod linear goal program with stochastic extensions. A performance test using a large archival set of customer data illustrated the benefits of efficient portfolio construction. The test asset allocation resulted in significantly more reward than that of the benchmark case. The results of this study may be of interest to marketing researchers, operations research practitioners, and functional marketing executives. The social change implication is increased efficiency in allocation of large advertising budgets resulting in a new source of improved corporate performance.

2 - On the Tradeoffs Between Brand and Product Advertising

Chuan He, University of Colorado at Boulder, Leeds School of Business, Boulder, CO, 80309, United States of America, chuan.he@colorado.edu, Wilfred Amaldoss

Often firms offer multiple varieties within a product line. Firms can advertise each of its products in a separate product advertisement and it also has the option of advertising its entire product line in a composite brand advertisement. A key decision facing a multi-product firm is: what fraction of a firm's advertising reach should come from its brand advertising? We find that the monopolist favors brand advertising. The duopolists, on the other hand, prefer product advertising; however, they increase the emphasis placed on brand advertising as the diversity in consumers' taste increases or consumers' attention span decreases.

3 - Breaking Through Creativity Barriers: The Marketing Dilemma with Highly Creative Advertising

Scott Koslow, Associate Professor, University of Waikato, Private Bag 3105, Gate 7 Hillcrest Road, Hamilton, 3240, New Zealand, skoslow@mngt.waikato.ac.nz, Sheila Sasser

This paper offers insight regarding creativity barriers that may inhibit highly creative advertising. Marketers often yearn for greater creativity, while their agencies feel that clients fail to appreciate cutting edge work. This chasm creates a struggle or tension, yet there are measurable factors that illuminate this dilemma and offer greater understanding of the underlying organizational dynamics. A key distinguishing factor appears to be the client's willingness or openness to exploring ideas. Some open-minded clients insist on highly creative work from their agency, champion such ideas, and support such campaigns. Other cautious and risk averse marketers may resist such creativity, inhibiting the development of highly creative work. For example, copy-testing techniques may be used to improve advertising. Or it might be misdirected as a tool to control agencies by rejecting campaigns that do not fit the norm. Surprisingly, organizational politics are leveraged to push highly creative work through for approval in situations where the work is genuinely creative or where there is a strong level of client insecurity. Hypotheses are tested on a sample of 1125 advertising campaigns reported by 408 respondents from the largest New York and Detroit agencies. Results from this research confirm such effects and consider future implications.

4 - Strategic Advertising In A Recession: A Business Cycle Perspective

Astrid Keel, Assistant Professor, Auburn University, 415 W Magnolia Ave, Auburn, AL, 36849, United States of America, astrid.keel@auburn.edu

Marketing scholars provide a number of substantive recommendations to guide managers in effectively allocating marketing resources. In advertising, firms are recommended to increase advertising efforts during recessions. While the origins of this suggestion stem from the findings of various industry-sponsored studies, there has been little empirical academic research investigating the validity of these suggestions to date. We revisit the theoretical rationale for increasing advertising spending in economic downturns and explain firms' decisions to change advertising effort and media mixes during recessions. We develop a model for business-cycle advertising using the concept of cyclical comovement, to (1) identify the various advertising strategies firms engage in during economic downturns and (2) examine the strategies' long-term effect on market share. We test the model with quarterly advertising data for a ten-year period in sixteen industries across different media. Economy-wide advertising spending is further disaggregated to category and firm levels. The findings provide a better understanding of firms' advertising strategies during duress and the impact of marketing research recommendations.

■ SA04

Lower Level - Room 0240

Pricing

Cluster: Pricing

Invited Session

Chair: Aydin Alptekinoglu, Assistant Professor, SMU Cox School of Business, 6212 Bishop Blvd, Dallas, TX, 75275, United States of America, aalp@cox.smu.edu

1 - Consumer Choice and Evaluation of Product versus Price Bundles

Rahul Sett, Doctoral Student, Indian Institute of Management Ahmedabad, Dorm 10, Room 5, IIM A, Vastrapur, Ahmedabad, Gu, 380015, India, rahuls@iimahd.ernet.in, Abraham Koshy, Tathagata Bandyopadhyay

Price bundling, the practice of selling two or more separate products in a single package at a price discount, is a tool for cross selling a given product A to customers who only buy product B and vice versa. Cross selling works by the transfer of consumer surplus from the higher to the lower valued product in the bundle. The mechanism of transfer of consumer surplus assumes independence of demand of the bundled products. Some studies have, however, highlighted the strategic importance of relaxing the independence assumption, by considering various types of complementary relations between bundle components, (which do not necessitate the transfer of consumer surplus) that incentivize the customer vis-a-vis a price discount, by raising their reservation price for the bundle. Value is created through integration of the bundle components (product bundling) (Stremersch and Tellis, 2002). Empirical research on this issue is, however, scant. In this study we investigate how consumers choose and evaluate product bundles vis-a-vis economically equivalent price bundles. Specifically, we consider product enhancement and image enhancement product bundling strategies, proposed by Guiltinan (1987) for our study. We also investigate how framing the choice between a product and price bundle as an economic loss, vis-‡-vis a loss in quality (enhancement) affects choice and evaluation. Lastly, by studying how individual differences in goal orientation (promotion focus and prevention focus) affect choice and evaluation of product vis-a-vis price bundles, we contribute to the relatively scarce literature on process versus outcome oriented studies in bundling.

2 - Managing Seasonal Peaks and Inventorying Customers

Aydin Alptekinoglu, Assistant Professor, SMU Cox School of Business, 6212 Bishop Blvd, Dallas, TX, 75275, United States of America, aalp@cox.smu.edu, Steven Shugan

Seasonality often creates demand peaks during predictable seasons, months, days, hours and so on. During these peaks (e.g., Christmas at Disney), expected increased congestion can deter some strategic buyers - potentially lowering profits. Prior research often assumes only one type of seasonality. We relax that assumption and consider different types of observable peaks and derive the best strategies for each. For example, arrival peaks (or Ferry peaks) involve more buyers arriving during peaks because the service is more valued during peak periods. Here, compensating for congestion by lowering prices only encourages arrivals, aggravating congestion, so the optimal strategy requires higher prices but not exploiting increased arrivals with less service capacity. During Cost peaks (or Gasoline peaks) service providers suffer from higher costs (e.g., off-season vegetables or seafood). Optimal peak prices are either higher or lower depending on whether peak service capacity is controllable. Cross-selling peaks (or Popcorn peaks) allow additional revenue from cross selling or up selling (e.g., movie concessions during mealtimes). Optimal service capacity increases but not necessarily optimal prices. Finally, consumption peaks (or Happy Hour peaks) involve increased consumption (e.g., cantina liquor sales). Optimal prices always decrease but optimal service capacity does not. We provide the logic and intuition underlying each strategy.

3 - Antique Roadshow Redux: Evaluating Consumers' Appraisals of Credence Qualities

Matthew Nagler, Associate Professor of Economics, The City College of New York, NAC Room 5/144, Convent Avenue at 138th Street, New York, NY, 10031, United States of America, mnagler@ccny.cuny.edu, Bei Jiang, Fredi Kronenberg, Edward Kennelly

The paper develops and demonstrates empirical methods for evaluating consumers' abilities to appraise, and methods of appraising, credence qualities, defined as valuation-relevant product characteristics that the consumer is unable to observe even after purchase. Our study leverages the results of a proprietary laboratory analysis assaying the authenticity of 27 dietary supplement products claiming to contain black cohosh, a medicinal herb believed to help with menopause symptoms. We combine these data with retail prices and consumer-observable characteristics for a sample of 88 black cohosh single-herb and multi-herb SKUs across 20 retailers. Using a modified hedonic approach, we develop a weak test for determining whether authenticity is a credence quality (i.e. unobservable and valuation-relevant), as well as a measure of the goodness of fit of consumers' predictions regarding product authenticity. We also measure the share of the effect of observable characteristics on price attributable to their role in authenticity prediction. Results obtained using our methods have a range of applications in marketing strategy development, including pricing, product positioning, and product packaging. Other applications include liability determination and calculation of damages for product fraud litigation, as well as the measurement of welfare losses due to fraud.

4 - Optimal Hybrid Bundle Pricing Using Willingness-to-pay Measures from Conjoint Analysis

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Firms are increasingly offering hybrid bundles, defined as products that combine and generate revenues from both good(s) and service(s). Hybrid bundles span bothB2C and B2B industries. Anecdotal evidence suggests that choosing the right hybrid bundle to offer and determining its optimal price are critical to the success of the bundle. While pricing strategies for goods bundles have been extensively studied, those for services bundles have been explored much less. Hybrid bundles, which are fundamentally different from goods or services bundles, have received even less attention. Drawing from previous research on pricing and bundling for both goods and services, this research proposes an approach to derive optimal pricing strategies for hybrid bundles through the use of a conjoint analysis. We determine the willingness-to-pay for hybrid bundles that comprise a single good and one of several services through conjoint analysis experiment. By manipulating the services offered along with the nature of the services, we examine the effects of complementarity, independence, and service type on willingness-to-pay. We estimate an individual's willingness-to-pay using a hierarchical Bayesian choice-based conjoint analysis approach. Preliminary results show that complementarity and independence increase an individual's willingness-to-pay for a hybrid bundle. We use the estimates of willingness-to-pay to derive the optimal pricing policy for a monopolist through simulation. We examine the sensitivity of optimal prices to complementarity, independence, and heterogeneity in willingness-to-pay and derive implications for hybrid bundle pricing and the managerial decision on which hybrid bundle to offer.

■ SA05

Lower Level - Room 0320

Non-compensatory Choice

Cluster: Buyer Behavior

Invited Session

Chair: Ty Henderson, Assistant Professor, University of Texas at Austin, 1 University Station B6700, Austin, TX, 78712, United States of America, Ty.Henderson@mccombs.utexas.edu

1 - Efficient Choice Designs Under Non-compensatory Models

Qing Liu, University of Wisconsin-Madison, 975 University Ave, Madison, WI, 53705, United States of America, qliu@bus.wisc.edu, Neeraj Arora

We investigate efficient designs for conjoint choice experiments where consumers use non-compensatory screening rules in their decision process. This topic has great applicability to the design of field experiments where the choice tasks are complex and consumers tend to simplify the tasks through screening. Contrary to efficient designs for a compensatory logit choice model, we show that informative designs for a non-compensatory model tend to be non-orthogonal and do not obey the minimal level overlap criterion. We provide guidelines on the construction of efficient designs and investigate the tradeoff between estimation efficiency and the number of model parameters when there is prior knowledge on the probabilities of screening.

2 - Cognitive Simplicity and Consideration Sets

Rene Befurt, Associate, Analysis Group, 111 Huntington Avenue, 10th Floor, Boston, MA, 02199, United States of America, rbefurt@analysisgroup.com, John R. Hauser, Olivier Toubia, Theodoros Evgeniou, Daria Silinskaia

We develop and test methods to identify cognitively-simple decision rules that explain which products consumers select for their consideration sets. Drawing on qualitative research we propose disjunctions-of-conjunctions (DOC) decision rules that generalize well-studied decision models such as disjunctive, conjunctive, lexicographic, and subset conjunctive rules. Using synthetic and empirical data we compare methods based on cognitively-simple DOC-based rules to extant compensatory and non-compensatory rules. The methods to identify DOC-based patterns are Logical Analysis of Data (LAD), and an integer program that identifies the logical patterns that minimize false positive and false negative predictions (DOCMP). Both are constrained to be cognitively simple. The extant methods include four hierarchical Bayesian methods: compensatory, conjunctive, disjunctive, and linear. In addition, we use two machine learning methods that build on a compensatory and a linear approach. We also report limited results for subset conjunctive (both Bayesian and machine learning) and for decision trees. Synthetic data suggest that estimation methods matched to data-generating rules predict validation data best. Empirically we observe consumers' consideration sets for global positioning systems for both estimation and validation data. On validation data methods to identify DOC-based rules - which account for cognitive simplicity (and market commonalities) - fit significantly better than other rules. This result is robust with respect to sample (German representative vs. US student), measurement format, and presentation of profiles. Empirically, our analyses suggest that cognitively-simple DOC rules predict validation data well and imply different managerial insights.

3 - An SKU-level Dynamic Screening Model

Lin Bao, PhD Student, University of Wisconsin-Madison, 4260 Grainger Hall,975 University Avenue, Madison, WI, 53706, United States of America, bao1@wisc.edu, Ty Henderson, Neeraj Arora

An overwhelming majority of choice models in marketing are compensatory. Recently, non-compensatory choice models have experienced an increase in popularity. Gilbride and Allenby (2004, 2006) proposed choice models estimating heterogeneous conjunctive, disjunctive, EBA and economic screening rules. Kohli and Jedidi (2005) generalized the conjunctive and disjunctive decision rules. Also, Yee et al. (2007) used Greedoid language to help estimate non-compensatory models with large number of aspects. Most of the recent work on non-compensatory choice models has focused on conjoint analysis. By using household purchase panel data, we study three aspects of non-compensatory choice not studied before. First, we investigate household screening behavior involving a large number of alternatives over a long period of time. Households in a panel may make a choice from 50+ SKUs, while a conjoint experiment is typically limited to 3-4 alternatives per choice task. Also, unlike conjoint analysis where each respondent provides data for 10-15 choice tasks, SKU-level choice data exhibits significant variation in number of observations across panelists.

Second, consumers are likely to change their decision process over time, e.g. from screening a brand out to not screening it. These changes in screening rules may be caused by factors such as SKU availability. Third, consumers' screening behavior could cause manufacturers or retailers to alter their SKU assortment. Data from the frozen pizza category was used to study the above three aspects of non-compensatory choices. Our data spans from 2001 to 2004 and involves a large number of brands and SKUs. The results provide evidence supporting the dynamics in screening behavior and supply-side strategy shifts due to consumer screening.

4 - Non-compensatory Dyadic Choices

Ty Henderson, Assistant Professor, University of Texas at Austin, 1 University Station B6700, Austin, TX, 78712, United States of America, Ty.Henderson@mccombs.utexas.edu, Neeraj Arora

The use of non-compensatory decision rules at the individual level is well documented (e.g. Gilbride and Allenby 2004). How such decision rules operate among members in a joint choice context remains unknown. For example, when shopping for a new flat panel television, a husband may desire only a high-end brand with superior picture quality, while his wife may be unwilling to consider models above a certain price threshold - thus individual screening rules are in dyadic conflict. Existing group decision research assumes a compensatory joint evaluation, but it is unclear how preferences get merged when individuals are non-compensatory. This research provides a framework to characterize a non-compensatory evaluation process at the dyadic level. We investigate conflict in a joint decision process (e.g. Corfman and Lehman 1987) by building a model that formally captures different types of decision conflict at the attribute level. The non-compensatory choice model captures attribute preference extremeness that is a consequence of individual must have and can't have requirements and provides insight into attribute-level decision concordance and conflict. Eight mutually exclusive, collectively exhaustive dyadic evaluation strategies are presented and empirically investigated. Using a multi-phase nationwide study of 250 husband and wife dyads purchasing consumer electronics products, we examine the relative prevalence of these dyadic evaluation strategies and the implications of non-compensatory conflict resolution via threshold maintenance or consideration set expansion. We explore the extent to which these strategies are a dyadic trait, and the relationship between the outcomes and factors such as dyad welfare, decision efficiency, choice deferral and individual regret.

■ SA06

1st Floor - Room 1210

Strategy/Measurement

Cluster: Special Track: Interactive Maketing

Invited Session

Chair: Anita Elberse, Harvard Business School, Boston, MA, 02163, United States of America, aelberse@hbs.edu

1 - What, When, and How Much to Cross-Sell? Optimizing Multicategory Catalog Mailing

Morris George, Assistant Professor, Hankamer School of Business, Baylor University, One Bear Place #98007, Waco, TX, 76798, United States of America, morris_george@baylor.edu, V Kumar, Dhruv Grewal

Catalog retailers sending multiple catalogs, each promoting different product categories, is an emerging trend in the industry. However, the existing catalog mailing models do not address the issue of optimizing multicategory catalog mailing. We address this research gap by introducing a multivariate proportional hazard model (MVPHM) employed in a Hierarchical Bayesian framework, to jointly estimate the probability of purchase and purchase amounts in multiple product categories. The model integrates when and what components of a customer's purchase decision into how much component of a firm's cross-selling strategy using Genetic Algorithm based optimization. We use data from a US catalog retailer to build and validate the model. The optimal catalog mailing policy helps to achieve 46% more CLV from a sample of 10% of the households as compared to the current catalog mailing policy of the retailer. The results of the study have several implications for both practitioners and academics. While a key managerial implication is to apply the optimal catalog mailing policy to maximize Customer Lifetime Value (CLV), the academic contributions relate to applying a MVPHM model to a multicategory catalog retailing context.

2 - User Generated Content and Firm Stock Value During Financial Crisis

Xueming Luo, Eunice & James L. West Distinguished Professor, Associate Professor of Marketing, University of Texas at Arlington, UTA Department of Marketing, Box 19469, Arlington, TX, 76019, United States of America, luoxm@uta.edu

Can user-generated content (UGC) be related to firm stock performance during financial crisis? The present proposal tackles this under addressed question. In economic tough times, it is even more crucial to make sure that customers dont leave the firm. When burdened by negative UGC such as unfavorable reviews, ratings, or blogs posted by customers, firms may not enjoy a resilient customer base and often face a difficult challenge to pull up in down markets. Thus, if positive UGC can enable managers to gain customer insights, increase brand loyalty, and reduce customer acquisition and retention costs (all of which lead to higher firm financial value), then negative UGC may obstruct achieving these goals and thus reduce firm stock performance during financial crisis. However, the empirical literature on this topic is rather underdeveloped. Our study seeks to fill in this gap in the literature.

3 - Bye Bye Bundles: The Impact of the Unbundling of Music in Digital Channels

Anita Elberse, Harvard Business School, Boston, MA, 02163, United States of America, aelberse@hbs.edu

Fueled by digital distribution, unbundling is prevalent in many information industries. Take the music industry: until recent years, recorded music was mostly sold in bundlesin the form of albums with usually between ten and fourteen songs each. With the advent of online stores such as Apple iTunes, however, people can now choose to buy individual tracks rather than albums. What is the effect of this unbundling on sales? I examine this question in the context of the music industry, using data on weekly digital-track, digital-album, and physical-album sales for all titles released by a sample of over 200 artists. I analyze sales dynamics from January 2005 to April 2007a period in which the share of unbundled units jumped from roughly one-third to two-thirds of total unit sales. My modeling framework, a system of an album-sales and a song-sales equation estimated using the seemingly-unrelated-regression method, explicitly accounts for the interaction between sales for the bundle and its components. I find that record companies lose money as digital music downloading becomes more prevalent because music consumers switch from buying albums to cherry-picking their favorite individual tracks on those albums. A drop of around one-third in weekly sales per bundle is attributable to increased digital music downloading activity over the course of the study period. Overall, the study provides compelling evidence of the negative impact of unbundling on revenues in the music industry.

■ SA07

1st Floor - Room 1220

Social Influence: Internet I

Cluster: Social Influence

Invited Session

Chair: Hiroshi Onishi, Doctoral Student, Ross School of Business, University of Michigan, 701 Tappan Street, Ann Arbor, MI, 48109, United States of America, hohnishi@umich.edu

1 - Firm-sponsored Social Communities: An Empirical Analysis

Grant Packard, Doctoral Student, Marketing, University of Michigan (Ross), 701 Tappan St, R0400, Ann Arbor, MI, 48109, United States of America, gpackard@umich.edu, Adithya Pattabhiramaiah, Puneet Manchanda

Recent trends indicate that many firms have jumped on the online community bandwagon by developing firm-specific online platforms for social interactions. This is motivated by a belief that consumers who become part of the social interaction platform are likely to be more engaged with the firm and/or its products, leading to more frequent and higher value purchase behavior. Additionally, the hope is that these consumers will act as proponents for the firm's products and influence the behavior of other consumers. In this research, we leverage a unique data set to investigate these beliefs. Using panel data from a large North American entertainment products company (books, music, DVDs etc.), we compare and contrast the behavior of two sets of the firm's customers - those who buy online and engage with the firm-specific social community, and those who buy online but do not engage with the community. Based on our analysis, implications for firm investments in online social media are discussed.

2 - Modeling the Development of Online Communities

Yuanping Ying, University of Texas at Dallas, P.O. Box 830688, SM32, Richardson, TX, 75083, United States of America, yingyp@utdallas.edu, Dongling Huang

In the age of the Internet, online communities are flourishing. Some of the communities are initiated, maintained or sponsored by companies; some of them are not related to companies at all. Regardless of their connection with companies, these online communities have enormous impact on consumer purchase decisions. Therefore it is important for marketers to understand and monitor how a community develops over time; who are the influential members within the community; and etc. Past research on online communities has largely stemmed from the social network theory and typically takes a snapshot of the community, ignoring the dynamic nature of community development. We therefore propose a stochastic process model to address this issue, incorporating the effect of marketing actions such as advertising. We apply our model to an online consumer review community. Empirical analysis shows that our model not only predicts the growth of the consumer community well, but sheds important managerial insights into what marketers can do to facilitate such growth.

3 - The Death of a Relationship

Asim Ansari, Columbia University, 517 Uris Hall, Graduate School of Business, New York, United States of America, maa48@columbia.edu, Oded Koenigsberg, Florian Stahl

Users in online social networks ostensibly have relationships with a large number of other users. This has prompted many to comment that the nature of friendship in the online world is different from the offline world. However, even though a user may connect with many others, a majority of such connections become inactive after a period of time, and therefore, many relationships cease to exist. A challenge in modeling such connections is that death is unobserved, as the connection remains, but is not active. As a consequence, models that ignore the death of relationships overestimate the density of a network and can bias measures of user influence. We model interactivity among users in an online social network and explicitly account for unobserved relationship death via extensions of the well known Pareto-NBD and BG-NBD models to social network settings. We estimate our model on a network of musicians using hierarchical Bayesian methods and find that accounting for the death of relationships is beneficial for predicting future interactivity.

4 - Co-Evolution of Social Network Growth and Group Formation

Hiroshi Onishi, Doctoral Student, Ross School of Business, University of Michigan, 701 Tappan Street, Ann Arbor, MI, 48109, United States of America, hohnishi@umich.edu, Puneet Manchanda

The use of social networking sites to enhance marketing is a growing trend. A key requirement that marketers need to leverage users on their social networking sites is that the users remain engaged and exhibit high levels of activity on the site. Many social networking sites use the "group" function as a mechanism to increase engagement as groups allow users to self-select peers with common interests. In this research, we investigate the "stickiness" effect of the group function by measuring the propensity of group members to increase networking activity such as a number of connections and messages. In addition, group growth may also contribute to enlarge the entire network. Similarly, a growing network would impact the formation and membership of groups. We use a unique data set from a professional social network in which users build professional networks, exchange job search information and get recommendations. We examine the stickiness of network members by comparing the pre- and post group joining behavior. We also model the co-evolution between the network and groups. Preliminary results indicate that networking activity, such as the number of connections and messages, increases after site users join groups compared with the activity right before. In addition, group users seem to have the ability to attract new members from outside the network to join the same groups. We then discuss implications for managers.

■ SA08

1st Floor - Room 1230

Dynamic Models I

Cluster: Dynamic Models

Invited Session

Chair: Andrew Ching,Rotman School of Management, University of Toronto, 105 St. George Street, Toronto, ON, M5S3E6, Canada, aching@rotman.utoronto.ca

1 - Exploring Revenue Concentration Within the Firm Using an Agent Based Simulation

Keith Hermiz, IBM, 511 Chester Road, P.O. Box 97, Grafton, VT, 05146, United States of America, khermiz@us.ibm.com

Many, if not most, firms experience some degree of revenue concentration across their customer base. Extraordinarily high levels of revenue attributed to a small number of customers can be viewed as a risk to the ongoing viability of the firm and requires appropriate warnings in financial audits. The question arises, is revenue concentration a natural consequence of a firm's operating environment or is it driven by certain behaviors that might reflect the firm's marketing strategy? In the latter case, if one were to understand the dynamics that lead to increased revenue concentration it could potentially be mitigated. While revenue concentration across firms has been widely studied, revenue concentration within firms has received far less attention, if any at all. In this paper we will use a simple buyer-seller agent simulation to explore the emergence of revenue concentration in the business-to-business environment. We have in mind the information technology industry as we model buyers and sellers, who transact in random amounts using a variation of a sealed bid auction. The willingness of buyers to buy and sellers to bid is moderated using a series of utility functions that capture the relative size of transactions, buyer's budgets and seller's capacity to bid. The results from our simulations suggest of that some degree of revenue concentration in sellers is unavoidable but can be exacerbated if the buyers and sellers transact based on each other's relative size or if the seller shows bidding restraint relative to their existing capacity to bid. Options to mitigate concentration and the resulting effects on total revenue are discussed.

2 - Understanding The Value of Investments in Exploitation And Exploration Capabilities: Balance Versus Focus? A Dynamic Perspective

Matthew Sarkees, Assistant Professor of Marketing, Penn State University Great Valley, 30 East Swedesford Road, Malvern PA 19355, United States of America, mes45@psu.edu, John Hulland

Whether performance advantage accrues more to firms that balance exploitation (i.e., serving existing markets) and exploration (i.e., developing new products for future markets) or to those that focus on only one of these approaches is open to debate. Empirical studies reflect mixed findings. To help answer this question, we employ objective, longitudinal data to examine how efficient firms are at utilizing resource investments to build exploitation and exploration capabilities within a competitive environment. These capabilities are then linked to short-term and long-term performance. We find that firms with superior exploitation capabilities have a higher return on assets but lower Tobin's q values. In contrast, firms with superior exploration capabilities have higher Tobin's q values but a lower return on assets. Importantly, firms that have superior capabilities in both exploitation and exploration generally find benefits in both short-term and long-term performance. However, these benefits are decidedly reduced for larger firms.

3 - A Practitioner's Guide to Bayesian Estimation of Discrete Choice Dynamic Programming Models

Andrew Ching, Rotman School of Management, University of Toronto, 105 St. George Street, Toronto, ON, M5S3E6, Canada, aching@rotman.utoronto.ca, Susumu Imai, Neelam Jain, Masakazu Ishihara

This paper provides a step-by-step guide to estimating discrete choice dynamic programming (DDP) models using the Bayesian Dynamic Programming algorithm developed in Imai, Jain and Ching (2008). The Bayesian Dynamic Programming algorithm combines the DDP solution algorithm with the Bayesian Markov Chain Monte Carlo algorithm into a single algorithm, which solves the DDP model and estimates its structural parameters simultaneously. The main computational advantage of this estimation algorithm is the efficient use of information obtained from the past iterations. In the conventional Nested Fixed Point algorithm, most of the information obtained in the past iterations remains unused in the current iteration. In contrast, the Bayesian Dynamic Programming algorithm extensively uses the computational results obtained from the past iterations to help solving the DDP model at the current iterated parameter values. Consequently, it significantly alleviates the computational burden of estimating a DDP model. We carefully discuss how to implement the algorithm in practice. We also present an example of a dynamic store choice model to illustrate how to use this algorithm.

■ SA09

1st Floor - Room 1240

Theory Based Empirical Models I

Cluster: Marketing Models

Invited Session

Chair: Brett Gordon, Columbia Business School, 3022 Broadway, Uris 511, New York, NY, 10027, United States of America, brg2114@columbia.edu

Co-Chair: Wesley Hartmann,Associate Professor, Stanford University, Palo Alto, United States of America, Hartmann_Wesley@gsb.stanford.edu

Co-Chair: G,nter Hitsch,University of Chicago, guenter.hitsch@chicagogsb.edu

1 - Estimating Factors of Store Choice

Raphael Thomadsen, University of California, Los Angeles, raphael.thomadsen@anderson.ucla.edu, Jean-Pierre Dube, Tim Conley

This paper examines which factors affect store choice decisions the most. Geographic location is among the most-important factor in store choice, so special care is taken to account for the geography of the market, as well as the interaction of demographic tastes for particular neighborhoods. Also, we account for both individual tastes for store factors, as well as unobservable fixed effects of the appeal of particular stores, which is a departure from standard models. The results are shown through both structural model estimation and through descriptive empirical analysis.

2 - When Demand Projections Are Too Optimistic: A Structural Model Of Product Line And Pricing Decisions

Andrés Musalem, Duke University, 1 Towerview Dr., Durham, NC, 27705, United States of America, amusalem@duke.edu, Woochoel Shin

We propose a methodology to estimate structural models of product line competition. This methodology enables researchers to estimate demand systems accounting for the endogeneity of product introductions, an issue which is typically ignored in the empirical literature in marketing and economics. In particular, we find that not accounting for this form of endogeneity leads to overoptimistic estimates of total demand due to sample selection bias. More importantly, biased estimates of demand can generate misleading managerial recommendations and inaccurate inferences about consumer welfare. In addition, the formulation of a structural model of product line competition enables us to consider policy simulations aimed at studying the consequences of changes in a number of structural factors, such as consumer preferences, cost structure, ownership and capacity. The model under analysis jointly considers the interplay between consumer preferences, pricing and product line decisions. Consumer demand is characterized by a utility maximization process with unobserved heterogeneity in consumer preferences. Price decisions are assumed to be the outcome of a Bertrand-Nash game among firms offering differentiated products. Product line decisions are modeled using a Bayesian-Nash equilibrium concept where firms form beliefs about the profits of their competitors and anticipate the prices and demand they would observe for any given set of products that could be introduced in the market.

3 - Using Tracking Data in Estimating the Effect of Advertising on Sales

Michaela Draganska, Stanford University, 518 Memorial Way, Stanford, CA, 94305United States of America, draganska_michaela@gsb.stanford.edu, Daniel Klapper

It has been long known that advertising expenditures or GRPs are imperfect measures of advertising as they fail to account for the quality of a particular ad campaign. Attitudes toward an ad have been found to be important moderators of the effect of advertising on brand evaluations and choice. Firms habitually conduct surveys to track consumer perceptions but there has been very limited effort to date to incorporate these attitudinal data in demand estimation. We show how to use a repeated cross section on brand recall and ad evaluations in conjunction with data on advertising expenditures and sales to separate the effect of advertising on brand awareness (inclusion in the consideration set) and goodwill toward the brand. In a second step, we estimate how ad quality moderates advertising expenditures in creating a stock of awareness and goodwill. The detailed modeling of the process by which advertising influences sales improves our understanding of how advertising works and thus the ability to make policy recommendations.

4 - A Structural Model of Political Advertising

Brett Gordon, Columbia Business School, 3022 Broadway, Uris 511, New York, NY, 10027, United States of America, brg2114@columbia.edu, Wesley Hartmann

We present a structural model of political advertising in equilibrium. The voter side of the model takes the form of an aggregate random coefficients discrete choice model in which advertising affects a registered voter's incentive to vote for either candidate or not vote at all. On the other side of the model, candidates choose advertising across regions in order to maximize the probability of winning the election. We consider general presidential elections, but the model could be applied or extended to races for other offices (e.g. house, senate or gubernatorial) or primaries. The model examines how equilibrium advertising depends on voter characteristics and the competitor's behavior and can predict how advertising affects voter turnout. Furthermore, the model can be used to consider counterfactuals, such as eliminating the electoral college, in which candidates equilibrium advertising allocations may change.

■ SA11

2nd Floor - Room 2210

Choice Models: Multiple Categories

Cluster: Choice

Invited Session

Chair: Rex Du, Assistant Professor of Marketing, University of Georgia, 116 Brooks Hall, UGA, Athens, GA, 30602, United States of America, rexdu@terry.uga.edu

1 - Retail Chain Management and Frequency Reward Programs

Qiang Lu, Assistant Professor, University of Sydney, CNR Codrington and Rose Streets, Sydney, Australia, s.lu@econ.usyd.edu.au, Junji Xiao, Ji Tao

Given the intense competition, super large retailers are commonly seen in the marketplace nowadays, e.g., Wal-Mart in USA, Coles Group in Australia. Many large retailers carry thousands of products at a time, and have different types of retail stores or chains, (e.g., supermarkets and department stores at the same location serving as anchor stores to each other [Konishi and Sandfort 2003]). Efficient retail management of different categories and even different types of stores is becoming more and more difficult. Researchers have started to pay more attention to the retailers as retailers apparently play a very important role in the distribution channel. Among different topics in retailing, frequency reward programs are no doubt an important one although their efficiency has been debated among researchers. Frequency reward programs have been long considered as a way to create switching costs between retailers. However, frequency reward programs in a large chain may serve many other purposes besides as the switching barrier. For example, frequency reward programs influence the brand choice decision within a category as well as in the different stores of the retailer. Using the data from a retail chain including both a supermarket and a department, we study consumer multicategory purchase behaviour across the two types of stores. Based on recent development in the structural multicategory purchase discrete models (Nitin 2007, Song and Chintagunta 2007), we develop a structural muticategory purchase model to investigate the retail chain management through frequency reward programs. In the study, we investigate how frequency reward programs provided by the retailer influence consumers' purchasing patterns across different categories and stores.

2 - A Cross-country Analysis of Umbrella Branding for National and Store Brands

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The large and fast penetration of store brands in recent years has been accelerated by a substantial increase of their availability across various categories. For example, Wal-Mart Stores, much like most large retail and grocery chains, offers store brands as diverse as bread and automobile tires. Even though store brands have generated tremendous interest in academic literature, little work has been done about the implications of umbrella branding strategies for store brands. Previous research indicates that under quality uncertainty consumers transfer associations across categories for umbrella brands (Erdem 1998). In this study, we estimate a cross-category learning model across five product categories (ketchup, margarine, canned tuna, toilet paper, and laundry detergent) to study differences across store brands versus national umbrella brands in three countries (the United States, the United Kingdom, and Spain). The model allows for price sensitivities, quality perceptions, and risk aversion to be correlated across categories for umbrella brands. Also, we allow consumers to have different priors for the quality of store brands and national brands, as well as we let the strength of association transfer for umbrella national versus store brands to differ. This enables us to compare the differential spillover effects of usage experience for national brands umbrella versus store brands. We also make cross-country comparisons.

3 - Developing a Media Basket: Using Simultaneous Two-way Clustering of Multiple Correspondence Analysis

Jonathan Lee, Associate Professor, Cal State Univ Long Beach, CBA 351 Dept of Marketing, 1250 Bellflower Blvd, Long Beach, CA, 90840, United States of America, jlee6@csulb.edu, Heungsun Hwang, Pamela Miles Homer

Advertising remains the most important promotional tool used by marketers to influence consumer choice. A variety of media models are available to media planners in their quest to optimize their budget allocation, each of which has unique strengths and weaknesses. Fundamental to any media plan are the media mix and media vehicle decisions. We present a two-stage approach to the development of such a media "basket", that is, the "mix" of media types and specific vehicles selected for a particular media plan. At the first stage, we develop a new method that can identify clusters of both consumers and media categories (i.e., general media types such as print and electronic) using MCA (Multiple Correspondence Analysis). We can also then distinguish specific media vehicles within each media category. The proposed model combines MCA with k-means in a unified framework so as to classify the object scores of target consumers and the weights for a set of media categories/vehicles simultaneously. As such, the proposed method can show explicitly which media types and vehicles are closely associated with a particular group of consumers on the basis of cluster membership. At the second stage, based on the cluster characteristics obtained, we determine which media plan is optimal given specific media objectives (e.g., reach, frequency, continuity) and budget. That is, the model lets us compare the efficiency and effectiveness of alternative media plans. Initial findings based on TV program data show that the joint map offered by the proposed method is much easier to interpret than that by the extant approach. Moreover, the results greatly contribute to profiling clusters in a more objective way.

4 - Determining Shopper Innovativeness and Forecasting Trial Sales Using Frequent-Shopper Card Data

Rex Du, Assistant Professor of Marketing, University of Georgia, 116 Brooks Hall, UGA, Athens, GA, 30602, United States of America, rexdu@terry.uga.edu, Piyush Kumar

This research attempts to address two issues related to trial sales of consumer packaged goods by tapping into a heretofore under-utilized data source for new product research, i.e., frequent-shopper card data collected by increasingly more retailers. Contained in these data is an incredibly rich trial purchase history for millions of individual shoppers. Our first objective is to identify truly innovative consumers based on actual trial behavior across tens (or even hundreds) of past new product launches, as opposed to relying on consumer self-reported trial history, or psychographic and demographic information. Building on the solution to the first issue, we develop a modeling approach that predicts for each individual shopper his propensity to try a newly introduced product, requiring only a few weeks worth of trial purchase data from a small panel. Such an individual level predictive model would be more flexible (i.e., allow forecasting trial sales at any level of aggregation), more insightful (i.e., can distinguish innovators from deal seekers), more accurate (i.e., less error in forecasting year-end trial sales), and more economical (i.e., use as few test stores and as short a testing period as possible).

■ SA12

2nd Floor - Room 2220

High-Tech Marketing

Cluster: New Products and Product Policy
Invited Session

Chair: Hyun Shin, Assistant Professor of Marketing, Long Island University, 720 Northern Blvd. Roth Hall #112, College of Management, Brookville, NY, 11548, United States of America, hyun.shin@liu.edu

1 - Does Online Buzz Impact Retail Prices?

Hyun Shin, Assistant Professor of Marketing, Long Island University, 720 Northern Blvd. Roth Hall #112, College of Management, Brookville, NY, 11548, United States of America, hyun.shin@liu.edu, Bharath Gajula, Dominique M. Hanssens

How do positive and negative consumer perceptions influence business outcomes such as retail prices? To address this question, we investigate the effect of online buzz sentiment on the prices of digital music players. Using a cutting-edge web crawling technique, we collected the relevant buzz information from diverse online documents on a daily basis for two months. In particular, we capture online buzz sentiment, which allows us to examine the different implications of positive, neutral, and negative online conversations. Using econometric time-series modeling, we find that positive online buzz is a leading indicator of price increases, and vice versa. Furthermore, the effect of online buzz sentiment on prices is moderated by purchase involvement: negative online buzz leads to price cuts for high-ticket items, whereas positive online buzz enables price increases for low-ticket items. These findings imply that online buzz sentiment affects e-retailers' pricing power, and thus, managers should frequently monitor the sentiment of online buzz around their products and respond appropriately by adjusting their prices promptly.

2 - Survival in Markets with Network Effects: Product Compatibility and Order-of-Entry Effects

Qi Wang, Assistant Professor of Marketing, State University of New York at Binghamton, School of Management, P.O.Box 6000, SUNY Binghamton, Binghamton, NY, 13902, United States of America, qiwang@binghamton.edu, Yubo Chen, Jinhong Xie

Although survival is a crucial performance concern for new products in markets with network effects due to high uncertainty and innovation risk in such markets, it has received scant academic attention. This paper investigates pioneers' survival (dis)advantage compared with their early followers in networked markets. We develop a conceptual framework suggesting that a pioneer's survival (dis)advantage is jointly affected by network effects and two fundamentally different types of product compatibility: (1) cross-generation compatibility, and (2) within-generation compatibility. Our empirical study, based on data from 45 markets, reveals some intriguing systematic patterns of contingency of pioneer survival advantage on the two types of compatibility. Specifically, in markets with very weak network effects, the two types of incompatibility affect the pioneer's survival advantage in opposite directions: Cross-generation incompatibility strengthens, but within-generation incompatibility weakens the pioneer's survival advantage. As network effects increase, however, the impact of both incompatibilities becomes weaker in their original directions, and eventually their directions are reversed. Despite the lower average survival duration of pioneers compared to their early followers in these markets, we find that pioneers can have a survival advantage in markets with both strong and weak network effects; however, the two cases require opposite compatibility conditions.

3 - The Effect of Consumer Social Interaction: Designing and Marketing Techno-fashion Products

Jiong Sun, Assistant Professor, Illinois Institute of Technology, 565 W Adams St., Chicago, IL, 60661, United States of America, jsun22@iit.edu, Jinhong Xie, Tao Chen

Consumers buy products not only for their material needs, but also for their social needs. Consumers who want to signal their uniqueness gain social utility if their products contrast with others, whereas those who wish to conform gain social utility by acquiring what others already have. This paper analyzes how such socially-driven preferences affect firms' new product design and marketing decisions. Specifically, we examine when to introduce an advanced version of a product and how to differentiate the advanced version from the existing version in terms of functionality and embellishments of style.

4 - Leveraging Consumers in Concept Generation and Screening of Technology Products

Lan Luo, Assistant Professor of Marketing, University of Southern California, 3660 Trousdale Parkway, HOH 519, Los Angeles, CA, 90089, United States of America, lluo@marshall.usc.edu, Olivier Toubia

The new product development process for technology-driven products typically starts with a new technology, followed by attempts to develop end products that best utilize the technology to serve unmet consumer needs. Many technology products fail because firms lack insights to generate product concepts well-received by the general public. However, there has been very little formal research on how to effectively generate and screen product concepts in the front end of technology product development. In this paper, we investigate the following questions: 1) Can consumers be utilized to generate and screen product concepts in the early development of technology products? 2) If so, what type of consumers should be used? And 3) how should these consumers be involved (i.e. what should be their tasks)? We develop an interactive online survey to examine the above questions. Our research indicates that consumers are valuable resources that firms can leverage in generating and screening product concepts that match strong consumer needs. We suggest that both lead users and non-lead users may be used in concept generation and the key decision is the abstractness of the solution space. Specifically, lead users should be directed to an abstract solution space and non-lead users work better in a concrete solution space. We also find that, in terms of concept evaluation, it matters less whether lead users or non-lead users are used for evaluating different concepts. Finally, we propose a practical, cost effective method for firms to involve consumers in concept generation and screening of technology products.

■ SA13

2nd Floor - Room 2230

Brands and Branding: Brand Management

Cluster: Brands and Branding
Invited Session

Chair: Vijay Ganesh Hariharan, PhD Student, State University of New York at Buffalo, 232 Jacobs Management Center, State University of New York at Buffalo, Buffalo, NY, 14260, United States of America, vh5@buffalo.edu

1 - Determinants of Brand Loyalty in Inflationary Times

Subir Bandyopadhyay, Professor of Marketing, Indiana University Northwest, 3400 Broadway, Gary, IN, 46408, United States of America, sbandyop@iun.edu, Orose Leelakulthanit

Brand loyalty is one of the key customer retention strategies. A corner stone of brand loyalty is brand value. A brand that satisfies customers' practical needs delivers functional value, whereas a brand that satisfies customers' psychological needs delivers emotional value. The creation of brand value will help the companies to win over the competitors. However, this relationship is generally valid under the normal economic situation. Therefore, it remains to be a question of whether the brand value will survive in an inflationary time. Besides brand value, consumer characteristics are known to influence brand loyalty. Previous brand loyalty studies show, however, an inconsistent relationship between the characteristics of consumer and brand loyalty. For example, East et. al. (1995) found that shoppers who were more concerned about prices were less loyal, with high income groups being more loyal than low income groups. In contrast, Gust (1964), and Coulson (1966) found that demographics, such as gender, marital status, education, age and social class were not related to brand loyalty. This study attempts to evaluate the relative importance of two critical determinants (i.e., brand value vs. consumer characteristics) of brand loyalty during inflationary times. Using a large sample of survey data collected in Thailand during the highly inflationary period of January - August 2008, we found that, among several demographic characteristics of the consumers, income stands out as a significant determinant of brand loyalty during inflationary times whereas brand value does not seem to play any significant role. Based on our results, we suggest a set of marketing strategies appropriate during inflations.

2 - The Effects of Long-term Product Unavailability

Li Wang, Washington University in St Louis, Campus Box 1133, Olin Business School, One Brookings Drive, Saint Louis, 63130-4899, United States of America, wangli1@wustl.edu

Stock-out is not an uncommon phenomenon in real business world. The impact of stock-out crucially depends on consumers' reaction. Most previous literature on stock-out focuses on the immediate effect of stock-out from which temporary stock-out is more relevant. However, the long-term effect of stock-out could be more severe than the immediate effect. Since long-term stock-out may change consumer's preference, the objective of this paper is to examine the effects of long-term product unavailability using a sales data set of dog food products. The time structure of observed long-term stock-out in the data provides a natural environment to explore the evolvement of consumers' brand and store preferences over different periods. A varying-preference random coefficient logit model is developed and estimated using the method of maximum simulated likelihood (MSL). It is found that, controlling for the potential impacts of pet food recall and time trend, own-brand long-term stock-out decreases consumer's brand preference and there exists an asymmetric impact of strong versus weak brand stock-outs on consumers' store preference. In addition, the estimation result also shows that consumer's preference does not recover over a medium term after long-term stock-out. These findings have important managerial implications for both retailer and manufacturer in terms of market share and category profit as well as appropriate inventory management and promotion/advertising strategies.

3 - The Interplay Between Private Label Quality, Store Image and

Store Patronage

Salome Nies, Goethe University Frankfurt, Grueneburgplatz 1, Frankfurt, 60323, Germany, salome.nies@wiwi.uni-frankfurt.de

Private labels (PL) are often understood as retention tools for retailers, since they are believed to differentiate store image and to enhance store patronage. Accordingly, retailers have developed their PL schemes and have heavily invested in the quality of their PL brands. The extant marketing literature documents that these steps have brought national brands and private labels closer together in terms of quality and positioning which has contributed to PL market shares. However, whether the investments in PL quality also pay off in terms of store image and store patronage is still unclear. It is important to clarify this point, because more and more retailers rely on their PL brands to create store loyalty. In this study, we address this issue by specifying a model that links PL-specific quality evaluations to the perceptions of the image of the associated retailer as well as to the level of patronage of this retailer. Our intention is to answer the following research questions. 1) How does image transfer between a corporate retail brand and a PL brand? That is, does the evaluation of the PL affect the store image, or is it the other way around? 2) Does a positive PL evaluation contribute to store patronage? 3) Is the impact of PL quality on store image and patronage category-specific? Our empirical findings offer good news for retailers, since they show that PL quality has a positive effect on store patronage and store image. Based on our findings, we derive category-specific recommendations how to improve the effectiveness of private label quality programs.

4 - Dynamic Effects of the Introduction of Cobranded Ingredient Extensions on Consumer Choice

Vijay Ganesh Hariharan, PhD Student, State University of New York at Buffalo, 232 Jacobs Management Center, State University of New York at Buffalo, Buffalo, NY, 14260, United States of America, vh5@buffalo.edu, Ram Bezawada, Debabrata Talukdar

Cobranded ingredient extension is a new product in which one brand explicitly incorporates its attributes into another brand. The brand whose attributes are incorporated is called the "ingredient brand" and the brand incorporating the attributes is called the "host brand". In this study, we focus on the dynamic effects of the introduction of a new cobranded ingredient extension on choice using household scanner data. Specifically, we focus on the following research questions: (1) How do intrinsic brand preferences of parent brands and their competitors evolve after the introduction of a cobranded ingredient extension?, (2) How do loyalties of parent brands affect the choice of cobranded ingredient extension?, and (3) Are the parent brand effects asymmetric and how do contextual antecedents explain those variation? We answer these questions using a multinomial discrete choice model that accounts for idiosyncratic consumer responses, evolving brand preferences and spillover effects. Our analysis uses a comprehensive consumer transaction dataset that covers about 15 cobranded ingredient extensions and spans across multiple parent brand contexts. Preliminary analysis of one category shows that host brand loyalty has a stronger effect than ingredient brand loyalty on consumers' purchase probability of the cobranded ingredient extension. We expect that our findings will provide useful strategic insights for manufacturers and retailers on forging successful brand alliances.

■ SA14

2nd Floor - Room 2240

Services

Cluster: Marketing Strategy

Invited Session

Chair: Fumiyo Kondo, Assistant Professor, University of Tsukuba, 1-1-1, Tennoudai, Tsukuba, Japan, kondo@sk.tsukuba.ac.jp

1 - The Impact of Team Interdependence on Service Performance: A Cross Level Approach

Yu-Li Lin, Assistant Professor, Southern Taiwan University, No.1, Nantai Street, Yung-Kang City, Tainan, 710, Taiwan - ROC, bookigen@gmail.com, Hsiu-Wen Liu

In today's company, the complexity of organizational jobs can not be accomplished by anyone individually. Only the team that integrates the specialties of members and collaborates together can carry out a complex work and provide a high quality service. Therefore, how to design jobs of each term members and its effects on service behavior becomes an important issue. In this study, we examine the impact of term interdependence on service behavior of the front line employees so as to provide recommendations for managers to improve their job design and the service performance of term work. Term interdependence is a composite concept that includes two kinds of interdependences: task and outcome interdependence. Both task interdependence and outcome interdependence are group level concepts. Employee service behavior, a service performance outcome, is an individual level concept. However, past research projects lack of a good cross level research design. Most studies examined their hypothesis based on one level variable, either group level or individual level variables. To avoid the severe bias resulted from distortion of different level variables, we suggest researchers use a cross level approach to examine the impact of term interdependence on service performance. The managerial implications and suggestions will be provided based on the findings of this study.

2 - Conceptualising the Customer-perceived Value Model

Connie Chang, Visiting Lecturer, Coventry University, Priory Street, Coventry, CV1 5DL, United Kingdom, connie.chang@coventry.ac.uk, Sally Dibb

Conceptual and operational studies of customer-perceived value and its relationship with price, quality, sacrifice and satisfaction dominate the contemporary marketing literature. This reflects the centrality of goods and services in everyday life and the importance of value decisions when purchasing. Yet, the crux of customer-perceived value has not been clearly identified, nor have the relative relationships between price, quality, sacrifice and satisfaction been fully explored. This study takes a holistic view of customer-perceived value, synthesising research from Axiology, Economics, Physiology and Marketing. The context is the market for online tourism products in Taiwan. The main antecedents and consequences of customer-perceived value are identified and a systematic process of model development is undertaken. The developed model's contribution is to integrate a range of key variables (i.e. price, quality, sacrifice and satisfaction) into a single theoretical framework. The research uses a mixed-methods research approach. A qualitative phase involving interviews with 18 Taiwanese travel agents and 45 consumers enabled a refining of the research constructs prior to the main data collection. This was followed by a quantitative survey of 914 online travel consumers. The model was tested in a retail setting using a sample of real consumers who were shopping for a tourism product. The findings suggest that these consumers, place greater importance on the sacrifice associated with purchasing tourism products than they do on the price, quality and satisfaction elements. The proposed customer-perceived value model explains greater variance in the value construct than other published models, indicating strong analytical support for the framework.

3 - Counting (on) Recommendations: Explaining Top-performance in Customer Referral Programs

Kay Peters, University of Muenster, Am Stadtgraben 13-15, Muenster, Germany, kay.peters@uni-muenster.de, Sebastian Feld, Manfred Krafft, Daniel Asselmann

Although recent contributions acknowledge the increasing importance of customer referrals (CR) for firm performance (e.g., Kumar, Petersen, and Leone 2007, Villanueva, Yoo, and Hanssens 2008), research on CR-programs is sparse. Extending results by Biyalogorski, Gerstner, and Libai (2001), Ryu and Feick (2007) find that rewards increase referral likelihood, being particularly effective in increasing referral to weaker ties and brands. Wangenheim and Bayon (2007) investigate the drivers of the actual number of referrals. Applying a ZIP-model, they find a u-shaped influence of satisfaction and a direct effect of situational involvement. Additionally, the latter moderates the relationship of satisfaction on referral behavior. Unfortunately, they have to rely on self-reported behavior and do not observe its actual success, which constrains the implementation of their findings in CR-programs. We extend these insights in several ways. First, our analysis is based on observed referral behavior. Our results are therefore based on an objective measure of CR (success) and thus allow an implementation of findings. Second, we investigate a more holistic framework of motivational drivers based on collective insights from word-of-mouth research, accounting for heterogeneous motivational patterns. Our results indicate the presence of referral segments with differential motivational structures beyond satisfaction and involvement. Additionally, moderating effects differ across segments which may explain earlier findings neglecting heterogeneity. Third, we use our insights to identify potential high-performers in the customer database. This enables a company to finetune its CR-program to the different segments and implement it successfully.

4 - Actual Use Behavior, Satisfaction and Continuous Use Intention

Fumiyo Kondo, Assistant Professor, University of Tsukuba, 1-1-1, Tennoudai, Tsukuba, Japan, kondo@sk.tsukuba.ac.jp, Jiro Hirata

The purpose of this research is to model on actual use behavior of information services benefits of mobile phone and corresponding analyses on satisfaction and continuous use intention (loyalty) by structural equation model. Effective responses of 5567 were obtained by Internet research conducted in 2008, out of 20000 panels and the number of people who have mobile phone was 5222. We classified twenty one information services into several groups by conducting a factor analysis and extracted the following three factors: the first factor: Basic information service factor; the second factor: Amusement factor; the third factor : Low penetration rate service factor. By using 999 samples of the customers who have experience of using the second factor of "Amusement services" we constructed a satisfaction model with a path of benefits satisfaction loyalty by Gustafsson and Johnson (1997). The result showed that the path from the latent variable of actual benefit behavior to satisfaction and that from satisfaction to loyalty becomes significant at the 1% level with standardized value of 0.85 and 0.93, respectively. Further, the result showed that the higher the extent of amusement, the higher the standardized value is. Namely, high extent of amusement services such as animated graphics or E-mail arrival with melody or has high standardized value, compared to simple E-mail services such as E-mail with or with a picture. Measurement variables of amusement services that have higher amusement characteristics have larger relationship with latent variables that those of the counterpart. Namely, the result showed a managerial implication that a company should try to improve the quality of information services with high amusement characteristics.

■ SA15

2nd Floor - Room 2320

Marketing of Life Sciences

Cluster: Healthcare Marketing
Invited Session

Chair: Stefan Stremersch,Professor Dr, Erasmus School of Economics, Erasmus University Rotterdam, and IESE Business School, Universidad de Navarra, Burgemeester Oudlaan 50, Rotterdam, 3000DR, Netherlands, stremersch@few.eur.nl

1 - Identifying Peer-to-peer Networks Using Behavioral Data

Tulikaa Bhatia, Rutgers University, tulikaa@rci.rutgers.edu, Lei K. Wang

There is an increasing interest in the marketing, sociology and economics literature on the formation, identification and influence of social networks. The growing popularity of online social networking and its influence on consumer choice and consumer behavior has been highlighting the importance of these effects. Marketers have been developing and studying marketing phenomenon such as buzz marketing, word-of-mouth marketing, viral marketing, and so on. In this paper we try to identify the offline peer-to-peer network of physicians using patient movement between those physicians to identify their networks. We characterize the strength of these peer-to-peer networks by the number of patient movements between these physicians. We also examine the geographic and patient characteristics-based trends in such peer-to-peer networks identified using unique patient movement data between physicians for a certain large therapeutic category, which can be linked with physician data and data on patient characteristics. This paper has important implications for targeting of influential/ well-connected physicians by pharmaceutical firms.

2 - Global Market Segmentation: A Cross-national Empirical Analysis

Venkatesh Shankar, Professor of Marketing and Coleman Chair in Marketing, Texas A&M University, 240B Wehner Building, 4112 TAMU, College Station, TX, 77843-4112, United States of America, vshankar@mays.tamu.edu

With the increasing globalization of business and the need for more efficient utilization of marketing resources, there is a growing interest in identifying actionable "global" segments. A global segment can be viewed as a market segment whose profile is consistent across different countries and which responds in the same manner to a global marketing mix strategy. Prior research on segmentation in the international context has primarily focused on approaches to identify clusters of homogenous countries. Furthermore, much previous research in the international context has examined segmentation based on heterogeneity in diffusion effects or consumer preferences, but not on differences in marketing mix effects. In this paper, we propose an approach that helps to identify both "global" segments and clusters of homogenous countries. Our approach is based on heterogeneity in both diffusion effects and response to marketing mix efforts. We apply this approach to a data set on two pharmaceutical product categories comprising several brands spanning several European countries, U.S.A. and Canada. We develop and estimate a latent class to identify the segments. Our results show that global segments exist and can be identified with our approach. These segments have actionable implications for both managers and policy makers that are different from those defined by clusters of homogenous countries. We discuss the implications of the results for business practice and for international business and regulatory policies of different governments.

3 - Where Do Patients Get What They Want? Heterogeneity in Prescription Response to Patient Requests

Stefan Stremersch, Professor Dr, Erasmus School of Economics, Erasmus University Rotterdam, and IESE Business School, Universidad de Navarra, Burgemeester Oudlaan 50, Rotterdam, 3000DR, Netherlands, stremersch@few.eur.nl, Vardit Landsman, Sriram Venkataraman

In the United States, one in three patients at some point has requested a drug by name from his/her physician. Such requests may be triggered by, among other things, word-of-mouth and direct-to-consumer advertising (DTCA), on which the pharmaceutical industry spends more than $5 billion a year. There is some evidence that physicians are heterogeneous in their responsiveness to such patient requests. However, we have a very limited understanding where patients most easily get what they want. This study, addresses this research gap. Understanding in which demographic areas physicians most readily accommodate patient requests is critical to public policy and marketing management alike. Policy makers can use this information to assess the social welfare implications of patient requests on patient care and marketers can use these insights to effectively allocate their DTCA resources taking into account local market responsiveness to patient requests, which DTCA tries to trigger.

Saturday, 10:30am - 12:00pm

■ SB01

Lower Level - Room 0210

New Products: Development and Design

Cluster: New Products and Product Policy
Invited Session

Chair: Bo Huang, PhD Candidate, University of Michigan, 701 Tappan St., Ann Arbor, MI, 48109, United States of America, bohuang@umich.edu

1 - How Serial Innovators Understand Customer Needs

Abbie Griffin, Royal L. Garff Presidential Chair in Marketing, University of Utah, 1645 E. Campus Center Dr., Salt Lake City, US, United States of America, abbie.griffin@business.utah.edu, Bruce Vojak, Raymond Price

Understanding customer needs is critically important in new product development. Prior to the mid-1980's, businesses that marketed to other firms had very few methods available to help them understand customer needs. The predominant technique was to use focus groups to gather the qualitative needs information. This technique, however, is more effective at understanding individual customer needs than the needs of firms. Methods that are more effective for understanding business needs, including Voice of the Customer (Griffin and Hauser 1993), Customer Visits (McQuarrie 1993) started emerging in the late 1980's and diffusing into use. This research reports on the results of how 35 Serial Innovators, individuals in large, mature firms who have repeatedly developed one commercially successful product after another, in businesses that market products and services to other firms (rather than consumers) approach understanding customer needs. We conducted in-depth interviews of these individuals, investigating the processes by which they uncovered customer needs and delivered solutions addressing those needs. Overall - we find that this is a radically different approach from typical marketing-lead Voice of the Customer and Customer Visit endeavors. This presentation will detail our findings, especially those about how they go about asking the questions that allow them to drive to potentially breakthrough products.

2 - The Success of New Product Development: A Perspective of Social Networks

Jurui Zhang, Doctoral Student, University of Arizona, 1010 E Mabel St., Apt. 218, Tucson, AZ, 85719, United States of America, juruizh@email.arizona.edu, Yong Liu, Yubo Chen

Social networks and their impact on firms and consumers have attracted a great deal of attention from researchers in different disciplines, including sociology, economics and marketing. This paper attempts to examine whether and how social networks of the members of new product teams may influence the new product development (NPD). We propose a theoretical framework to investigate the mechanism through which the impact of social networks may materialize and eventually influence the NPD success. Different properties of the social networks among NPD team members may influence the team's creativity, resource and potential market impact. Moreover, social network properties of different functional areas of a new product team may play different roles in the success of NPD. We empirically test our theoretical predictions in the context of social networks in the Hollywood movie industry. We discuss the implications of our findings for both research and practice in new product development.

3 - Does it Pay to Spend More Effort in New Product Development Projects? An Efficiency Perspective

M. Billur Akdeniz, PhD Student/Michigan State University, N370 North Business Complex, Department of Marketing, East Lansing, MI, 48823, United States of America, akdenizm@msu.edu, Anthony Ross, Roger Calantone

To launch profitable, timely, high quality new products in the current competitive marketplace firms are under increasing pressure to find new process alignments meeting market goals. Using data from a sample of 1115 NPD projects, this study investigates the relationship between the effort expended at each stage of the development process and project performance from an efficiency perspective. First, the output-oriented variable returns to scale model of Data Envelopment Analysis (DEA) is conducted with multiple input-output factors to differentiate the efficient from the inefficient projects. Next, regression models analyze the impact of eight different stages of NPD on the profitability, quality, and speed of the project and are compared between efficient and inefficient groups via the Chow statistic. A limitation of the Chow test is not to allow for differences between groups. To overcome this, efficiency group dummy and interaction terms between efficiency and NPD stages are included in the regression models. Finally, joint significance F-tests are conducted to explicate intercept and slope differences between efficient and inefficient projects. This research contributes to the literature in specific ways. There is a scarcity of empirical studies that have examined similar relationships at the project level. It provides a fresh approach through conducting DEA to assess the performance of NPD projects. Also, it provides a new formulation to design NPD process contingent on the efficiency of the project. Overall, it is observed that efficient projects lead to higher than expected project profitability, quality and speed. Furthermore, they moderate the impact of effort expended at various NPD stages like idea generation and market feasibility on project performance.

4 - Does Brand Value Affect New Product Positioning in Quality? Evidence From the Mobile Phone Industry

Bo Huang, PhD Candidate, University of Michigan,
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Every year firms expand R&D effort to develop and bring to the market a variety of new products. Despite some sporadic revolutionary breakthroughs in either technology or design, new products often share most of the characteristics of existing products in a category. It is well-known that firms make their new product introduction decisions based on expected market demand, competition and costs. It is less clear, however, exactly how a firm's brand value affects its new product positioning. In other words, do firms rely strategically on their brand value in their new product introduction decisions? Some theories suggest that brand value does not affect a firm's new product positioning decisions because these are driven mostly by technological factors. Other theories imply that when brand value increases, a firm's most profitable strategy may be to "milk" its brand and introduce many products in the low-quality segment where intrinsic differentiation is low, and thus brand value plays a key role as a differentiating factor. The opposite view says that brand value is extremely important for the high-quality segment, and that a firm will maximize profits by introducing more high-margin high-quality products when its brand value increases. I examine this research question empirically using data from the mobile phone industry in Italy.

■ SB02

Lower Level - Room 0220

Channels: Relationship Management

Cluster: Channels
Invited Session

Chair: Matilda Dorotic,Doctoral Candidate, University of Groningen, P.O. Box 800, Groningen, 9700 AV, Netherlands, m.dorotic@rug.nl

1 - Channel Coordination in Heterogeneous Markets

Salma Karray, UOIT, 2000 Simcoe Street North, Oshawa, Canada,
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Channel design is one of the most important decisions facing channel managers. An important marketing and operations management literature studied this issue and has found that channel coordination improves the channel's performance when a manufacturer is dealing with a strategic retailer. This paper investigates the effects of coordination on the performance and strategies of a bilateral monopoly in a market characterized by consumer heterogeneity in both taste and quality preferences. We propose a theoretic model and solve for Stackelberg equilibrium solutions. Contrary to the accepted result that distribution channels should strive to achieve results from vertical integration, especially in case of a bilateral monopoly, we show that coordination does not benefit the channel when consumers' valuation of quality is the most important source of heterogeneity in the market and that most consumers do have strong quality preferences. We find also that the standard notion that coordination increases total channel's profits in presence of a strategic retailer is true only in markets characterized by some homogeneity in consumer valuations for both the product's quality and features. It does also hold in case the market is heterogeneous on both of these dimensions with substantial preferences for product taste over quality.

2 - Channel Coordination Under Financial Constraints

Yi Liao, Drexel University, 3141 Chestnut St, Decision Sciences Department, Philadelphia, 19104, United States of America,
yl36@drexel.edu, Shan Feng

In previous channel coordination problem study, researchers put lots of efforts on the mechanism of channel coordination. McGuire and Staelin (1983), Coughlan (1985) and Wenerfelt (1989) study the manufacturer's choice of channel structure. Jeuland and Shugan (1983) demonstrate that quantity discount can coordinate a channel with price and non-price variables. Pasternack (1985) shows that supply chain can be coordinated by an intermediate buy back contract policy (full return with partial buyback credit). Kandel (1996) extends Pasternack (1985) to a stochastic model and concludes that supply chain can be coordinated by return policy without retail price maintenance. Weng and Webster (2000) introduce a risk-free return policy. The marketing literature has largely ignored corporate financing decisions on the assumption that a firm's optimal investment level or production level can be fully financed by internal capital. Although Modigliani and Miller (1958) proves that a firm's investment and financial decisions can be separately in a perfect capital market, it is not perfect in reality due to some tax , asymmetric information problems (Harris and Raviv (1991)). The more important thing is that many firms's growth and survival are closely related to the limited internal capital. From the 2008's financial crisis, we can easily see this. Our channel model introduces the financial constraint to the traditional channel coordination problem. To analyze our results, we use the classical single period model ("newsboy problem") with financial constraints within risk-neutral world. Although we use the single period model to derive the results, the most important thing is to find what kind of policy will be optimal under financial constraint.

3 - Understanding Dispute Initiation and Resolution in Franchise Relationships

Xu Zheng, University of Wisconsin-Madison, Suite 4260,
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Disputes are an inevitable fact of business relationships. Conflicts could arise if either of the parties involved in the focal relationship perceives its goal attainment to be hindered by its partner. In the context of franchising, both franchisor and franchisee simultaneously undertake a fiduciary duty to each other; yet, either party might disregard the other's interest and behave opportunistically. Surprisingly, this dual perspective has not received commensurate recognition by prior research. There has also been very little attention focused on the issue of dispute resolution, whether by legal sanction or out-of-court agreement. The current study adopts a double-sided moral hazard perspective on business format franchising relationships so as to understand (1) the drivers of either party's (franchisor or franchisee) decision to seek legal redress, and (2) contingent on the dispute being initiated, the predictors of the initiating party's choice of dispute resolution method - litigation versus alternative dispute resolution (ADR) methods. To the best of our knowledge, ours is the first empirical examination of dispute initiation and resolution efforts by both parties, principal and agent, in the context of contractual channel relationships.

■ SB03

Lower Level - Room 0230

Advertising: Competition

Cluster: Advertising
Invited Session

Chair: Dan Horsky, Professor, U of R - Simon Graduate School of Business, Carol Simon Hall (Room CS3-210)-, Box 270100, Rochester, NY, 14627, United States of America, dan.horsky@simon.rochester.edu

1 - Managing Advertising and Word of Mouth in a Competitive Setting

Jiwoong Shin, Assistant Professor, Yale University,
135 Prospect Street, New Haven, CT, 06520,
United States of America, jiwoong.shin@yale.edu, Dina Mayzlin

In this paper, we consider the interaction between word of mouth (both naturally-occuring as well as firm-generating) and advertising. First, consistent with existing evidence, we assume that favorable word of mouth is a more persuasive signal than a company-sponsored advertisement. That is, while advertising is relatively a more efficient tool to achieve awareness, word of mouth is intrinsically more persuasive. In addition, we hypothesize that there are asymmetric complementarities between advertising and word of mouth: positive word of mouth increases the effectiveness of advertising, while advertising causes word of mouth to become less credible. We show that due to the negative effect of advertising on word of mouth, a firm in a competitive setting may engage in less advertising than a firm in a monopoly setting. This is due to the fact that in a competitive setting, persuasiveness is more important criterion, while in a monopoly setting, awareness may be more important.

2 - Persuasive Advertising with Asymmetric Firms

Mariana Roesner, Institute for Communication Economics,
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Tobias Kretschmer

In this work, we use a game-theoretic model of duopoly competition with differentiated goods to study the effects of persuasive advertising on market asymmetries. Advertisements are persuasive when they are primarily aimed at changing consumers' preferences about product characteristics instead of transmitting product information. Although persuasive techniques such as celebrity endorsements or emotional appeal are a generic part of the marketer's everyday tool kit, the persuasive function of advertising is only slowly acknowledged in game-theoretic models of advertising competition. As a result, the strategic effects of persuasive advertising especially in asymmetric competitive situations are not fully understood. In particular, it is not clear whether advertising makes markets more or less symmetric and what kind of brands profit most from using advertising in a persuasive manner. In our framework products' characteristics are exogenously given but firms can alter consumers' perceptions of the ideal brand through advertising. The firms' products enter the game with asymmetric locations which represent initial appeal to consumers.

Our results indicate that the presence of advertising does not help the initially disadvantaged firm but that, on the contrary, asymmetries with respect to consumers' tastes increase because of advertising. At the same time, the initially disadvantaged firm will charge a lower price and earn lower profits than its rival. When products are not too similar and advertising not too costly, the dominant firm may even capture the entire market. In an extension with asymmetric advertising technologies we find that an initial locational asymmetry may be outweighed when the disadvantaged firm can advertise more effectively than the dominant firm.

3 - Assessment of the Optimal Decision on Advertising Format

Patrali Chakrabarty, Doctoral Student, Indian Institute of Management Ahmedabad, D2, R37, IIM Ahmedabad, Vastrapur, Ahmedabad, Gj, 380015, India, patralic@iimahd.ernet.in, Bibek Banerjee

A critical aspect in advertising is the decision regarding "comparative stance" taken alongside competitors in an advertisement. Often consumers have been subjected to comparative advertising (CA), where a certain form of comparison is made evident amongst the sponsored brand and competing alternatives. Recently, markets have been thronged with another variant of CA, which is sequelized on at least one of the earlier-aired advertisements featuring competing brand(s). This phenomenon of CA-warfare, wherein market players engage in a prolonged and explicit repartee of claims and counter-claims about self as well as competing brands (e.g. Pepsi and Coca Cola, Mc Donald's and Burger King, etc.), is henceforth referred to as Sequelized Comparative Advertising (SCA). The purpose of this paper is to model and analyze the impacts of SCA, vis-a-vis alternative advertising strategies, on consumers and hence on brands' payoffs. Given arguments in literature that effectiveness of any competitive decision is sensitive to how competitors choose to counter-play the move, we incorporate sensitivity, in the aforesaid model, to possibilities of retaliation from competitors. We restrict the model to one where the market is dominated by two firms in terms of market share, alongside a set of differently priced alternatives and potential entrants. We analyze the aforesaid payoff functions in a differential games framework, considering a closed-loop information structure. We argue that the optimal strategy profile for any large firm is a pulsating (SCA,SCA)l (#=1, ...k), (non-CA,non-CA)l(#=k+1, ..., ...m), which, due to an aggregative impact on large firms' advertising costs and consumers, has the potential to Pareto-dominate other advertising strategies in a comparable context.

4 - Periodic Advertising Pulsing by Competitive Firms

Dan Horsky, Professor, U of R - Simon Graduate School of Business, Carol Simon Hall (Room CS3-210), Box 270100, Rochester, NY, 14627, United States of America, dan.horsky@simon.rochester.edu, Marshall Freimer

In examining the advertising patterns of competing firms it is often observed that they engage in pulsing - they advertise for three months and then stop for three or six months. Moreover, the competing firms tend to advertise in-phase. The question as to the optimality of advertising pulsing has attracted many researchers since first posed by Vidale and Wolfe (OR, 1957). However, as summarized by Feinberg (Mg. Sc., 2001) no one has conclusively shown that it is in fact an optimal policy. In assessing this literature two issues stand out. First, pulsing vs. constant advertising is only compared under an assumption of a fixed budget. Second, the Vidale and Wolfe setting is a monopolistic one. In this paper we specify a market share model in which there are two advertising setting firms as well as a third non-strategic non-advertising brand. That last brand may represent a no purchase option. The framework is one of a Markov process with three states. When the second brand is eliminated the framework collapses to exactly the discrete analog of the Vidale and Wolfe model. The objective of both firms is to maximize profits and a Nash equilibrium is sought. We are able to demonstrate, for reasonable advertising cost functions, that the optimal advertising strategy is pulsing. Moreover, we show that if the retention of prior customers (the coefficient of lagged share) is consistent with the levels identified in empirical studies it is optimal for both firms to advertise in-phase. The frequency of pulsing is shown to depend on the magnitude of the retention rate; the higher it is the less frequent the advertising. We further show that the optimal advertising budgets do not remain the same when the frequency of pulsing changes.

■ SB04

Lower Level - Room 0240

Aggregate and Multi-Product Pricing

Cluster: Pricing

Invited Session

Chair: Kesha Coker, Doctoral Candidate, Southern Illinois University Carbondale, Department of Marketing, Rehn Hall 229, College of Business, Carbondale, IL, 62901, United States of America, kcoker@cba.siu.edu

1 - The Influence of Mood on Willingness-to-pay at the Point of Purchase

Robert Wilken, Assistant Professor, PhD, ESCP-EAP Berlin, Heubnerweg 6, Berlin, 14059, Germany, robert.wilken@escp-eap.de, Helmut Schneider

Pricing constitutes a critical element of the marketing mix because of its most direct impact on profitability. In order to establish profit-maximizing prices derived from price-response functions, information on the consumers' willingness-to-pay (WTP), defined as the maximum price a consumer is willing to pay for a product, is needed. There is a large amount of research papers dealing with either methodological issues in WTP measurement or with factors influencing consumer's willingness-to-pay. What appears to be missing, however, is to know how mood, an affective state of mind, influences consumers' WTP. To the best of our knowledge, no study attempted to analyze the payoff of mood state variations - neither on the individual level (in terms of WTP), nor on the aggregate level (in terms of price response functions). Specifically, we analyze the direct effect of mood (i.e., happiness versus sadness) on consumers' WTP for different products at the point of purchase. Hereby, we differentiate between different product categories (i.e., feel-good products, feel-bad product, try-not-to-feel-neutral products, and no-feel products) and the consumers' openness to feelings. We incorporate these moderating constructs of the mood - WTP relation into our analysis because literature has proven them to be moderators of some mood - outcome measure relations (albeit not purchase decisions, nor WTP). The various hypotheses are tested in an experimental setting, preceded by a preparatory study mainly aimed at defining adequate product alternatives and measuring the openness-to-feelings construct, and demographics.

2 - Estimating and Explaining Immediate, Dynamic, and Long-run Cross-price Effects

Dennis Fok, Erasmus University Rotterdam, Erasmus School of Economics, H11-23, P.O. Box 1738, Rotterdam, 3000 DR, Netherlands, dfok@ese.eur.nl, Csilla Horvath

In this article the authors describe their comprehensive analysis of moderating factors of cross-brand effects of price changes. The authors examine an extensive set of potential moderators for the immediate as well as the dynamic cross-price effect. For the dynamic effect it is important to explicitly distinguish between the dynamic effects assuming no competitive reactions, and the net dynamic effect, that is, after accounting for competitive reactions. Prices are decomposed into regular and promotional price, and both cross-price effects are studied simultaneously. Finally, the authors compare their findings with previous literature on the moderating factors of own-price effects to understand which factors influence own-price elasticity through affecting brand switching. For estimation the authors rely on Bayesian estimation techniques to provide efficient inference. The results show evidence of the neighbourhood price effect which is shown to be conditional on whether the promoted brand is priced above or below its competitor. The promoted brand's activities turn out to play a much more important role in determining the cross-price promotional effects than its competitor's similar activities. The authors outline conditions when cross-brand post-promotion dips tend to occur. They also argue that the brand-choice portion of the overall own-brand effect of a promotion depends on the brand's marketing strategy and on category-specific characteristics. Finally, dynamic cross-price effects are found to be smaller after accounting for competitive reactions.

3 - The Effects of Consumer Overestimation and Underestimation Biases on Pricing Plans

Sreya Kolay, Assistant Professor, Paul Merage School of Business, University of California, Irvine, Irvine, CA, 92697, United States of America, skolay@uci.edu, Rajeev Tyagi

Many products involve consumers signing a pricing contract prior to actual consumption. Examples include broadband service, telephone plans, gyms. Pricing of such products range from a flat rate (unlimited gym visits for an annual fee) to a per-unit price (5 cents a minute for a phone call) or a combination of both. To choose between the various pricing plans, it requires consumers to form some expectations of their future consumption. Recent empirical work has demonstrated that consumers' consumption forecasts may not be perfect. Consumers may overestimate or underestimate their future consumption and are prone to display a flat-rate bias or a pay-per-use bias respectively. This paper takes this behavioral story as the starting point and models a rational firm's optimal pricing plans when it faces this preponderance of overestimating and underestimating consumers. This illustrates the firm's reaction to the presence of consumers' biases in an important setting. We compare the firm's optimal pricing plans and profit levels across various scenarios when it faces groups of overestimators, underestimators or a mix of either of these types of consumers and rational consumers who can accurately predict their future consumption. We show how the optimal pricing plans differ from the standard pricing literature that assumes perfectly rational consumers. We also compare consumer welfare across these scenarios. For example, we show how the overestimating consumers end up with negative consumer welfare (ex-post) while underestimating consumers enjoy positive consumer welfare (ex-post). Furthermore, the consumer welfare of a particular group of consumers, e.g., rational ones, may be impacted by the type of other consumers (overestimators or underestimators) it co-exists with.

4 - Analysis of US Automobile Market: Insights From Hedonic Regressions

Kesha Coker, Doctoral Candidate, Southern Illinois University Carbondale, Department of Marketing, Rehn Hall 229, College of Business, Carbondale, IL, 62901, United States of America, kcoker@cba.siu.edu, Siva Balasubramanian

Using a hedonic price regression approach, we identify attributes of new cars and light trucks that are valued more than others in the US market. Developed over seven decades ago, this method's key premise is that customers derive different utility from and attach varying value weights to different product attributes. Our analysis is based on 23 car attributes and 25 light truck features for all models competing in the US automobile market during 2005 and 2006. Both the semi- and double-logarithmic hedonic regression model forms were estimated; the semi-logarithmic form had superior explanatory power and diagnostics. Results provide interesting insights on value perceptions of automobile features. For both cars and light trucks, customers paid more for attributes pertaining to performance/power, safety, drive, style, and ride/maneuverability. Interestingly, our findings suggest that the auto market was not too concerned with fuel economy features for cars over the time period analyzed. The market for light trucks appears more nuanced in this regard, in that superior gas mileage carried a relatively lower value while models characterized as ëhybrids' carried relatively higher value. Future research should investigate how the relative valuation of attributes related to fuel economy evolves in the future, especially given greater fluctuations in fuel costs and increased economic constraints. Finally, as expected, the brand's country of origin played a role in customers' valuation of vehicles, with foreign cars being valued higher than domestic ones. But foreign light trucks were valued less than domestic ones. This finding reflects the greater share of the market for light trucks commanded by domestic brands. Our results also carry implications on pricing and promotion.

■ SB05

Lower Level - Room 0320

Auctions: Bidding Behavior

Cluster: Buyer Behavior

Invited Session

Chair: Mayukh Dass, Assistant Professor of Marketing, Texas Tech University, Rawls College of Business, Box- 2101, Lubbock TX 79424, United States of America, mayukh.dass@ttu.edu

1 - Drivers of Bidding Behavior In Electronic Reverse Auctions

Sengun Yeniyurt, Assistant Professor, Rutgers University, Janice Levin Bld., 94 Rockafeller Road, Piscataway, NJ, 08854, United States of America, yeniyurt@business.rutgers.edu, Cynthia Stevens, Stevie Watson, Craig Carter

Electronic reverse auctions are a popular tool used in sourcing, and have seen increased popularity in business research. In these auctions, bidding is a behavior that is a result of complex decision making that is not yet fully understood. This study explores the factors that affect suppliers' decision making and bidding behavior in electronic reverse auctions. The effects of supplier characteristics, auction configuration, and situational factors on the propensity to bid at a specific point in time during the electronic reverse auction are estimated utilizing continuous time hazard rate analysis techniques. The data used in the analysis are gathered from a series of laboratory experiments of online reverse auctions. Our results indicate that the supplier's need for cognition and extant online reverse auction experience, online auction configuration, and the status of a supplier at a given point in time (the rank that the last bid currently occupies) are factors that significantly affect the propensity to submit a bid. Also, as a supplier submits new bids in the online auction, an escalation of commitment results in more intense bidding behavior.

2 - The Impact of Online Auction Duration

Ernan Haruvy, Associate Professor, University of Texas at Dallas, Box 830688, Richardson, TX, 75083, United States of America, eharuvy@utdallas.edu, Peter Popkowski Leszczyc

Common wisdom suggests that longer duration auctions would have more bidders, which in turn would result in higher prices. To examine this notion, we conduct pair-wise comparisons of auctions identical in all but duration, with durations of one day and ten days. We find that the shorter duration results in a price increase of approximately 20%. We find that the auction duration does not significantly affect the number of participating bidders or the number of bids placed in an auction, whether active bids or bids by proxy, and that these variables do not significantly affect price. Instead, we find the culprit to be the magnitude of jumps in bids, which are negatively and significantly correlated with duration. These jump bids are in turn shown to impact final prices.

3 - The Democratization of Personal Consumer Loans: Evidence From Online Peer-to-peer Lending

Rick Andrews, Professor and Department Chair, University of Delaware, Department of Business Administration, Newark, DE, 19709, United States of America, andrewsr@udel.edu, Michal Herzenstein, Utpal Dholakia, Evgeny Lyandres

Online peer-to-peer (P2P) lending communities enable individual consumers to borrow from, and lend money to, one another directly. We study the borrower- and loan listing-related determinants of funding success in an online P2P lending community by conceptualizing loan decision variables (loan amount, duration for which loan request is active, and effort prior to making the request) as mediators between borrower attributes such as demographic characteristics and financial strength and the final interest rate the borrower pays. Borrower attributes are also treated as moderators of the effects of loan decision variables on the final interest rate. The results of our empirical study, conducted using a database of 5,367 completed P2P loan transactions, provide support for the proposed conceptual framework. Generally, demographic attributes such as race, gender, and marital status have little to no effect on the final interest rate, in contrast to the large effects of borrowers' financial strength. These results are substantially different from the documented discriminatory practices of US financial institutions, suggesting that individual lenders lend more fairly when their own investment money is at stake in P2P loans. The paper concludes with specific suggestions to borrowers to increase their chances of receiving funding in P2P lending communities, and a discussion of future research opportunities.

4 - Loser's Curse? Effects of Losing an Auction on Bidding Behavior in Subsequent Auctions

Mayukh Dass, Assistant Professor of Marketing, Texas Tech University, Rawls College of Business, Box- 2101, Lubbock, TX, 79424, United States of America, mayukh.dass@ttu.edu, Srinivas K. Reddy

Over the last decade, the growing popularity of online auctions and availability of rich bidding data have resulted in interesting research on price dynamics and bidder behavior in auctions. Interestingly, most of the studies focused on bidder behavior looked at the winning bidders and bidder competition and nothing on the "losers" (losing bidders) and how their behavior may impact the auction outcome. In this paper, in the context of simultaneous auctions, we examine how losing bidders on an item behave and bid on subsequent items in the auction Using data from an online art auction where 199 Contemporary Indian art works were sold, we find that bidders aggressively participate in subsequent auctions after losing the initial one, resulting in a positive effect on seller profit. We term this as Loser's Curse. We also found that this effect diminishes as the gap between their losing bid price and the winning bid price increases. In other words, effects of Loser's Curse dilute with the gap between the bidders last bid and the final price. We conclude with the managerial implications of our findings and future directions related to this study.

■ SB06

1st Floor - Room 1210

Network Structure/Process

Cluster: Special Track: Interactive Maketing

Invited Session

Chair: Michael Trusov, Assistant Professor, University of Maryland, 3454 Van Munching Hall, College Park, MD, 20742, United States of America, mtrusov@rhsmith.umd.edu

1 - Identifying Network Properties From Aggregate Data

Michael Trusov, Assistant Professor, University of Maryland, 3454 Van Munching Hall, College Park, MD, 20742, United States of America, mtrusov@rhsmith.umd.edu, William Rand

Firms are becoming increasingly interested in the role of social interactions in the success of their product. Numerous academic studies have discussed the importance of word-of-mouth communication for product trial and adoption. However, with the exception of some special cases such as online communities or telecommunication systems, these interactions are rarely observable. Even in these special cases, third-party firms who utilize a network as a platform typically have very limited knowledge of the underlying network structure. In our study we present a technique for discovering general network properties from readily available aggregate-level data. Using an agent-based modeling approach in combination with Bayesian model selection techniques we infer properties of the unobserved consumer network. We discuss implications of the inferred knowledge to marketing practitioners.

2 - Searching for "Something": The Role of Product Networks and Social Networks in Ill-defined Search in Online Environment

Shachar Reichman, sr@post.tau.ac.il, Gal Oestreicher-Singer, Jacob Goldenberg

Commercial and social interactions online have increased dramatically over the last decade. An important by-product of this development is the emergence of a number of visible electronic networks. To date, researchers and practitioners have focused on social networks. That is, networks which describe relationships between individuals. Our focus is on the product network. These networks map complementarity between products frequently consumed by overlapping set of consumers. Most electronic commerce sites are organized as a collection of webpages, each featuring one product and linked by hyperlinks, thus creating a product network. Those networks are especially interesting because they are often generated by aggregated consumer actions and are not predetermined by the firm. We focus on the interaction between these two types of visible electronic networks - product networks and social networks - and their influence on consumers' search for content. Specifically, we focus on ill-defined search, i.e., a consumer's search over a space of options, without a specific target or prior knowledge of what he or she is looking for. For example, consider the search for a present or interesting content. While performing an ill-defined search online, consumers are likely to be influenced by the product network structure as well as the interaction over the social network. We have collected data from YouTube.com, currently the largest user generated content site, both on videos' pages (product network) and users' pages (social network) and the links between them. Using this unique data set we are able to measured the distance between product pairs in the product network as well as the consumers 'diameter of interest'; the social diameter, which measure the distance between peer consumers' tastes; and studied consumers search path over the network. Our goal is to understand what constitutes, optimal search strategies, and the optimal network structures that facilitate the search process.

3 - Not Invisible: Uncovering the Face of the Network

Yaniv Dover, yanivd@phys.huji.ac.il, Jacob Goldenberg, Danny Shapira

Networks can be extremely large but a disseminated process taking place on them (e.g., opinion, epidemic, adoption) propagates over only a subset of them. We define this part as the active network. This part of the network seems to be invisible, and there is no guarantee that it has the structure of the entire network (e.g., scale-free) because it is a product of an interaction between the entire network structure and the disseminated process itself. We present a method that can uncover the structure of the active network (i.e., degree distribution) and the properties of the dissemination process itself, based on the diffusion data alone. We show that the active network can have different structures as a result of interaction between the process itself and the network potential including even a random network structure. Using data of diffusion of epidemics, opinion and products we show that indeed active network can have scale free, random, log normal and normal degree distributions depending on the process.

4 - An Empirical Comparison of Drivers of Network Evolution in a Social Commerce Community

Don Lehmann, Columbia Business School, Columbia University, 3022 Broadway, New York, NY, United States of America, drl2@columbia.edu, Olivier Toubia, Andrew Stephen

In this paper we model network formation mechanisms in an online "social commerce" marketplace where individuals have shops that they can link to other individuals' shops.

■ SB07

1st Floor - Room 1220

Social Influence: Internet II

Cluster: Social Influence

Invited Session

Chair: Monic Sun, Assistant Professor, Stanford University, 518 Memorial Way, Stanford, CA, 94305, United States of America, monic@stanford.edu

1 - Spreading the Oprah Effect: The Diffusion of Demand Shocks in a Recommendation Network

Eyal Carmi, Tel-Aviv University, Tel-Aviv, Tel-Aviv, Israel, eyal.carmi@gmail.com, Arun Sundararajan, Gal Oestreicher-Singer

We study the rate and persistence of the diffusion of exogenous demand shocks through the co-purchase network on Amazon.com. We do this by recording the books that were featured on the Oprah television show as part of her book club over the years 2006 and 2007. Not surprisingly, these featured books experience a substantial positive shock to their demand following their appearance. Towards understanding the distance to which this demand shock "travels" through the co-purchase network, we follow the demand changes for the books that are in the network neighborhood (one, two, three or four "clicks" away) of these featured books in the month following the featured book's appearance. We find that first and second neighbors also experience a statistically significant multifold increase in their demand on account, or that there is evidence of substantial "contagion" of the exogenous shock. Interestingly, there is a great deal of variation in the magnitude and persistence of this contagion which depends in part on the extent to which the neighborhood of the featured book is clustered, and the extend of triadic and cyclic closure associated with the links to the first neighbors. Our results demonstrate that there are specific network properties that lead to the persistence of demand contagion over time, and that distinguish between "fad-like" diffusion which dies down within two weeks, and diffusion which lead to a more permanent and persistent upward shift in the demand for the neighboring products. Our work presents a new model and evidence of contagion in economic networks, and furthers understanding of the network characteristics that influence the diffusion patterns of exogenous marketing events.

2 - How Does Variance of Product Ratings Matter?

Monic Sun, Assistant Professor, Stanford University, 518 Memorial Way, Stanford, CA, 94305, United States of America, monic@stanford.edu

This paper focuses on the informational role of the variance of product ratings. I first build a theoretical framework on how firm strategies and market outcomes would respond to both the average rating and the variance of ratings, and then empirically test the theoretical predictions. The model yields three major predictions. First, given the average rating, profit is U-shaped in the variance of ratings. Second, when the variance becomes unobservable, a firm would lower prices for niche products and raise prices for blockbusters. Third, a firm would make the variance more salient to consumers when the product is likely to trigger either a very low or a very high level of disagreement among consumers. I collect data from the motion picture and computer product industries. Empirical evidence provides support for all three predictions. The results suggest that the variance of product ratings can be an effective marketing tool in shaping brand images and influencing consumers' purchase decisions.

3 - Consumer-driven Promotions Through Social Networks

Vineet Kumar, PhD Candidate, Carnegie Mellon University, 5000 Forbes Avenue, Pittsburgh, PA, 15213, United States of America, vineetk@cmu.edu, Baohong Sun, Ramayya Krishnan

We examine how dyadic social effects drive viral or consumer-to-consumer marketing. The idea that customers may be valuable due to their influence on other customers or by virtue of their social network position has long been recognized by practitioners and has also received academic attention. We situate our study in a social network formed by mobile phone users in a large Asian city. Our unique panel data covers 6 months of individual consumer level usage of mobile network services (voice calls and SMS messages) and purchase of ringback tones (or Callertunes). Consumer preferences are interdependent in the sense that a consumer's choice of ringback tone may be influenced by the choices made by her friends. We build the interdependence of consumer utilities directly into our model and estimate it from the data, and this allows us to precisely disentangle individual influence. We focus on the following questions: (a) How are consumers influenced by friends in their social network? (b) Who are the influential individuals and which consumers are susceptible to network marketing? (c) What are the dynamic effects of consumer-driven promotions? (or what are the short, medium and long-term effect of a promotion as it cascades through the network?). The unique aspects of the ringback tone allows us to determine the number of exposures per consumer, and permits us to examine how the purchase of ringback tones is influenced by the social calling network of consumers. We demonstrate that simple network degree centrality and similar metrics may be misleading in the evaluation of social influence. Our findings also have broad practical applicability to categorize consumers based not only on individual-level data but on network (dyadic) data reflecting social ties and influence.

■ SB08

1st Floor - Room 1230

Dynamic Models II

Cluster: Dynamic Models

Invited Session

Chair: Shuba Srinivasan,Associate Professor, Boston University, School of Management, Boston, MA, 02215, United States of America, ssrini@bu.edu

1 - Dynamic Learning in Behavioral Games: A Hidden Markov Model Approach

Ricardo Montoya, University of Chile, Republica 701, Santiago, Chile, rmontoya@dii.uchile.cl, Oded Netzer, Asim Ansari

Research in economics and marketing often relies on the notion of a strategic equilibrium in competitive settings. While an equilibrium is assumed to occur, the path towards an equilibrium is often not modeled. Behavioral game theory researchers have documented that players learn from previous choices and outcomes over repeated strategic interactions. This research shows that players use learning strategies such as reinforcement learning, belief learning or a combination of these as in the Experience-Weighted Attraction (EWA) model. While previous research has identified different learning strategies that are employed, in this paper, we focus on the dynamics in the choice of these learning strategies over the course of a repeated game. We demonstrate that in a repeated game, players not only learn from previous choices and outcomes, but also may change their learning strategies over time. For instance, a player may shift from exploration to exploitation behavior with a view toward maximizing the expected outcome. We investigate the degree of state dependence in learning and probabilistically uncover the latent learning states and paths used by the players. We build a heterogeneous hidden Markov model which allows players to transition between different states of learning strategies over the periods of repeated play and empirically validate our model using both simulated and actual data from several repeated games. We demonstrate that accounting for the transitions in the learning strategies results in an enriched understanding of the dynamics of strategic action and also improves model predictions relative to the EWA, reinforcement and belief learning models.

2 - Understanding Consumer Preference Evolution for Newer Attributes

Karthik Sridhar, Doctoral Candidate, SUNY at Buffalo, 215 Jacobs, Buffalo, NY, 14260, United States of America, ksridhar@buffalo.edu, Ram Bezawada, Minakshi Trivedi

Consumers, in today's retail scenario, are continuously exposed to products containing newer attributes. The purchase patterns for such products suggest that consumer preferences for new attributes evolve over time. In this paper we investigate consumer preference evolution for the "organic" attribute in multiple food categories. We specify a heterogeneous nested logit framework that accounts for choice among attributes (organic or conventional) and incorporates a Bayesian learning process to model preference evolution. We use scanner panel data of household-level purchases for several categories. Our analysis is further enriched by survey data obtained from the same set of households. Thus, in addition to estimating consumers responses to marketing mix variables (prices and promotion), we also measure the impact of consumer psychographics (e.g., "health" orientation), consumer purchase habits (e.g., "healthy" purchases), and demographics on the choice of "organic" products. The model parameters are obtained using simulated maximum likelihood. Preliminary results suggest that consumers' initial preferences and preference evolution for the "organic" attribute vary across categories. Our study has the potential to help retailers and manufacturers understand the variability in consumer purchase behavior for products with new attributes, thus enhancing their category management decisions.

3 - Spatio-temporal Allocation of Advertising Budgets

Ashwin Aravindakshan, UC Davis, 157 AOB IV, Graduate School of Mgmnt, 1 Shields Avenue, Davis, CA, 95616, United States of America, aaravind@ucdavis.edu, Kay Peters, Prasad Naik

Companies strive to grow sales over time and across regions. The manager often faces a dilemma: Should advertising investment be spread uniformly across all regions, or spend more on strong regions, or develop the weaker regions? Previous research shows that support-the-weak or uniform spending strategies are generally superior to the support-the-strong strategy for new products. Which strategy should managers of mature brands follow? To address this question, we formulate a spatio-temporal model of advertising and derive dynamically optimal advertising budget and its allocation across regions. More specifically, we incorporate two different types of spatial effects, namely spatial heterogeneity and spatial dependence. In addition, we account for endogeneity of advertising and sales by using instrumental variables approach. We next apply maximum-likelihood approach to estimate the spatial dependence across multiple regions. Then we conduct a normative analysis to determine the optimal level of advertising spends at both the regional and national levels and compare it with actual spending levels. Our main results show that mature brands should not allocate resources as per support-the-weak or uniform or support-the-strong strategies; rather allocation should be based on ad effectiveness and other model parameters. In other words, optimal allocation is independent of regional sales volumes. Finally, we find that re-allocation of the fixed advertising budget yields substantial profit improvement.

4 - Consumer Attitude Dynamics and Marketing Spending Rules

Shuba Srinivasan, Associate Professor, Boston University, School of Management, Boston, MA, 02215, United States of America, ssrini@bu.edu, Dominique M. Hanssens, Koen Pauwels, Marc Vanhuele

Brand managers are urged to compete for the ëhearts and minds' of consumers and often collect metrics to this end. But how actionable is it to know that e.g. awareness stands at 80% while brand preference stands at 60%? Conventional wisdom suggests investing in the "weakest link', i.e. the metric with the most remaining potential. However, brand preference may have hit its ceiling, while momentum in awareness is still possible. Moreover, awareness could be more responsive to marketing actions than brand preference is. Finally, gains in brand preference may be short-lived due to fickle consumers or tough competitors, while gains in awareness are sticky. So how can brand managers use consumer attitude information to guide marketing actions? This important question of marketing effectiveness has not received thorough answers, mainly because the data sources have been lacking. Our paper incorporates the evolution of key mind-set metrics for predicting marketing impact, using newly datasets that match consumer attitudes and purchasing behavior for over 60 brands in fast-moving consumer goods categories for over 7 years. Our empirical analysis starts with testing mindset metrics for long-term relevance. Among the metrics that pass the test, we formulate measures for potential, stickiness and responsiveness. We establish predictive capability in a series of comparative tests that 1) diagnose two brands on the key mindset metrics at time t, 2) observe the differences in their marketing spending between time t and time (t+k), 3) make a prediction on which brand will enjoy the highest return to these marketing efforts and 4) assess marketing impact at time (t+k) and compare the results to the predictions. We conclude the paper with the managerial implications.

■ SB09

1st Floor - Room 1240

Theory Based Empirical Models II

Cluster: Marketing Models
Invited Session

Chair: Wesley Hartmann,Associate Professor, Stanford University, Palo Alto CA, United States of America, Hartmann_Wesley@gsb.stanford.edu

Co-Chair: Brett Gordon,Columbia Business School, 3022 Broadway, Uris 511, New York, NY, 10027, United States of America, brg2114@columbia.edu

Co-Chair: Günter Hitsch,University of Chicago, guenter.hitsch@chicagogsb.edu

1 - Exploring Life-time Persistence in Brand Preferences

Bart Bronnenberg, University of Tilburg, CentER for Economic Research, Tilburg, Netherlands, bart.bronnenberg@uvt.nl, Matthew Gentzko, Jean-Pierre Dube

We study the determinants of consumer brand preferences using a novel dataset that links household purchases of branded goods to the locations where household members lived at different stages of their lives. We ask three questions. First, to what extent does the geographic location in which an individual lived in the past predict their brand preferences holding constant where they live now? Second, to what extent is this behavior driven by selection on stable individual characteristics as opposed to a causal effect of past consumption, advertising exposure, or social influence? Finally, how does the malleability of brand preferences vary with age and how does this age profile differ across products?

2 - Identifying Preferences From Almost Continuous Choice Sets

Sanjog Misra, University of Rochester, misra@simon.rochester.edu

Many product markets are characterized by extremely large choice sets that have arisen as a reaction to demand from consumers that exhibit very heterogeneous tastes. In many cases the size of the choice sets are so large that one might describe them as almost continuous in the product-attribute space. Ascertaining the distribution of tastes and willingness to pay such product-attributes is a critical ingredient for a firm's product design and pricing decision. However, since consumers typically make only one choice within a reasonable time horizon, this represents a challenge to marketing researchers. We propose and implement an econometric framework that estimates the willingness to pay for various product-attributes in almost continuous choice set scenarios. The framework adapts and extends recently developed structural methods for demand estimation. We apply our framework to a real data from an online retailer and demonstrate its viability.

3 - An Empirical Analysis of Individual-level Casino Gambling Behavior

Sridhar Narayanan, Stanford University, 518 Memorial Way, Stanford, CA, 94305, United States of America, Narayanan_Sridhar@gsb.stanford.edu, Puneet Manchanda

Gambling has evolved to becoming a very large and pervasive industry in the United States over the last three decades. The nature of this industry and its rapid growth has led to a lot of debate about its benefits and costs. In this paper, our access to a rich dataset on individual consumer behavior in a casino allows us to take a data based approach to investigating some of the common criticisms of the industry. We focus our attention on three of the commonly cited criticisms of the gambling industry - it leads to addictive behavior with potentially harmful individual and societal effects, it leverages "irrational" consumer beliefs and it uses marketing incentives to influence gamblers. We fit a model of the play decision and bet amount to data from a consumer panel of casino visitors over a two-year period and test for addiction and irrational consumer beliefs. Our data are at a highly disaggregate level and our modeling approach allows us to exploit the rich variation in the data both across and within individuals. Our results show that only about 8% of all consumers show evidence for addiction. In terms of irrational beliefs, our analysis allows us to test for behavior based on two such beliefs - the "hot hand myth" and the "gambler's fallacy." We find evidence for the gambler's fallacy in both directions - consumers who win (lose) a bet are less (more) likely, on average, to continue betting. We also find that marketing activity has a positive effect on the decision to play and the amount to bet. In terms of effect size, marketing (comps) seem to be more similar to advertising rather than price promotions. Finally, we find some evidence that marketing activity is more effective for consumers who exhibit more addictive behaviors.

4 - Non-parametric Estimation of Marketing Mix Effects Using a Regression Discontinuity Design

Harikesh Nair, Stanford University, 518 Memorial Way, Stanford, CA, 94305, United States of America, Nair_Harikesh@gsb.stanford.edu, Wesley Hartmann, Sridhar Narayanan

We discuss the non-parametric estimation of marketing mix effects using a regression discontinuity design. Our main insight is to exploit commonly observed discreteness and kinks in the heuristics by which firms target marketing activity at consumers, for non-parametric identification. Such kinks, along with continuity restrictions that are typically satisfied in marketing and industrial organization applications, are sufficient for identification of local treatment effects. We review the theory of regression discontinuity estimation in the context of targeted marketing applications, and present new results and simulations to explore its applicability in various marketing settings. We then apply the approach to two examples of targeted marketing: i) casino e-mail promotions to customers grouped based on their expected customer values falling in a range; and ii) an insurance company soliciting requests for quotes from customers whose expected profitability falls above a certain threshold. In both cases, we illustrate that regression discontinuity reveals negative effects of the marketing campaigns that would not have been uncovered using more parametric approaches, even when including measures of customer heterogeneity.

■ SB11

2nd Floor - Room 2210

Choice Models: Multiattribute Models

Cluster: Choice

Invited Session

Chair: John Roberts, Professor, London Business School, Regents Park, London, NW1 4SA, United Kingdom, jhroberts@london.edu

1 - Design and Analysis of a Lexicographic Choice Model for Brand Tracking Research

Keith Chrzan, VP Marketing Sciences, Maritz Research, 996N 250E, Chesterton, IN, 46304, United States of America, keith.chrzan@maritz.com

Anecdotal evidence and introspection suggest that people sometimes include non-compensatory choice rules when making decisions among brands. Some conjoint methods accommodate non-compensatory aspects of choice processes, and allow researchers to test competing theories of decision-making (Swait 2001, Gilbride and Allenby 2004 and Yee et al. 2007). This presentation describes a research design and modeling method that allows analysts to fit a non-compensatory lexicographic choice model to ubiquitously collected brand tracking data. We compare the lexicographic model to the standard, compensatory MNL model of brand choice in nine empirical studies, and we illustrate the unique insights that are available when, as it usually does, the lexicographic model significantly outperforms the MNL choice model. The lexicographic model is simple to program with standard data analysis programs, including SAS, SPSS and even Excel. The issue of whether utility-formation is compensatory or non-compensatory can be quite complex, but even novice analysts will be able apply the lexicographic model to cross-sectional brand tracking data.

2 - Preference Evolution Under Changing Choice-set Composition: A Behavioral Perspective

Berk Ataman, Assistant Professor, Rotterdam School of Management, Erasmus University, Burgemeester Oudlaan 50, Rotterdam, 3062PA, Netherlands, bataman@rsm.nl, Robert Rooderkerk

In most product markets consumers repeatedly choose from sets of alternatives. Extant research in marketing provides evidence that consumer preferences evolve over the course of these choices and have advanced our knowledge by relating preference dynamics to firms' marketing activities such as advertising and discounting. However, as a result of product introductions and deletions these choice-sets vary over time. Though it is widely documented that product preferences depend on the context in which these judgments are made, little is known about the process underlying preference construction arising from firms' product line decisions. Accordingly, we analyze how consumer preferences evolve in the context of repeated choice with varying choice-sets. When choosing from a set of alternatives, consumers select items that are uniquely defined by an array of attributes. Changing choice-set composition exposes consumers to changes in the range of available attribute values and the frequencies of attribute-level occurrences. In line with range-frequency theory, consumer preferences should adapt in response to these changes. To attain insights into whether and how these behavioral mechanisms guide the preference dynamics we conduct a computerized choice-based conjoint experiment, wherein respondents make repeated choices from varying sets of alternatives. Preliminary findings that arise from the application of a Bayesian Dynamic Heterogeneous Choice Model indicate that changes in choice-set composition explain evolution of attribute-level preferences. The results also indicate that augmenting standard demand models in marketing with behavioral perspectives substantially improves their forecasting ability.

3 - The Role of Reference-quality in a High-tech Driven Market

Wonjoon Kim, Assistant Professor, KAIST, 373-1 Guseong-dong, Yuseong-gu, Daejeon, 305701, Korea, Republic of, wonjoon.kim@kaist.edu, Jeong-dong Lee, Subrata Sen, K Sudhir

Behavioral research has documented that reference effects are important in markets where either the choice set or the attributes of products in the choice set change over time. However, empirical research on reference effects has focused only on reference price effects, because the analysis has been only in non-durable categories, where prices change over time, but choice set and quality of products are fairly stable. In contrast, innovation-driven markets see substantial changes in quality and available choice sets over time. This paper empirically demonstrates the importance of accounting for reference quality (and price) effects in estimating a demand system for the U.S. wireless phone market. We find that omission of reference quality effects in demand biases price elasticity estimates and increases demand forecast error. We also examine two questions about reference formation: (1) Are reference effects formed around the best level of attributes or the average level of attributes? (2) Are reference effects contextual within the current choice set or are they temporal based on attributes of products available in the past? We find that reference effects are based on the best product quality, but the average price. We find evidence of both temporal and contextual reference effects in quality and price.

4 - A Parsimonious Model for Testing Taste Formation Phenomena

John Roberts, Professor, London Business School, Regents Park, London, NW1 4SA, United Kingdom, jhroberts@london.edu, Bruce Hardie, Mathew Chylinski

How consumers learn about the importance of product attributes with which they have no familiarity has important implications for new product positioning and communication strategies. The psychology literature provides a strong conceptual foundation of the mechanisms by which learning can take place, as well as identifying some of the information processing limitations that consumers demonstrate in integrating new information. A number of existing learning models lend themselves to representing many of these phenomena. In this paper we review existing models, and develop a parsimonious one that allows nested tests for biased learning, existence of prior beliefs, and recency/primacy effects. Using a laboratory experiment we test the model in both noisy and deterministic conditions and show how learning rates and asymptotes very as a function of the strength of relationship between an attribute and its ability to facilitate the achievement of a consumer goal.

■ SB12

2nd Floor - Room 2220

B2B: Relationship Management

Cluster: B2B Marketing

Invited Session

Chair: Sheila Sasser, Assistant Professor, Eastern Michigan University, 300 W. Michigan Avenue, 437 Gary M. Owen Building, Ypsilanti, MI, 48197, United States of America, ssasser@emich.edu

1 - On the Association among Relationship Learning, Relationship Performance and Relationship Tensions

Chueh-An Hsieh, PhD Candidate, Michigan State University, Measurement and Quantitative Methods, 3000 Trappers Cove Trail Apt. 3C, Lansing, MI, 48910, United States of America, hsiehchu@msu.edu, Yi-Chun Hsieh

In a knowledge-based economy, knowledge acquisition has become an everlasting pursuit for the business remaining its sustainable competitive advantage. Due to the highly competitive environment and the fluid property of knowledge, many companies obtain and accumulate knowledge resources through external partnerships. The close relationship existing among network organizations plays the key factor to facilitate the willing of sharing knowledge, and promote the dissemination and accumulation of knowledge. Therefore, a partnership of mutual trust is deemed to be an important strategic asset for the business. Whereas interactive relations over a long term period bring the dark side for both sides relationship, the unduly close relations may bring antipathy and spoil their relations among partner organizations. Relationship tension is the compelling force which impacts the relationship performance among organizations, including cooperation verse competition, rigidity verse flexibility, and short-term verse long-term orientation. On the basis of the relationship between leaning and performance, this study attempts to examine the impact of relationship learning on relationship performance through the expansion of organizational learning from internal learning system to external learning activities. It explores (1) the influence of relationship learning on relationship performance; (2) the moderating effects of relationship tension on relationship learning and relationship performance. Finally, several managerial implications and directions for further research are discussed and provided.

2 - Are Industrial Buyers Attached by Brands? Exploring the Influence of Attitude and Behavioral Control

Dorith Mayer, Technical University Munich, Leopoldstr. 139, Munich, Germany, mayer@wi.tum.de, Ralf Reichwald

Although previous research showed that branding gets increasingly important in B2B markets, brand retention has been rather neglected in the context of B2B switching behavior so far. Therefore, we contribute a framework of brand retention in B2B markets which accounts for industrial buyers' attitude and behavioral control in switching decisions based on the Theory of Planned Behavior. Using a choice-based conjoint experiment and survey data collected from industrial buyers of telecommunication solutions, we are able to identify the effects of attitude and behavioral control on brand retention. Modelling the choice decision through a random utility model allows considering heterogeneity in brand retention behavior. The results imply that the attitude of industrial buyers explains a major part of the differences in brand retention behavior and is influenced by behavioral control. Consequently, suppliers are able to identify those customers with high probability of switching and therefore are able to address their customers' needs adequately in order to strengthen brand retention.

3 - Mad Men Taking a Creative Risk

Sheila Sasser, Assistant Professor, Eastern Michigan University, 300 W. Michigan Avenue, 437 Gary M. Owen Building, Ypsilanti, MI, 48197, United States of America, ssasser@emich.edu, Scott Koslow

Although marketing clients claim to want their advertising agencies to produce highly creative work, agencies often feel that marketers will not use the creative campaigns they present them. We suggest that a key inhibiting factor is a lack of client openness to exploring ideas. When marketers are open, they will insist on highly creative work from their agency and buy it, but if not, they are resistant to creativity. While copytesting can be wisely used to improve advertising, marketers often misuse it to control agencies and turn down more advertising campaigns that those who do not use copytesting. However, in situations where the work is genuinely creative or the client insecure, agencies can use organizational politics to get their work used by clients. We test these hypotheses on a sample of 1125 advertising campaigns reported by 408 respondents from the largest New York and Detroit agencies. Results confirm these effects and we offer implications.

■ SB13

2nd Floor - Room 2230

Reviving Brands

Cluster: Brands and Branding

Invited Session

Chair: Catherine Tucker,MIT Sloan School of Management, 1 Amherst St, Cambridge, MA, 02142, United States of America, cetucker@mit.edu

1 - Why Are Bad Products So Hard to Kill?

Juanjuan Zhang, Assistant Professor of Marketing, MIT Sloan School of Management, 1 Amherst St, E40-171, Cambridge, MA, 02142, United States of America, jjzhang@mit.edu, Duncan Simester

It is puzzling that firms often knowingly continue investments in unpromising projects. We argue that bad products are hard to kill because firms face an inherent conflict when designing managers' incentives. A firm can motivate a manager to work hard by promising a bonus if the product succeeds. However, this bonus may lead the manager to forge ahead with low-demand products. To ensure that the manager does not ignore signs of low demand, the firm must also reward the manager for killing a project. However, this reward in turn weakens the manager's incentives to work. The inability to resolve this tension forces the firm to choose between paying an even larger bonus for success and accepting continued investment in low-demand products. We also study how the timing of demand information affects the outcome. If the manager learns demand before choosing effort, the firm can ensure that the manager only continues high-demand projects. However, mere uncertainty about the timing of demand information can amplify the inefficiencies, making bad products even harder to kill. Our model embraces previous explanations for why firms invest in bad products. In particular, we show that managers' career concerns and escalating psychological commitment can both aggravate the tension between motivating effort and detecting low demand.

2 - Would You Consider a Buick Even if It Were #1 in JD Power?

Erin MacDonald, Post-doctoral Fellow, MIT Sloan School of Management, E40-168, One Amherst Street, Cambridge, MA, 02142, United States of America, erinmacd@mit.edu, Glen Urban, John Hauser

Even before the financial crisis the US automobile industry suffered significant loss of market share. One explanation is that a decreasing number of customers consider purchasing US brands. For example, roughly 2/3rds of California customers reject General Motors' brands without considering them. We describe a multi-year research effort designed to understand how US manufacturers could increase consideration of their brands. We began by observing customers making consideration decisions. This study identified a brand override phenomenon (customers discount stated superiority on quality and reliability for US brands), indicated the need to make search costs salient to measure realistic consideration sets, and was consistent with the hypothesis that customer use a multi-stage consider-then-choose process or screen-then-consider-then-choose process. Key findings were confirmed with a web-based study that varied (a) search costs and (b) brands and feature differences. The third and fourth studies tested the influence of inductions on consideration. Some inductions were obvious: some GM vehicles were (truthfully) superior on JD Power and Consumer Reports evaluations. Others were more subtle, presenting information that peaked customers' curiosity. The third study used extant methods to infer the features by which customers consider vehicles; focusing on a limited set of features and brands, made feasible by exploiting the identified two- or three-stage evaluation process. To scale up to a realistic set of brands and features for the auto market, the fourth study uses a new method of adaptive conjunctive questioning to measures customers' decision processes before and after inductions, identifying inductions that influence consideration and decision.

3 - Adaptive Profile Evaluation to Identify Heuristic Decision Rules in "Large" Experimental Designs

Daria Silinskaia, MIT, 1 Amherst Street, Cambridge, MA, 02142, United States of America, dariasil@mit.edu, Glen Urban, John Hauser

There has been a growing interest among both managers and academic researchers in modeling the process consumers use to form a consideration set. In the case of the automobile industry, car makers must design and market vehicles that consumers want to buy in order to return to profitability. About half of US consumers will not even consider GM, Ford, or Chrysler vehicles. This is even more critical because some models "win" among considered vehicles if they make it into the consideration set. There is significant evidence that consumers' decision processes are heuristic - they screen on features and/or brand. Unfortunately for conjoint-like methods focused on consideration, even a "small" design of brands, vehicle types, powertrains, and other features requires a minimum orthogonal resolution of 13,230 profiles (21 x 9 x 7 x 5 x 33 x 2). Clearly, it is not feasible for respondents to evaluate so many profiles. We demonstrate that an adaptive questioning procedure can identify respondent-specific heuristic rules in far fewer (roughly 30) profiles. We begin by asking the respondent to configure the horizontal attributes for a "seed" vehicle which they would consider. Subsequent profiles are presented to respondents to obtain maximal information, by it minimizing the expected posterior entropy obtained using a fixed-point iteration of a conjunctive decision rule. We test our adaptive method in a large scale study for a US automobile manufacturer. Respondents first complete the adaptive profile evaluation, then complete memory cleansing tasks, and finally complete a validation task consisting of profiles chosen to describe popular existing vehicles. We compare our proposed method to existing methods that attempt to identify non-compensatory heuristic decision rules.

4 - Continuous-time Markov-process with Misclassification: Modeling and Application to Auto Marketing

Glen Urban, David Austin Professor of Marketing, MIT Sloan School of Management, E40-159, One Amherst Street, Cambridge, MA, 02142, United States of America, glurban@mit.edu, Gui Lieberali, John Hauser

Past research has explored consumer response using Markov models of behavioral states with marketing variables linked to transitions. But Markov models are frequently subject to state specification error and state measurement error (states often times are not directly observed). We propose a multi-state continuous-time Markov process model that explicitly considers state measurement and specification errors. We apply the model to a large field experiment to determine the effects of marketing strategies on automobile purchasing. We model consumer response to different marketing instruments and allow for multiple changes of states between discrete-time state measurements. Covariate effects, transition probabilities, and probabilities of misclassification are estimated simultaneously. Time-dependent transition probabilities depend on consumer characteristics, marketing actions, and behavioral states. We analyze a large-panel factorial field experiment to determine if advertising, Internet advice, moderated on-line communities, and competitive test drives are effective in selling automobiles. We model continuous-time flows among five behavioral states: "Unaware," "Consider," "Purchase," "Do Not Consider," and "competitive test drive". Results suggest that the marketing actions have the potential to improve the likelihood that a consumer purchases a GM vehicle. Methodologically, we found that estimating the probability of misclassification during the flow estimation in our Continuous-Time Markov Process (CTMP) improves the actual estimates of the explanatory variables.

■ SB14

2nd Floor - Room 2240

Services: Strategy

Cluster: Marketing Strategy

Invited Session

Chair: Tolga Akcura,Associate Prof., Long Island University, Northern Blvd, Brookville, NY, United States of America, munir.akcura@liu.edu

1 - How are Determinants and Outcomes of B2B Service Innovations Different From Those of B2C?

Thomas Dotzel, Doctoral Candidate, Texas A&M University, 220 Wehner Building, 4112 TAMU, College Station, TX, 77840-4112, United States of America, TDotzel@mays.tamu.edu, Leonard L. Berry, Venkatesh Shankar

Both developed and developing economies worldwide are becoming increasingly services-driven. By some estimates, the value of business-to-business (B2B) commerce dwarfs that of business-to-consumer (B2C). Yet not much is known about B2B services. In particular, firms competing in business markets are constantly seeking to introduce service innovations to satisfy customers and improve firm value. The Institute for the Study of Business Markets (ISBM) points out that "as firms continue to seriously "mix" service offerings [Ö] with hard product offerings, the issue of computing the value, demonstrating value, and documenting value is becoming ever more important." However, there is a paucity of research on B2B service innovations (B2B-SIs) and their value to firms. We empirically address this issue by studying both the determinants and outcomes of B2B-SIs, while controlling for both firm- and market-specific factors. Furthermore, we investigate how these effects are different from those of business-to-consumer service innovations (B2C-SIs). We develop a modeling system that relates service innovation, customer satisfaction and firm value to one another. We estimate our model on a unique panel data of service innovations assembled from multiple data sources across multiple industries. Preliminary results indicate that while B2B-SIs have positive effects on both customer satisfaction and firm value, there is insufficient evidence for the effects of B2C-SIs on customer satisfaction or firm value. Our findings offer executives important insights about the value and the determinants of different types of service innovations for their companies.

2 - The Antecedent, Mediating and Moderating Factors of Service Brand Love GA Cross-Level Research

Hsiu-Wen Liu, Assistant Professor, Soochow University, No. 56, Sec.1, Kuei-Yang Street, Taipei, 100, Taiwan - ROC, hsiuwenliu@gmail.com, Yu-Li Lin

Brand love is different from the concept of brand satisfaction or brand loyalty. As a young age will be crazed about a super idol, having a positive attitude toward a brand leads to an emotional attachment and ultimately love the brand. A service brand can have a unique position if it can deliver special value and have an emotional connection with their customers. The service offering needs to be provided by a front-line employees and a service team. Therefore, the attitude and service behavior provided by the employee will have a living branding effect, providing meaningful thoughts than advertising and determining the feeling of service brand love. In this study, we will focus on service offerings, discussing how customer's feelings of service brand love will be influenced by the antecedent factors through service delivering process. We presume that the service policy can create service climate in the organization so as to have a positive effect on employee's customer orientation. Through the mediating effect of employee's customer orientation behavior, customer service can create service brand love. In addition, the moderating role of team level factors will be explored. In this study, we link three kinds of data from service team, employee and customer in order to examine term service climate, team customer orientation, employee psychological service climate, employee customer orientation service behavior and their effects on service brand love. To prevent the biased information resulted from the distortion of data with different levels, the cross-level research design will be applied to examine the proposed hypothesis. Finally, conclusions and managerial implications will be provided based on the findings of this study.

3 - Rethinking Revenue Generation: Cross-selling in Customer Service

Nita Umashankar, Doctoral Student, University of Texas at Austin, 1 University Station, B6700, Austin, TX, 78712-0211, United States of America, nita.umashankar@phd.mccombs.utexas.edu, Raji Srinivasan

Customer service has evolved as a key source of differentiation. An important strategic shift in customer service is the move from a focus on cost-containment to revenue generation. A key source of revenue generation is the cross-sell of additional goods and services with the potential to enhance the performance of existing products. In this paper, we ask the following questions: (1) What influences the likelihood that a cross-sell pitch has been accepted and (2) Given that a cross-sell pitch has been accepted, what influences its value. We consider how customer risk aversion, agent technical ability, issue severity and cross-sell tangibility influence the likelihood and conditional value of a cross-sell.
The data consist of 567 technical support sales transactions from a Fortune 500 technology firm in the computer systems industry. We analyze the data using a Heckman selection model that models the cross-sell and value decisions of customers. The results strongly support the hypotheses and the two-part estimation for the likelihood and conditional value of cross-selling in the context of customer service. For managerial practice, the results offer guidance on how to match customers' product conditions and personal characteristics with agents' technical capabilities. For marketing theory, cross-selling emerges as a revenue generating and problem-resolution tool in the context of customer service.

4 - Strategic Adoption of Internet Agents

Tolga Akcura, Associate Prof., Long Island University, Northern Blvd, Brookville, NY, United States of America, munir.akcura@liu.edu, Zafer Ozdemir, Mohammad Rahman

Service providers such as hotels, car rental companies and restaurants frequently use Internet agents, Shopbots and infomediaries. For example, Expedia, Travelocity, Orbitz may act as both infomediaries when providing many alternatives for the consumers and act as third party agents for the providers. On the one hand, using such agents may help the firms to better utilize their capacities. On the other hand, increased price competition and ease of consumer search may put downward pressure on prices. Consequently, the incentives behind using these websites may vary between high quality firms that already have sufficient demand versus low quality firms with low capacity utilization. This research analyzes the motivational differences and pricing strategies when adopting such Internet agents for quality differentiated service providers using both an analytical and an empirical model. The analytical model suggests that high quality firms increase their pricing power and benefit from a superior differentiation when they use the services of the Internet firms such as Expedia. The low quality firms, on the other hand, decrease their prices. Still, increased profits provide incentives for both firms to use such services. The empirical dataset includes data on hotel pricing and ranking information and gathered based on searches generated using three different sites; Expedia, Travelocity and Orbitz using a specialized robot. The dataset enables us to compare and contrast firm strategies across different sites.

■ SB15

2nd Floor - Room 2320

Health Marketing

Cluster: Healthcare Marketing
Invited Session

Chair: Wenbin Sun,University of Mississippi, P.O. Box 3850, University, MS, 38677, United States of America, wsun@bus.olemiss.edu

1 - The Effects of Information about Health Hazards in Food on Consumers' Choice Process

Amir Heiman, Hebrew University, Dep Agricultural Economics, Faculty of Agriculture, Rehovot, 76100, Israel, heiman@agri.huji.ac.il

This study examines the effects of context (health hazard), direction (positive versus negative) and intensity of information about health hazards on consumers' choice processes. While previous studies have been focused on analyzing the effect of such information on final outcome, i.e., demand, judgment, evaluation and did not consider the effect of such information on tradeoff between attributes, we are interested in analyzing the effect of information on health hazards on the choice process. We suggest that information about health hazards increase uncertainty, and result in allocating greater cognitive resources to the choice process. We show that information about health hazards change the choice process from a single-dimension to a multidimensional process under high-intensity negative information. This finding suggests that under uncertainty individuals consider tradeoff between attributes of frequently purchased products. The insights of these studies might help policy makers in crafting public campaigns aimed at changing unhealthy diets, such as the campaign aimed at handling the obesity epidemics.

2 - The Effect of Message Content on Sales Call Effectiveness in Pharmaceutical Markets

Eelco Kappe, PhD Candidate, Erasmus School of Economics, Erasmus University Rotterdam, Burgemeester Oudlaan 50, Rotterdam, 3000DR, Netherlands, kappe@few.eur.nl, Stefan Stremersch

A strong interest has emerged in marketing on physician responsiveness to detailing effectiveness, with results finding strong heterogeneity in sales call effectiveness. Prior scholars have looked at brand characteristics and physician characteristics to partially explain this heterogeneity. However, they have not discerned differences in sales call content, nor how variation in sales call content may affect sales call effectiveness. If such differences do exist, it could support sales management decisions. In this paper, we analyze the short- and long-term effects of discussing different product attributes (e.g. effectiveness, side effects) on sales call effectiveness. By looking at differentiated products in a pharmaceutical market we link these effects to the strength of product characteristics. We estimate an integrated system of sales response functions on a large physician panel. Using a hierarchical Bayesian approach, we model the effect of content discussed and its interaction with the strength of these attributes for different drugs. Thereby we correct for the possibly endogenous effects of sales call allocation and product characteristics discussed with the physician.

3 - Information About Health Hazards and Fast Food Selection

Oded Lowengart, Ben Gurion University, Department of Business Administration, Beer Sheva, Israel, odedl@bgu.ac.il, Amir Heiman

There is a growing concern about the large proportion of overweight individuals given the fact that obesity is associated with many illnesses. Regulators struggle to decrease the obesity epidemics by taxing unhealthy inputs and products, mandatory labeling health hazards, and promoting healthier food alternatives such as fruits and vegetables. Restaurants are also responding to this concern by adding new, healthier items to their menu making the choice of healthier food easier. All these efforts, however, did not have a significant effect on the demand for these unhealthy yet tasty food items. The resistance of consumers to changes in eating habits can be explained by similar mechanisms that had been used to explain smoking behavior despite the awareness to its associated risk: hyperbolic discounting function, habit formation, limited cognitive resources, and unattractive alternatives. This paper offers a different perspective to this resistance that is based on a concept that information about health hazards changes the process of decision making. Namely, such information changes the relative importance weights and perceptions of product attributes in a decision process. Toward this end we explore the impact of information on benefits of food and the format of information presentation on changes in perceptions and relative importance weights of demand. We show that providing information about health aspects of food products has a differential effect on the choice process between alternative food items.

4 - Geographic Differences in the Consumption of Hedonic Products: What the Weather Tells the Marketer!

Wenbin Sun, University of Mississippi, P.O. Box 3850, University, MS, 38677, United States of America, wsun@bus.olemiss.edu, Rahul Govind, Nitika Garg

Multiple studies have shown that weather conditions are associated with significant changes in affect for individuals. Another group of studies has examined the influence of affect on the consumption of hedonic products. Our research brings these two streams together and takes the first step in empirically examining the influence of multiple weather variables on the consumption of tobacco and alcohol consumption along with the regional differences in its impact, across the entire continental United States. The current research confirms that not only is weather an important predictor of hedonic consumption but also, that this association varies geographically across the continental United States. For instance, a ten degree increase in temperature in New York might not be the same as it is in Philadelphia despite the relative similarity of the cities in terms of both weather and demographics. Data on the consumption of two hedonic products along with twenty weather related variables at the zip code level for the entire continental Unites States are used to examine this relationship after controlling for variables known in literature to influence the consumption of these hedonic goods. The results are consistent with the findings of the recent studies that demonstrate a significant influence of weather on hedonic consumption but in addition also show that the influence varies geographically. Although the regional patterns in consumption might differ based on the negative hedonic product being considered, our results clearly indicate that they vary significantly with shifts in weather conditions and that to be truly effective, any public policy initiatives regarding consumption of these products should adequately account for these differential patterns.

Saturday, 1:30pm - 3:00pm

■ SC01

Lower Level - Room 0210

New Products: Strategy

Cluster: New Products and Product Policy

Invited Session

Chair: Jesheng Huang, Assistant Professor, Tamkang University, 151 Ying-chuan Road, Tamsui, Taipei County, 251, Taiwan - ROC, iamjesheng@gmail.com

1 - The Marketing of Green Products: An Empirical Study of Consumer Preferences for Hybrid Cars

R. Venkatesh, Associate Professor of Marketing, University of Pittsburgh, Katz Graduate School of Business, Pittsburgh, PA, 15260, United States of America, rvenkat@katz.pitt.edu, Didem Kurt

Products such as hybrid cars and energy efficient light bulbs are redefining the domain of green marketing. Beyond environmental friendliness, these products offer nuanced economic value propositions and have the potential to alter consumption habits in fundamental ways. Yet the adoption of these products is nowhere close to the tipping point in their respective markets. Integrating economic and psychological perspectives, the current study seeks to address two central questions: (i) Which customers are the more likely prospects for adopting green products? (ii) Which marketing strategies are more or less effective in targeting potential adopters of green products? Customers are characterized by their attitudinal characteristics such as openness to experience and volunteerism, and behavioral characteristics such as anticipated usage and variety seeking. The marketing strategy variables considered include warranty level, leasing vs. selling, type of promotion, and message type. We propose a series of hypotheses linking the above variables to potential consumers' preference intensity for the green version relative to the conventional version. We test our hypotheses with empirical data from potential consumers of hybrid and conventional cars. Results of the empirical study, limitations of the study and directions for future research are discussed.

2 - Consequences of New Product Failure

Ronald Larson, Associate Professor, Western Michigan Univ, 1903 West Michigan Ave, Dept of Marketing, Kalamazoo, MI, 49008, United States of America, ron.larson@wmich.edu, Michael McCardle

Research suggests most new products fail. Debate on the failure rate can be partially attributed to when to count products and to the definition of "success." The lack of agreement on a failure rate may make it difficult to estimate the expected returns from new product investments. No matter what the actual failure rate is, failures have negative consequences. While monetary costs for development and launch of a product are top of mind, other negative outcomes also exist. However, under certain circumstances, these losses are mitigated by two gains. First, shelf space previously allocated to the failed product may remain with the manufacturer. A type of slotting allowance, also known as a "failure fee," might, in part, pay to maintain shelf space after a failure. By maintaining space, the manufacturer could increase the facings for better selling products and boost total sales. The second reason that gains could result from product failures centers on the consumer. When a manufacturer introduces a new item, they often do so to counter a competitor. While a new product may eventually fail, many consumers try the new product and some choose to switch from a competing brand. Because they switched to the new brand, their loyalty to their original brand is low. When the new product fails, these customers could switch back to their previous brand or switch to another brand. Because they have a relationship with the manufacturer (through the failed item), they may be more likely to purchase another item from the same manufacturer. This paper analyzes more than 50 new product failures in two food categories within the last six years and suggests some generalizations on whether firms gain some benefits when new products fail.

3 - The Role of Product Aesthetic Attributes in Consumer Purchase Decision: Buyer-choice Simulators

Jesheng Huang, Assistant Professor, Tamkang University, 151 Ying-chuan road, Tamsui, Taipei county, 251, Taiwan - ROC, iamjesheng@gmail.com

The topic of product design has been addressed mostly by the macro-view of holistic design or product form to examine the issues about consumer response, benefits or brand impressions. It is known that the perception and usage of beautifully designed products would provide sensory pleasure and stimulation to consumers. The aesthetic performance of a product will strongly influence the design process as well. However, from the perspective of consumer choice, product attribute matters more, i.e., in micro-view, whether the product aesthetic attribute will predominate consumer choice decision? And which kind of aesthetic attribute dimension will evoke the critical hedonic benefits? This article first constructs the dimensions of product aesthetic attribute as exterior aesthetic appearance, interior aesthetic meaning, and total aesthetic style; then, conducting an empirical study of male perfume product to examine the relationship between the product aesthetic attribute and purchase intention by conjoint analysis. Due to different aesthetic acumens among consumers, the author clusters respondents into three groups with high, medium, and low aesthetic sensibilities, respectively. The result shows that the combinations of product aesthetic attribute-level elicit different aesthetic response among three clusters, and each group has its own best combination of aesthetic attribute. Finally, the author extends conjoint analysis to forecast how consumers choose among competing product aesthetic attributes by using buy-choice simulators. Through sensitivity analysis by changes in the levels of product aesthetic attribute, the finding gets interesting strategic implications to exploit the critical role of product aesthetic attribute in consumer choice.

■ SC02

Lower Level - Room 0220

Retailing: Category Management

Cluster: Channels

Invited Session

Chair: Upender Subramanian, Wharton, 3730 Walnut Street, Philadelphia, United States of America, upender@wharton.upenn.edu

1 - Spatial Externalities in Item Arrangements on Shop-shelves - An Empirical Investigation

Sudhir Voleti, PhD Candidate, Simon Graduate School of Business, 4-308 Carol Simon Hall, University of Rochester, Rochester, NY, 14627, United States of America, voletis1@simon.rochester.edu

While the sales impact of where an item is placed on the shop shelf and how much shelf space it is provided have received research attention, the issue of whether and how the arrangement of items in the immediate neighborhood of a particular item on the shop shelf impacts sales has not been empirically investigated. This paper inquires into: (a) whether spatial sales externalities exist; (b) the variables that this spatial dependence acts through; (c) the range of spatial dependence; and (d) whether spatial effects differ by direction. Sales data on different shelf arrangements across a single chain's outlets are analyzed. Using cross-sectional models of spatial dependence for any particular item we estimate the sales impacts of items in the neighborhood of this item on the shop shelf. Some methodological innovation in adapting models of spatial dependence used traditionally in non-marketing contexts, is also demonstrated.

2 - Explaining the Frequency of Out-of-stock Events Through Store Scanner Data

Gilles Laurent, Professor, HEC Paris, 1 Avenue de la Libération, Jouy en Josas, 78350, France, laurent@hec.fr, Sandrine Mace

Both retailers and manufacturers see in-store out-of-stock events (OOS) as a major problem, but there is a lack of research on their causes. We analyze a large data set provided by IRI France and supplemented by data on store characteristics and store logistics collected by the sales force of an anonymous manufacturer (20 items observed on 72 successive days in 84 stores belonging to 6 chains) to identify the main determinants of OOS. Regarding the dependent variable, following IRI, we distinguish complete OOS (when there are no sales at all on a given day) from partial OOS (when sales are significantly below normal). We discuss how the IRI procedure separates these two cases from cases where zero sales may be due to random variations in an item with low expected sales, and from cases when low sales are likely to be due to competitor promotions. This definition leads us to use a multinomial logit procedure, with three possible values of the dependent variable (complete OOS, partial OOS, no OOS). The explanatory variables belong to several categories. First, variables linked to the item itself, e.g., national market share, local market share, package size. Second, variables linked to store characteristics, e.g. store size. Third, variables linked to store logistics, e.g. how much space is devoted to the category, how far is the shelf from the store reserve, how often does the store receive merchandise, shelf depth, how many persons handle shelf replenishment. Fourth, variables linked to the support given by the store to the brand, e.g. shelf space, number of pallets.

Fifth, variables linked to promotional and advertising activity for each brand. Sixth, calendar variables, e.g. day of the week. We'll present the results at the conference.

3 - Measuring Retailers' Stockout Costs From Scanner Panel Data

Arne Schroder, Goethe-University Frankfurt am Main, Gruneburgplatz 1, Frankfurt am Main, 60323, Germany, aschroeder@wiwi.uni-frankfurt.de, Daniel Klapper, Christine Ebling

Average stockout rates of 7 to 10 % imply a substantial threat to retailers' sales and revenues. Therefore, retailers show great interest in deducing stockout costs of carried items in order to optimize their inventory policy. Stockout costs depend on an item's stockout frequency and the consumers' reactions towards an out-of-stock situation. Consumers could principally switch to another item or delay the purchase, which leads to a shift in retailers' sales. How-ever, consumers could also switch to another retailer or do not buy at all, which leads to a decline in retailers' sales. We propose an iterative sequential approach that utilizes scanner panel data from a retail chain in order to infer stockout costs of different items in a product category. Any iteration of our approach consists of the following two steps. In the first step, a sales model is estimated for each item considered and unexpectedly low sales are identified as stockout situations. Sales that are lost due to out-of-stock are computed and stored next to sales that are not explained by the sales model. In the second step, previously unexplained sales of each item are regressed on lost sales of other items and own sales lost in previous periods. By this means, the degree of item-switching and purchase-delaying is identified for each item. Sales, which are originally inflated by these effects, are corrected and a new iteration is carried out until the method converges. We assess the validity of our approach by performing several simulation studies. Finally, we apply the method to daily sales data for different product categories.

4 - The Competitive Consequences of Category Captainship

Upender Subramanian, Wharton, 3730 Walnut Street, Philadelphia, United States of America, upender@wharton.upenn.edu

Many retailers these days designate a national brand manufacturer as a "category captain" to help them manage the entire category. The category captain is involved in decisions that affect not only its own brands, but also those of its rivals. We examine the competitive consequences of the category captain arrangement, when the category captain is responsible for providing demand enhancing retailing service, such as a better in-store environment or improved shelf-space management. Our findings may help explain why, despite concerns raised by researchers and industry observers about the retailer's reliance on a category captain and the potential for category captain opportunism, the practice has flourished, with relatively few complaints from non-category captain manufacturers. We analyze a setting where two manufacturers supply to a single retailer. We find that, even in the absence of competition for category captaincy, the category captain may deploy its service in a manner that enhances demand for not only its own brand but also for its rival's brand. Furthermore, even when the category captain's service depletes demand for the rival's brand, the rival manufacturer and the retailer may still benefit. We find that competition for category captaincy leads to a higher service level. More interestingly, it also increases the extent to which the category captain's service boosts the rival's demand. Nevertheless, both manufacturers may be worse off than without the category captain arrangement. Thus, in some instances, category captaincy may simply be a cost of doing business. Lastly, We find that the retailer may prefer the category captain arrangement over engaging both manufacturers jointly to provide demand enhancing service.

■ SC03

Lower Level - Room 0230

Advertising: Models

Cluster: Advertising

Invited Session

Chair: Meltem Kiygi Calli,PhD Candidate, University of Antwerp, Applied Economics Faculty, Department of Marketing, Prinsstraat 13, Antwerp, 2000, Belgium, meltem.kiygicalli@ua.ac.be

1 - Advertising Allocation and Its Impact on Multi-product Sales

Moon Young Kang, PhD Student, University of Wisconsin-Madison, 975 Unviersity Ave, 4260 Grainger Hall, Madison, WI, 53706, United States of America, mkang@bus.wisc.edu, David Schweidel, Neeraj Arora

While advertising is known to accelerate sales, firms have limited advertising budget for a given financial period. In projecting financial performance and planning advertising, accurate assessment of advertising impact is important for marketing researchers in order to more effectively allocate the budget. In addition, to extract the most efficiency from advertising multiple products via diverse media, it is important for managers to understand 1) the impact of advertising via different media types, 2) the effect of the advertising interactions among different products and media types, and 3) the power of timing at which to conduct advertising. We develop a model to measure the impact of these advertising dynamics on multi-product sales using product-level aggregate sales data from a performing arts center. To model the aggregate sales, we use a multivariate duration model with latent groups of customers, early and late buyers, by allowing for differential responses of advertising per group. As managers may have set the advertising timing and budget based on their expected market response, we include the model of advertising budget allocation process from the supply side such as how much advertising dollar will be spent for each product, how to allocate the product-level budget into diverse media, and when to execute these media-level budget for a given product over the fiscal year. Moreover, we incorporate attributes of the products, as those products with greater similarity among the attributes may exhibit similar sales and budgeting patterns. To demonstrate the applicability of the modeling framework, we show efficient ways of allocating advertising budget by deriving metrics such as the ROI.

2 - Retail Proliferation and Cannibalization

Joseph Pancras, University of Connecticut, 2100 Hillside Road Unit 1041, Storrs, CT, 06269, United States of America, jpancras@business.uconn.edu, Sriram Srinvasaraghavan, V Kumar

Managers of retail store chains often seek to meet their sales growth and/or profit objectives by opening new outlets, leading to a proliferation of their stores in many urban markets. While a part of the sales generated by these new stores are likely to be incremental, a significant fraction of these sales would come from nearby stores operated by the chain. Several high profile retailers have recently acknowledged that their expansions in the recent past have been predicated on an imperfect understanding of the effect of new store openings on the demand of nearby stores as well as the overall chain sales. Such an analysis is further complicated if other dynamics such as changes in the intrinsic preference for the chain contribute to the change in performance of its stores. We develop a demand model that accounts for many of these complex factors and would therefore help us assess the extent to which the addition of new stores would generate new sales as opposed to cannibalizing for stores nearby. We calibrate the model on data for a U.S. fast food chain in a large U.S. city. During the period of our analysis, there were several new store openings while some existing stores experienced temporary closure. Furthermore, the chain experienced significant growth in sales during this period. Our results reveal that this growth was driven largely by the increase in the brand preference for the chain (driven by increase in advertising expenditures). In addition, our results reveal that the magnitude of the cannibalization effect is much smaller than the additional sales generated by the stores opened by the chain. Hence, we believe that cannibalization is a relatively a minor issue for the chain in this market.

3 - A Group Decision Making Approach to Model TV Channel Choice

Lei Su, Chinese University of Hong Kong, Rm413, Floor 4th, Leung Kau Kui Building, Hong Kong, China, sulei@baf.msmail.cuhk.edu.hk, Kinnam Lau

There are two unresolved issues in existing literature on TV channel choice. Firstly, though TV viewing is a household activity in most circumstances, no research examined the influence of other household members on individual channel choice except a recent paper by Yang et al. (2006). Yang et al. (2006) modeled the interdependence of channel preference between husband and wife; however, more complex multi-lateral interactions are expected beyond husband-wife interaction in real life. Secondly, though individual channel preference usually changes dynamically, it is treated as static in most existing research. In current research, a new channel choice model is built by using group-decision making approach to solve the two issues aforementioned. Adapting the group decision making framework of Aribarg et al. (2002), we use three sub-models to model household channel decision making process: 1) pre-decision, in which each household member forms individual channel preference; 2) joint-decision, in which household make joint decision through decision rules; 3) post-decision, in which each household member responses to the joint decision (following the joint decision or not watching). By estimating the parameters in each sub-model with MLE, different decision mode and preference interdependence pattern among household members can be derived for different household groups. In addition, the response made by each household member in sub-model 3 is not only based on individual channel preference in sub-model 1, but also influence their channel preference in sub-model 1 of next time slot. We conclude that the individual channel preference changes dynamically with viewing history, and the change pattern depends on program type.

4 - Advertising Effectiveness under Time Aggregation

Meltem Kiygi Calli, PhD Candidate, University of Antwerp, Applied Economics Faculty, Department of Marketing, Prinsstraat 13, Antwerp, 2000, Belgium, meltem.kiygicalli@ua.ac.be, Marcel Weverbergh, Philip Hans Franses

This study investigates the sensitivity of estimates of advertising effectiveness under time aggregation. We look at the differences in the estimates of advertising impact when using hourly data, daily or weekly aggregates. The data relate to a fast service for repairs of a consumer durable good. The dependent variable consists of the number of incoming calls at a toll free number. In this study there are two different research issues. First, we compare the extended Koyck model (Tellis, Franses 2006) and the Autoregressive Distributed Lag (ADL) model under time aggregation. Second, we investigate the stability of advertising effectiveness estimated using the ADL model and the Linear Mixed model (LMM) under time aggregation and we also investigate the forecasting process and accuracy of ADL and LMM models. The data relate to a single advertiser and cover Spain, Flanders (Dutch speaking Belgium) and the Walloon region (French speaking Belgium). Each series covers 2 to 3 years of data, measured at hourly intervals and sometimes even at fifteen minute intervals. For the Dutch- and French-language part of Belgium, the calls data cover October 2004 to June 2007 and there are 23880 hourly data points. For Spain, the available data cover the period from January, 1 2004 to June, 30 2006. In the observation period, 21888 hourly data points are available. We find that the results from the aggregated extended Koyck model are fully equivalent to the results from the aggregated ADL model, and that they are quite unstable under time aggregation. This is not only because of differences with respect to advertising effectiveness, but also points to lack of stability with respect to the non-advertising effects.

■ SC04

Lower Level - Room 0240

Pricing Effects

Cluster: Pricing

Invited Session

Chair: Seungwon Jeon, Assistant Professor, St. John Fisher College, 3690 East Avenue, Rochester, NY, 14618, United States of America, sjeon@sjfc.edu

1 - Exploring Price Competition in Online Markets: Empirical Test of an Aggregate Level Model

Hasan Tolga Bilgicer, PhD Student, Columbia University, 130 Morningside Dr. Apt. 32, New York, NY, 10027, United States of America, hbilgicer13@gsb.columbia.edu, Amiya Basu, S. P. Raj

We develop and empirically test a model of price competition in online markets. We assume that online retailers offer either high or low level of service, and there are three customer segments: quality loyal, quality seeker, and price seeker. We have tested the following propositions: (1) Hi-service vendors compete for the two quality-sensitive segments, but do not compete on price with lo-service retailers for the price seeker segment. (2) As consumers' reservation prices fall, hi-service retailers drop mature products earlier than the lo-service. (3) If more retailers offer the same product, the average price offered by hi-service retailers decreases, and the average price offered by lo-service retailers declines even more. (4) Hi-service retailers would increase or decrease their prices frequently, while lo-service vendors would just decrease their prices over time. (5) Lo-service retailers are adversely affected by hi-service retailers' price promotions. Hence, as the number of hi-service retailers increases, the average price charged by lo-service retailers decreases. In contrast, the number of lo-service retailers does not negatively affect the prices charged by hi-service retailers. We argue that in online markets, high traffic and multichannel vendors, comprising network of brick and mortar as well as online stores, are hi-service retailers, while small e-tailers are lo-service retailers. Primary data were collected from a major online shopping agent for two years. These longitudinal data include weekly prices of sixty eight consumer electronics products, in three product categories; digital cameras, portable audio players and plasma TVs, and weekly retail store ratings by consumers. Tests on these panel data support our propositions.

2 - A Structural Model of Multiproduct Pricing, Advertising, and Capacity on the High Seas

Dinesh Gauri, Assistant Professor of Marketing, Syracuse University, 721 University Ave, Syracuse, NY, 13244, United States of America, dkgauri@syr.edu, Mingyu Joo, Ken Wilbur

Although the cruise line industry has become one of the fastest growing and most profitable segments in the travel industry over the past decade, it has received no empirical study. In this paper, we study the intertemporal multiproduct pricing and brand advertising decisions made by a large cruise operator using a structural model of cruise supply and demand. This problem is complicated by two features common to a variety of industries such as service, transportation, seasonal, fashion, advertising, and entertainment: perishable capacity and advance selling. The firm's revenues from a product to be consumed in a period may be affected by marketing variables set in any period up to and including that period. Using booking data of a major North American cruise company, we model demand using a nested logit model with discrete consumer heterogeneity, and control for endogeneity using the firm's first-order conditions in a full information approach using the Generalized Method of Moments (GMM). We analyze a counterfactual in which we replace the firm's observed prices with a simplified uniform pricing strategy to gauge the approximate profit value of the firm's yield management system.

3 - What Matters for Price Negotiations: Evidence From the US Auto Retailing Industry

Jorge Silva-Risso, Associate Professor, Marketing, University of California, Riverside, 900 University Ave., Anderson Hall, Ste. 201, Riverside, CA, 92521, United States of America, jorge.silva-risso@ucr.edu, Florian Zettelmeyer, Fiona Scott Morton

While there is a great deal of theoretical and experimental literature on what factors affect bargaining outcomes, there is little empirical work based on data from real markets. In this paper we analyze negotiations for new cars, a $400 billion industry in the US in 2007. We combine transaction data that record car characteristics and prices with responses to a survey of new car buyers that reveals how informed customers were, how they searched for information, and their attitudes towards bargaining. This study allows us to examine hundreds of bargaining outcomes for identical cars. Our results show that incomplete information has an economically important effect on bargaining outcomes in car sales. Buyers who have learned the seller's reservation price (the dealer's invoice price) pay $121 less on the average car; this corresponds to 8% of the average seller surplus. Also, buyers do better when they have better information about their outside options; for example, search at one additional dealer is associated with a 7% lower dealer margin. We account for potential selection effects. By using a survey we are able to measure, albeit imperfectly, these normally "unobserved" consumer traits. We also find that consumers with different characteristics obtain very different bargaining outcomes. Consumers with low search cost pay on average $287 less - which is 18% of the average dealer margin - than consumers with high search cost. Also, buyers who are patient, according to our proxy measure, are associated with 8% lower dealer margins compared to other buyers. Finally, consumers which our proxy measures indicate have a low bargaining disutility pay on average $261 less than consumers with a high bargaining disutility. This corresponds to 17% of the average dealer margin.

4 - Estimating Market Potential in Logit Models of Demand Using Aggregate Data

Dongling Huang, Rensselaer Polytechnic Institute, 1108th Street, Pitts 1120, Troy, NY, 12180, United States of America, huangd3@rpi.edu, Christian Rojas

Demand estimation in differentiated products markets has become one of the most important components in the analysis of empirical themes in marketing and in industrial organization.Many of these applications, including the seminal work of BLP, use aggregate data and thus do not have information on the size of the outside option (i.e. those consumers who considered buying the product but ended up not purchasing). The common practice is to define the size of the outside option (and to transform the aggregate quantities to market shares) by assuming a "market potential" this measure is typically based on the researcher estimate of the population that may consider buying any of the varieties of the product at every point in time. One problem with this approach is that the key estimates of demand estimation, price elasticities, are a function of the assumed market potential. For example, assuming a market potential that is too large yields cross-price elasticities that are smaller than their true value; this is important for antitrust policy, for example, as this result may mean that a merger is allowed when it should not be. In this paper we propose a method to estimate market potential when only aggregate data are available. Our approach is to simulate data using demand specifications that follow the popular logit model and then attempt to recover the true demand parameters and market potential under the assumption that the researcher only observes the market level quantity information of the inside goods but not the quantity of the outside good. We show that our procedure can recover the true parameters (including the unobserved market potential) in both the simple logit as well as the random coefficients logit model.

■ SC05

Lower Level - Room 0320

Recent Progress on Best-Worst Scaling

Cluster: Buyer Behavior

Invited Session

Chair: Jordan Louviere,Professor, School of Marketing and Centre for the Study of Choice (CenSoC), P.O. Box 123, Haymarket, 2029 NSW, Sydney, NS, 2090, Australia, jordan.louviere@uts.edu.au

1 - Recent Developments in BWS Case 1

Jordan Louviere, Professor, School of Marketing and Centre for the Study of Choice (CenSoC), P.O. Box 123, Haymarket, 2029 NSW, Sydney, NS, 2090, Australia, jordan.louviere@uts.edu.au, Tony Marley

BWS Case 1 is the classical best-worst (or "maximum-difference") scaling case introduced by Finn & Louviere (1993, Jl of Public Policy & Mark). Typically, one has a "list" of "things" (items, statements, people, brands, etc) to be measured on some underlying, latent scale. Case 1 can be thought of as a multiple comparison extension of the method of paired comparisons where experimental participants choose the best and worst (smallest, largest; most, least important, etc) things (items, objects, etc) in sets of three or more things. It is a type of discrete choice experiment (DCE) introduced by Louviere & Woodworth (1983, JMR) where choice options are labeled but attributes do not vary. Marley & Louviere (2005, Jl of Math Psych) derive theoretical properties for Case 1. We summarize them, and discuss implications for applying the theory to practical measurement problems. Case 1 has many advantages over paired comparisons; and arguably is superior to paired comparisons except where one needs an accurate estimate of the scale position of one thing (item, object, etc). Case 1 also has many advantages over rating scales, and I widely used by marketing researchers worldwide. We discuss several issues that arise in applying BWS Case 1 that many seem unaware of, and we illustrate it with two cases: a) measuring attitudes of a sample of Australian farmers towards rural retailers and the farm economy as revealed in agreement/disagreement with 13 statements, and b) measuring perceived importance of 13 attributes for the decision to "go direct" instead of choosing local retailers.

2 - Recent Developments in BWS Case 2

Terry Flynn, Senior Research Fellow, University of Technology Sydney, Centre for the Study of Choice (CenSoC), P.O. Box 123 Broadway, Sydney, NSW 2007, Australia, terry.flynn@uts.edu.au, Jordan Louviere

BWS Case 2 involves choices of attribute levels within conjoint profiles. That is, a profile of attribute levels is a choice set, and experimental participants choose the best and worst (most, least attractive, etc) attribute levels in each profile. It is a version of discrete choice experiments (DCEs) introduced by Louviere and Woodworth (1983, JMR) where each conjoint profile is a choice set, and choice options are attribute levels described therein. Marley, Flynn & Louviere (2008, Jl of Math Psych) derived theoretical properties of BWS case 2. We summarize key derivations and discuss implications for applying the theory to practical measurement problems. Introduced by Louviere (1994), Case 2 has advantages over many preference elicitation methods as it measures all attribute levels on a common latent scale, allowing inter-dimensional utility comparisons, and avoiding a need to rescale to common metrics like dollars. It also can be used to measure utilities of single people instead of groups of people. We discuss several issues that arise in applying Case 2 and illustrate it with two cases: a) measuring values of attributes and levels for dermatological appointments, and b) measuring attributes and levels of ski areas.

3 - Recent Developments in BWS Case 3

Tony Marley, Emeritus Professor, Department of Psychology, The University of Victoria, Victoria, BC, Canada, ajmarley@uvic.ca, David Pihlens

BWS Case 3 is a type of discrete choice experiment (DCE) introduced by Louviere & Woodworth (1983, JMR). Instead of experimental participants choosing the best (or "most preferred") option in each DCE choice set, participants choose the best and worst profiles from sets of three or more profiles. Marley, Pihlens, Flynn & Louviere (2009, Jl of Math Psych) derive theoretical properties of BWS for this case. Case 3 has advantages over traditional "first choice" DCE elicitation procedures as one obtains much more information about preferences in each choice set. In many cases, one obtains enough information to estimate choice models for single persons. We summarize and discuss key formal properties of Case 3, including how and why the task structure leads to several potential model forms. The model forms are "new", or at least we are unaware of prior work comparing models for sequential choices with other choice strategies like strict ranking or strictly best choices. We compare the new models with current models for several datasets, and discuss implications for applications of Case 3. We illustrate Case 3 with two examples for choice of mobile phones and choices of pizza and fruit juice products.

4 - Less (or More) than Meets the Eye: A Comparison of Ways to Handle Error Variability Differences in Best-Worst Choices

Towhid Islam, University of Guelph and Centre of the Study of Choice, School of Marketing, University of Technology, Australia, islam@uoguelph.ca, Jordan Louviere, Siggi Gudergan, Kyuseop Kwak, Paul Wang

Best-Worst choices are limited dependent variables. Statistical models for analysis of such data ALL share a common problem noted by Swait and Louviere (1993, JMR), Louviere (2001, JCR), Magdison and Vermunt (2007) and Salisbury and Feinberg (MSci, 2009). That is, unless error variances are constant for individuals, observations and choice options, parameter estimates can be seriously incorrect and biased. We motivate the problem by using stylized examples with and without error variability to show the potential confound of estimates and variability, and indeterminancy in distinguishing alternative explanations of underlying processes. We compare the relatively new scale-adjusted latent class models of Magdison and Vermunt (2007) with other ways to decompose variability and reduce confounds with various sources of error variability and model parameter estimates. The comparisons involve Best-Worst choices among subsets of 13 attributes related to retailing choices provided by a large sample of Australian farmers. Measuring the importance of these attributes was part of a national study of Australian farmers' rural retailing choices.

■ SC06

1st Floor - Room 1210

Interactivity and Consumer Behavior

Cluster: Special Track: Interactive Maketing

Invited Session

Chair: Martin Spann,Professor, University of Passau, Department of Marketing and Innovation, Passau, D-94032, Germany, martin.spann@uni-passau.de

1 - Consumer Responses to a Legal Alternative to File Sharing

Arvind Rangaswamy, Penn State, Buseinss Building, University Park, United States of America, arvindr@psu.edu, Michel Clement, Srikant Vadali

In recent years, several free and legal alternatives have become available to college students to download music files. The availability of these free services may be viewed as IT interventions that could potentially alter students attitudes toward illegal file sharing, and result in lower use of illegal music files. We hypothesize that these free service interventions change the mental models of students who access the service. Specifically, we use the theory of planned behavior to represent mental models, and employ natural field experiments to investigate how interventions modify the mental models associated with illegal file sharing. Our experiments involve the introduction of two free subscription services (Napster and Ruckus) at the campus of a leading university. We employ a control group-treatment group, before-after experimental design and collect data through surveys. We also track the actual levels of usage of the legal music service in the treatment groups. We analyze the resulting data using partial least squares (PLS) estimation. For both services, the intervention results in a significant reduction in the extent of favorable attitudes toward file sharing and (directionally) lower intent toward future illegal file sharing. We also find that the interventions bring about desirable changes in mental models, such as for example, weakening the relationship between attitude and intent, whereby favorable attitudes toward illegal file sharing do not necessarily translate into a stronger intent to engage in file sharing. However, the availability of the legal music service also strengthens the relationship between perceived benefits and attitudes toward illegal file sharing, and reinforces the positive impact on intent to file share for those who had engaged in higher levels of file sharing behavior in the past. We conclude by drawing insights from the study regarding how an IT-based intervention could influence consumer behavior and industry practice.

2 - Demystifying YouTube: An Analysis of the Drivers of User-Generated Online Video Consumption

Caroline Wiertz, C.Wiertz@city.ac.uk, Thorsten Hennig-Thurau, Bjoern Bohnenkamp, Michael Paul

In recent years, consumer participation in the creation of digital user-generated content defined as content made publicly available over the Internet which reflects a certain amount of creative effort on behalf of the user (Wunsch-Vincent & Vickery, 2007, p. 4) has established itself as a new reality of contemporary society and economy. User-generated video content sharing sites, such as YouTube, are re-shaping the way people consume video and TV, as demonstrated by declining TV audiences. As a consequence, the advertising model that has traditionally financed the media industry is under threat, with important implications for innovative and incumbent media companies, advertisers, and consumers. YouTube accounts for almost 15% of all Internet traffic, and over 150,000 new videos are added to YouTube every day. However, only a small fraction of the millions of user-generated videos that can be found on platforms such as YouTube actually receives mentionable attention from the audience, while most videos get very few or no views at all. Given the economic potential of user-generated video content and its deep impact on the media and advertising industries, it is crucial to understand the drivers of user-generated video popularity and consumption. We draw on literature on motion picture success, affective television, and social networks to develop a conceptual framework of user-generated video popularity. We then present the results of two empirical studies conducted in the context of YouTube. We drew a random of sample of 360 videos and tracked their evolution over a 4-week period from the moment they were uploaded. In addition, each video was content analyzed by three independent coders. We also analyzed the 100 most successful videos of a given month and a matching sample of 100 unsuccessful videos. Based on quantile regression analysis for the random video sample, and logistic regression analysis for the top/flop sample, we gain initial insights into what user-generated video content meets great demand.

3 - Drivers of Viral Marketing Success

Gerrit Van Bruggen, Erasmus University, Business, Rotterdam, Netherlands, GBruggen@rsm.nl, Ralf van der Lans

The last decade has seen an explosion in online advertising. This trend of increased online advertising has shifted power from the marketer to the consumer. Consumers are significantly more in control of viewing advertisements and filtering marketing communication messages. Although this forms a potential threat for marketers they can also benefit when consumers spread marketing communication messages to other potential consumers in their social networks via email. This evolution of traditional word-of-mouth in response to the new World Wide Web environment has led to the marketing communication concept of viral marketing. Due to its novelty it is still unclear what influences the success of viral marketing campaigns. Sometimes it seems to be by chance that some viral campaigns are big hits, while others fail completely. In this study we examine the key factors that determine the spread of viral marketing campaigns. Furthermore, we investigate the drivers that influence these factors and hence the success of viral marketing campaigns. For our empirical analyses we use data on 16 real viral marketing campaigns, which were executed between 2006 and 2008.

4 - The Validity of Decision Making in Virtual Worlds: An Experimental Test of Altruism, Fairness, and Presence

Martin Spann, Professor, University of Passau, Department of Marketing and Innovation, Passau, D-94032, Germany, martin.spann@uni-passau.de, Bernd Skiera, Oliver Hinz Il-Horn Hann

Virtual worlds are gaining in popularity and more and more companies act in those digital environments to test users' reactions to modifications in their products and advertising messages. One main characteristic of these virtual worlds is that users act via their avatars and make decisions for them. Companies that utilize virtual worlds for market research purposes and experimentation implicitly assume that an individuals decision making for her avatar in virtual worlds is similar to her decision making in the real world. In this paper, we analyze the validity of decision making in virtual worlds in an economic experiment (Dictator Game) conducted in the virtual and real world for the same set of subjects. For this purpose, we develop a methodology to test the validity of decision making in virtual worlds. We find similar decisions in the virtual and the real world with respect to sharing. Interestingly, altruism has a significant influence in the real world setting but not in the virtual world; fairness is insignificant in both settings. We explain this finding with the lower degree of nonsatiation in the virtual world. In addition, we identify the feeling of presence in ones avatar as a driver of the decision making in the virtual world.

■ SC07

1st Floor - Room 1220

Social Influence: Internet III

Cluster: Social Influence
Invited Session

Chair: Laura Kornish, Assistant Professor, Leeds School of Business, University of Colorado, UCB 419, Boulder, CO, 80309-0419, United States of America, kornish@colorado.edu

1 - Incentivizing the Creation of Word-of-Mouth

Ying Xie, Assistant Professor, Washington University in St. Louis, Campus Box 1133, One Brookings Drive, St Louis, MO, 63130, United States of America, xie@wustl.edu, Chunhua Wu

Existing empirical studies on Word-of-Mouth (WOM) focus on examining the effectiveness of WOM in driving sales or profits. Our study asks questions that have not been addressed by the previous literature: how does a firm incentivize the creation of WOM and how do different incentives generate different WOM impacts? We obtained data from a firm specializing in online credit card and loan application services. It provides monetary incentives to users who generate referrals for its website that depend on referred customers' website visits and credit card applications. One interesting aspect of the data is that the firm changed the incentive structure four months after its launch. With data before and after this change we are able to examine how effective are monetary incentives in driving traffic and sales for the website. Our ultimate objective is to help design an optimal incentive scheme that the firm may employ to maximize its net revenue.

2 - The Role of Social Networks in the Diffusion of User-generated Content

Mark Elsner, PhD Candidate, Johannes Gutenberg-University, Jakob Welder-Weg 9, Mainz, Germany, elsner@marketing-science.de, Oliver Heil, Atanu R. Sinha

User-Generated Content (UGC) has evolved into an important source when public opinion is being formed. UGC has proven to possess the power to instantly, strongly and persistently affect the market position of products and companies. Meanwhile, marketing research has yet to address the processes and factors that render a given content a high level of attention while other contents dissipate almost unnoticed. To address this issue, we use social network theory to explain the information diffusion process and focus on the (social- or net-) position occupied by the individual who spreads the information. We look at the size and structure of the egocentric network of a submitter and/or promoter of content. We posit that this network plays a pivotal role in the process of whether or not certain content achieves a 'prominent' level. Contrary to the concept of 'wisdom of crowds' where Internet-based networks are expected to allow for better decision-making and higher quality of information - we suggest that message factors are in certain situations only of secondary importance. In our analysis we use data from a popular Social News Site on the Internet. These data suggest that a new kind of opinion leader emerges, mainly because of their central social location. Our research contributes towards the general understanding of UGC, where certain individual's unique social position determines the diffusion of information and, thus, explaining whether and how certain content reaches prominence. In addition, we provide evidence that Internet-based networks may not work as effectively as has been argued for some time now.

3 - Competitive Responses of Advertising and Promotion to Consumer Reviews

Bao-Jun Jiang, PhD Candidate, Carnegie Mellon University, Tepper School of Business, 5000 Forbes Av., Pittsburgh, PA, 15213, United States of America, baojun@cmu.edu, Kannan Srinivasan

Consumer product reviews, as a form of user generated contents, have become very prevalent in the online retail environment playing an important role in consumer' purchase decisions. This paper provides a game theoretic model to study how consumer reviews influence firms' advertising and promotion strategies. We show that, if advertising is not very costly, firms tend to consider favorable product reviews and advertising as substitute, i.e., a firm with more favorable reviews will reduce advertising whereas its competitor will increase advertising. If advertising is costly, however, firms may consider favorable reviews and advertising as complement, i.e., a firm with more favorable reviews will find it optimal to increase its advertising expenditure whereas its competitor, with less favorable reviews, will reduce advertising. Further, depending on which firm has a higher advertising cost structure, the total advertising expenditure in the market can be either higher or lower as a result of consumer reviews. Lastly, we find that consumer reviews do not affect firms' promotion decisions though firms' promotions may influence their optimal levels of advertising.

4 - Do Metareviews on User Review Sites Improve the Crowd's Wisdom?

Laura Kornish, Assistant Professor, Leeds School of Business, University of Colorado, UCB 419, Boulder, CO, 80309-0419, United States of America, kornish@colorado.edu

Online product reviews have become an important kind of user generated content on the web. These user reviews are supposed to tap "the wisdom of the crowd." However, across many websites, we see a strong positive skew (i.e., many 4- and 5-star ratings) to reviewed products. There are many explanations for this skew, including bias in the set of people who choose to review the product and a more intentional bias of "promotional chat" placed by firms with a stake in the product's success. On some websites with user reviews, we now see metareviews in which review readers can rate the helpfulness of posted reviews. The question we explore in this research is whether biases in reviews can somehow be corrected by these metareviews. We argue that if the metareviewers are not an independent voice from the reviewers, then metareviews can reinforce rather than reduce the bias. If metareviewers share the same distribution of opinions with the original reviewers and they define helpfulness as agreement, then they are not an independent voice. If, however, metareviewers are not driven primarily by agreement with the original review, then this extra layer of review can mitigate the bias in the original reviews. We present data from user review websites about whether metareviews appear to be an independent voice from the reviews.

■ SC08

1st Floor - Room 1230

Marketing Metrics

Cluster: Marketing Models
Invited Session

Chair: Bruce Clark, Associate Professor, Marketing, Northeastern University, 202 Hayden Hall, Boston, MA, 02115, United States of America, b.clark@neu.edu

1 - Use of Non-parametric Methods to Improve Efficiency of a Marketing Mix Model in a Commercial Setting

Ingo Bentrott, University of Technology-Sydney, P.O. Box 123 Broadway, Sydney, Australia, ingo.bentrott@uts.edu.au, Kyuseop Kwak, Inna Kolyshkina

Marketing Mix models for weekly sales are typically modeled using a linear approach such as linear mixed model or a logarithmic modification (Van Heerde et al (2000, 2004). In a commercial environment, the linear models are known to be of limited use and their usage in banking, insurance, and telecommunication has been steadily declining in the past decade. The limitations of such models stems from various reasons. For instance, marketers may have information about many environment variables in addition to a few marketing mix variables and they are interested in identifying relationships between sales and those non-marketing mix variables. In addition, parametric assumptions used in these linear models may not be appropriate to represent the true relationships amongst the variables. Parametric linear models are not robust when faced with missing or incomplete data, unknown a priori functional forms, and interactivity in the explanatory variables. This paper presents a case study for enhancement of a linear Marketing Mix model and linear mixed sales response models using flexible, non-parametric linear regression. To overcome limitations with current linear marketing mix models, we will use Multivariate Adaptive Regression Splines (MARS) in our analysis. The MARS approach is applied to large aggregated weekly sales datasets with many store and market characteristics and shows significantly improved results compared to current linear and logarithmic methods.

2 - Organizational Learning and CRM Success: A Model for Linking Organizational Practices, Data Quality, and Performance

Debra Zahay, Northern Illinois University, Barsema Hall-Marketing Department, DeKalb, IL, 60115, United States of America, zahay@niu.edu, James Peltier, Don Lehmann

The emergence of customer relationship management (CRM) as an accepted business practice has focused attention on the value of customer data as a key organizational asset (Kim and Pae 2007). Despite our increased understanding of CRM as a strategic and tactical tool for responding to customer needs, missing is research that has explored the wide array of organizational factors that might impact the quality of data within the system, and how the quality of those data contribute to discrepant levels of customer and financial performance (Zahay and Griffin 2005). This omission is surprising given that data quality is arguably one of the most important concerns facing businesses today (Benbow and Kubiak 2007). We report the results of a several structural equation models of 128 survey respondents in the financial services industry. These results suggest a positive relationship between various organizational metrics such as teamwork and vision and marketing/IT integration and positive data quality. Data quality is in turn associated with financial and customer-based metrics Therefore, our study contributes to the literature in several ways. First, little research has examined how organizations enhance the quality of their customer databases over time. Second, although assumed, the relationship between data quality and organizational performance has received scant attention in the marketing literature and no good empirical test. Lastly, in that CRM performance research that does exist in the marketing literature has ignored data quality as an important link between CRM implementation and success, our study investigates data quality as an important consequence of CRM practices and an antecedent to business performance.

3 - Measurement Systems and the Market Research Function as Enablers of NPD Activities

Bruce Clark, Associate Professor, Marketing, Northeastern University, 202 Hayden Hall, Boston, MA, 02115, United States of America, b.clark@neu.edu, Andrew Abela, Tim Ambler

Effective new product development (NPD) continues to attract voluminous research in the Marketing Science community (e.g. Hauser, Tellis, and Griffin 2006). Recent attempts to describe best practices in NPD have highlighted the importance of metrics/performance evaluation and the market research function as critical aspects of a best practices framework (Kahn, Barczak, and Moss 2006). This research examines the role of measurement systems and the market research function as enablers of new product development activities. In terms of market research, we examine the satisfaction senior executives express with the performance of the market research group in their organization. In terms of measurement, rather than focus on specific innovation metrics, we examine the degree to which a company's measurement system produces superior understanding of the company's internal (resource allocation, finance) and external (customer and competitor) situation, as well as the kinds of data executives emphasize in judging success. This is consonant with Chan's (2004) discussion of metrics programs in NPD. We divide NPD activities into opportunity identification, specification and management of the NPD project, product testing, and pre-launch preparation, and hypothesize that measurement and market research should positively influence an organization's ability to carry out these activities. The framework is tested using data from a survey of senior executives carried out in concert with the Marketing Leadership Council, a major US-based research and education association. Results suggest significant associations among market research, measurement, and NPD activities, and that the NPD activities in turn are associated with a number of positive firm performance outcomes.

■ SC09

1st Floor - Room 1240

Theory Based Empirical Models III

Cluster: Marketing Models

Invited Session

Chair: Günter Hitsch, University of Chicago, guenter.hitsch@chicagogsb.edu

Co-Chair: Wesley Hartmann,Associate Professor, Stanford University, Palo Alto, CA, 94043, United States of America, Hartmann_Wesley@gsb.stanford.edu

Co-Chair: Brett Gordon,Columbia Business School, 3022 Broadway, Uris 511, New York, NY, 10027, United States of America, brg2114@columbia.edu

1 - A Hybrid Discrete Choice Model of Differentiated Product Demand with An Application to PC

Minjae Song, University of Rochester, Box 270100, Rochester, NY, 14627, United States of America, minjae.song@gmail.com

In this paper I consider a new discrete choice model of differentiated product demand that combines the pure characteristics demand model and the random coefficient logit demand model. In this hybrid model consumers are exposed to an idiosyncratic taste shock when they make a brand choice but free from it when they make a product choice within a brand. I compare the hybrid model with other demand models using product level data on personal computers. I also analyze the PC market after the merger between Hewlett-Packard and Compaq. My results show that the two brands became more differentiated from each other over time, suggesting that the merged firm repositioned its brands after the merger.

2 - Estimating a Dynamic Oligopolistic Game with Serially Correlated Unobserved Production Costs

Ahmed Khwaja, Duke University, Fuqua School of Business, 1 Towerview Drive, Durham, NC, 27708, United States of America, ahmed.khwaja@duke.edu, Han Hong, A. Ronald Gallant

We propose a likelihood based method that relies on sequential importance sampling to estimate dynamic discrete games of complete information with serially correlated unobserved state variables. Our method is applicable to similar games that have a Markovian representation of the latent dynamics and an algorithm to solve the game. We apply the method to a dynamic oligopolistic game of entry for the generic pharmaceutical industry in which the production costs of firms are the serially correlated unobserved state variable. Costs evolve dynamically and endogenously in response to past entry decisions, leading to heterogeneity among firms regardless of whether they are ex ante identical or heterogeneous. We find that there are significant spillovers of entry on costs. Each entry on average reduces costs by 7% at the next market opportunity; the average annual cumulative reduction is 51%. Our results provide evidence on the dynamic spillover effects of industry experience on subsequent market performance. The dynamic evolution of production cost plays an important role in the equilibrium path of the structure of the generic pharmaceutical industry.

3 - Estimation of Dynamic Discrete Choice Models in Continuous Time

Paul Ellickson, Assistant Professor, Duke University, 213 Social Sciences, Durham, NC, 27708, United States of America, paul.ellickson@duke.edu, Peter Arcidiacono, Patrick Bayer, Jason R. Blevins

This paper provides a method of estimating dynamic discrete choice models (in both single and multi-agent settings) in which time is treated as a continuous process. The advantage of working in continuous time is that state changes occur sequentially, rather than simultaneously, eliminating a substantial curse of dimensionality that arises in multi-agent settings. Eliminating this computational bottleneck is the key to providing a seamless link between estimating the model and performing post-estimation counterfactuals. In the case of complex discrete games, the models that applied researchers typically estimate (where the curse of dimensionality is broken by using two-step approaches in which agent's beliefsóconditional choice probabilities (CCPs)óare estimated in a first stage) often do not match the models that are then used to perform counterfactuals. Building on the theoretical framework developed by Doraszelski and Judd (2008), we propose an estimation strategy for continuous time discrete choice models that can be implemented either via a full-solution nested fixed point algorithm or using a computationally lighter CCP-based approach that can be useful when data is aggregated across time.

4 - Estimating Durable Goods Demand From Survey Data

Günter Hitsch, University of Chicago, guenter.hitsch@chicagogsb.edu, Jean-Pierre Dube, Pranav Jindal

We propose a new approach to estimating a durable goods adoption model from survey data. Our approach avoids some of the strong assumptions that have been made in the recent durable goods adoption literature, particularly regarding the consumers' discount function and expectations formation process.

■ SC11

2nd Floor - Room 2210

Choice Models

Cluster: Choice

Invited Session

Chair: Anocha Aribarg, Ross School of Business, University of Michigan, 701 Tappan St., Ann Arbor MI 48105, United States of America, anocha@umich.edu

1 - A Bayesian Structural Model of Retailer Behavior Based on Spatial Correlation in Consumer Choice

Ohjin Kwon, University of Southern California, 3660 Trousdale Pkwy ACC 306E, Marketing Department, Los Angeles, CA, 90089, United States of America, ohjkwon@usc.edu, Jorge Silva-Risso, S. Siddarth

We propose a Bayesian structural spatial model in which consumers' product preferences and marketing mix responsiveness co-vary depending upon how "close" consumers are to each other. The model is estimated on transaction data for new car purchases in the premium midsize sedan market in which the vehicle traded-in by the consumer is also observed. Spatial proximity or closeness between consumers is defined in a very general way to include the geographic distance between where they live and the extent to which the previous vehicle owned by one consumer is similar to that of another. The proposed demand model outperforms several benchmark models including a random coefficient model and spatial models that only incorporate either preference or response correlation alone. The estimation results reveal that the closeness measures that explain spatial correlation in preferences are different from the measures that predict response correlation. Specifically, we find that spatial proximity based on geographic distance is predictive of price sensitivities, whereas the similarity in the previous vehicles owned by consumers can predict the spatial correlation in consumer preferences for vehicle models. Interestingly, our analysis suggests that past purchases not only serve to directly increase a consumer's own utility for the same product, structural state dependence, but can also help predict the preferences of other consumers for other products. In addition to the demand model with spatial correlations, we also estimate a supply side profit model to investigate whether and how retailers (i.e. dealers) adapt their negotiated prices based on the identified spatial correlation in consumer preferences and responses.

2 - A Probabilistic Lexicographic Model

Rajeev Kohli, Professor, Columbia University, 506 Uris Hall, Graduate School of Business, New York, NY, 10530, United States of America, rk35@columbia.edu, Kamel Jedidi, Ricardo Montoya

A lexicographic rule orders alternatives over attributes by first evaluating on the most important attribute and then, if there are ties, on the second most important attribute, and so forth. Previous research has specified mathematical representations and inference procedures of lexicographic rules. However, these methods assume that consumers make deterministic decisions when using a lexicographic rule. We extend the previous literature by exploring the possibility of probabilistic decisions by consumers using a lexicographic rule. We present a model where consumers are allowed to probabilistically choose an alternative in a choice set when using the lexicographic rule. The model permits assessing the degree of use of the lexicographic rule, and obtains a probabilistic ordering of the attributes at the individual level. We overcome the usual lack of sufficient information from the data by pooling the data across consumers using a hierarchical Bayesian methodology. We validate our model by first simulating data and analyzing model identification and parameter recovery and then implementing the model in a conjoint-based dataset. We propose a MCMC methodology to estimate the parameters. We compare fit and prediction ability of the proposed method with competing models. Preliminary results show that a substantial fraction of the consumers in our study use a lexicographic rule.

3 - Evolution of Consumer Brand Preference and Periodic Consumer Learning

Hai Che, Assistant Professor, Marshall School of Business, University of Southern California, Department of Marketing, 3660 Trousdale Way, Los Angeles, CA, 90089, United States of America, haiche@marshall.usc.edu, Tulin Erdem, Sabri Oncu

We develop a structural demand model that examines how brand preference evolves for consumers new to a market and their needs change periodically. We allow for consumer quality uncertainty, risk-aversion and strategic sampling to learn about brands (e.g., Erdem and Keane 1996). This paper differs from previous work on forward-looking consumer learning in that we allow the need for learning to arise periodically due to changing needs of the consumer. We investigate whether strategic trials increase when anticipating changes in purchasing stages. We estimate our model using scanner data for the diaper category where consumers have to switch to the next bigger size periodically as their babies grow older.

4 - Measuring Impact of Market Environment Change on Preference Using Conjoint

Anocha Aribarg, Ross School of Business, University of Michigan, 701 Tappan St., Ann Arbor, MI, 48105, United States of America, anocha@umich.edu

Conjoint analysis is one of the most popular research techniques used by both academic scholars and practioners to assess consumer preferences for different product attributes. Often time, however, consumers' choice decisions are not only affected by attributes of product options but also other contextual factors. For example, amid soaring gasoline prices, vehicles with hybrid technology which provide better fuel economy have gradually caught more consumers' attention. It is also likely that consumers' decisions to purchase a hybrid vehicle can be influenced by observing adoption of hybrid technology by other consumers. A typical conjoint analysis and choice model do not take such contextual factors into account although understanding impact of such environmental factors on consumer choice is clearly crucial for a company's ability to predict potential success of its new technology. In this paper, we propose a choice modeling and conjoint analysis framework to investigate the impact of external environment on consumers' adoption of new technology. We construct a choice model which incorporates three possible mechanisms that environmental factors can affect consumer choice: i) determining whether products with new technology will be included in a consideration set; ii) activating trade-off between the new technology and other existing attributes and iii) moderating consumers' preferences for the new technology and other existing attributes. We conduct our conjoint experiment in the context of hybrid technology, and focus on two environmental factors: gas price and hybrid adoption rate by other consumers. Based on parameter estimates from our model, we attempt to predict the evolution of hybrid adoption in different gas price scenarios.

■ SC12

2nd Floor - Room 2220

B2B: Relationship Management and Trust

Cluster: B2B Marketing

Invited Session

Chair: Clara Agustin,IE Business School- IE University, Maria De Molina 12 Bajo, Madrid, Spain, clara.agustin@ie.edu

1 - Trust Building Process in Asymmetrical Buyer-Seller Relationships: An Experimental Study

Qiong Wang, Assistant Professor of Marketing, 435 Business Building, University Park, PA, 16802, United States of America, qiongwang@psu.edu, Min Ding, Songting Dong, Chenting Su

Prior research conducted in buyer-seller relationships suggests that trust may be the most efficient mechanism to govern partnering relationships into the long term (Anderson and Narus 1990; Morgan and Hunt 1994). However, the process through which trust is developed in business relationships is largely neglected in the extant literature. The lack of attention to trust building process is in part due to the paradigm extant researches have used. Cross-sectional surveys or anecdote case studies have been used in most of the research on partnering relationships, which precludes drawing strong inferences about the causal relationships between trust and relevant factors such as actions taken by firms. In this study, we first propose a theory based on both rational trust development (from experimental economics literature) and irrational trust developmental process (from social psychology literature). Particularly, we study different behaviors that are argued to influence perceptions of trust. Second, this study provides an empirical approach - inter-organizational interaction experiment - to track the development process of trust between buyer and supplier. Particularly, we study the trust building process in buyer-seller relationships characterized with asymmetrical power. Our study offers significant managerial implications for managers on how to successfully develop trust between buyers and suppliers. The software supporting the paradigm would be made available to other researchers and managers interested in furthering their understandings of business-to-business relationship development.

2 - Ensuring Trusting Supplier Working Relations

R. Mohan Pisharodi, Associate Professor of Marketing, Oakland University, School of Business Administration, 414 Elliott Hall, Rochester, MI, 48309-4493, United States of America, pisharod@oakland.edu, John Henke, Ravi Parameswaran

It is generally considered highly desirable to have cooperative, trusting working relations between partners in B2B relationships. While adversarial relations are quite common between buyers and suppliers, business scholars have credited cooperative working relationships with significant achievements including cost savings, productivity improvement, shorter product development cycle times, lower transaction costs, and improved overall supply chain management. There is paucity of information in the extant research literature on the working relations characteristics and managerial variables that influence the development and sustainability of trusting buyer-supplier relations. Needless to say, the generalizability of any findings across industries and cultures is limited. This research explores B2B relationships in a variety of industries and seeks to identify the drivers of good and poor supplier working relations. A set of indicators reflecting underlying drivers were identified and data were collected from key informants of more than 6000 buyer-supplier pairs representing eight industries in North America and in Europe. The data were analyzed in combined form, as well as in segmented form by separating responses by industry, by region of the world, and other relevant criteria. Statistical analysis of the collected data revealed similarities, as well as differences across groups. Further analysis of the diverse groups using Structural Equations Modeling and Confirmatory Factor Analysis revealed a pattern of relationships that empirically supports the importance of superior inter-organizational communication and perception of mutual economic benefit in creating and forging trusting supplier working relations.

3 - Trustworthy Mechanisms and the Trust-control Dilemma

Clara Agustin, IE Business School- IE University, Maria De Molina 12 Bajo, Madrid, Spain, clara.agustin@ie.edu, Maria Velez, Jose Manuel Sanchez

Do suppliers' formal controls damage distributors' trust? Extensive studies on this question show mixed results. We argue that the debate on whether formal controls and trust are complementary or substitutive in regulating business relationship can be sorted out by identifying the mechanisms underlying the association between formal control and trust. This article develops a theoretical model that takes into account how the parties involved use formal control systems, i.e. for decision-management and decision-control, and proposes that the formal control systems-trust association is contingent upon how decision management and decision control influence trustworthiness (competence and benevolence). This article employs perceptual measures from the controlled and the controller parties' point of view and focuses on a mature relationship. The model was empirically tested with survey data obtained from 107 distributors and 91 members of the supplier's firm. The results show that decision control damages trust to the extent that the use of formal control systems for decision control has a negative impact on perceived benevolence. However, the use of formal control systems for decision management enhances trust to the extent that it increases perceptions of competence and benevolence, therefore counter-balancing the negative effect of decision control on trust.

■ SC13

2nd Floor - Room 2230

Brands and Branding: Metrics

Cluster: Brands and Branding

Invited Session

Chair: Marta Olivia Rovedder de Oliveira,Doctor Student, Universidade Federal do Rio Grande do Sul, Av. Loureiro da Silva, 1500, apto. 712, Porto Alegre, RS, 90050240, Brazil, mrovedder@yahoo.com.br

1 - What Makes a Superstar? Investigating the Evolution of Athlete Brands

Yupin Yang, Assistant Professor, Simon Fraser University, 8888 University Drive, Burnaby, BC, V5A 1S6, Canada, yupin_yang@sfu.ca, Avi Goldfarb, Mengze Shi

Superstars in such industries as entertainment and sports extract a huge premium through their band power. Their brand values are managed through their associations with other brands rather than traditional marketing strategies such as pricing, advertising and etc. The author applies hazard models to investigate what are the factors associated with the evolution of athletes' brand values using the athletes data from the NBA. Particularly, this paper focuses on investigating the takeoff and decline times during the evolution of athlete brands. The results show that both the takeoff and decline times is significantly correlated with team performance; the decline time is often accompanied by a team change. In addition, results also suggest that the time makes it more difficult for players to become a superstar. This may be due to technology advances in TV and Internet, which make current superstars to live longer and other players harder to become a new superstar. The findings benefit not only athletes and professional teams, but also corporate brands that often use celebrity brands to promote their brands.

2 - Brand Health Diagnostics: Comparison of Brand-usage Versus Brand Image Measures

Mukesh Bhargava, Oakland University, 346 Elliott Hall, Rochester, MI, 48309, United States of America, bhargava@oakland.edu, Kim Serota

Brand health measures provide vital diagnostic information that is used for tactical and strategic decisions such as repositioning, extensions and deletions. However, most approaches to measuring brands rely on perceptual measures. By capturing usage data, decomposing brands into usage occasions and applying network analysis we offer an alternative approach to understanding the relationships between brands, and between the firm and consumer behavior. Most often, brand positioning is based on multi-attribute measures and relies on some form of perceptual mapping to describe and interpret the strategic and competitive relationships among brands. Based on theoretical foundations for understanding market structure from a customer perspective, usage data provides a similar perspective on the brand health measures. Further, network analysis can be applied to brands as they are used within a category to describe brand architecture and guide brand positioning and brand portfolio strategies. Therefore, as the basic attitude-intention-behavior framework continues to be challenged, strategy formation may benefit from closer examination of behaviorally-based data. Using data collected from the U.S. car rental industry, this paper compares both behavioral and perceptual brand measures over time and examines the efficacy of the two approaches for explaining and predicting changes in market share. Specifically, we examine both behavioral and perceptual change in light of changing external influences (travel security restrictions), consumer needs (the shift from business-dominated to leisure-dominated travel), and competitive actions (the rise of the Enterprise brand).

3 - Cognitive Knowledge Measurement Toward ROI in Brand Management

Akihiro Inoue, Professor, Keio Business School, 4-1-1 Hiyoshi, Kouhoku-ku, Yokohama, 223-8526, Japan, ainoue@kbs.keio.ac.jp, Akihiro Nishimoto

Brand is a key aspect of marketing management. Even though we have a substantial amount of the research in brand management, few have a focus on the financial aspects, i.e., marketing ROI. Also, even though many studies treat brand as cognitive images, few take into account the heterogeneity among individuals. In this research, we treat brand as a cognitive knowledge structure of a consumer that vary across individuals, and try to associate the cognitive structure with per-dollar value so as to provide marketing ROI insights to marketing managers. Our framework is based upon a hierarchical modeling where cognitive knowledge structures are specified by several cognitive elements, some of which are brand-related and others are not. The arousal processes of the cognitive elements are hyper-parameterized as a function of socio-psychological characteristics of individuals. And the entire cognitive structure is evaluated in terms of monetary values. Via the findings from our research, we can provide the following insights to marketing managers: how much the sales could be increased by re-positioning a brand value. To which target segment is most appropriate with the campaign featuring a particular value of brand and how much the sales would be. How much the sales would be if a product is sold under the sub-brand of existing brand name and how much the sales would be if not. How much the sales would be increased if a brand value is emphasized.

4 - Brand Value and Shareholder Value in the Brazilian Stock Exchange

Marta Olivia Rovedder de Oliveira, Doctor Student, Universidade Federal do Rio Grande do Sul, Av. Loureiro da Silva, 1500, apto. 712, Porto Alegre, RS, 90050240, Brazil, mrovedder@yahoo.com.br, Fernando Luce

Many authors (e.g., Doyle 2000, Rust et al. 2004a) pointed out that marketing practitioners and scholars are under increased pressure to be more accountable for and to show how marketing expenditure adds to shareholder value. This pressure tends to increase in a moment that the financial crisis is spreading to the broader economy. Over the last several years, marketing metrics has been a priority topic and brand valuations are increasingly being seen as an important performance metric for both companies and the academy. Prior studies has shown that brand value is associated with stock prices (e.g.: Simon and Sullivan 1993, Mizik and Jacobson 2006). Madden et al. (2006) demonstrate that brands provide greater return to shareholders than either the stock market as a whole, or a relevant benchmark. Most of this research on brand valuation focused on U.S. stock exchanges (the New York Exchange, the American Stock Exchange, and NASDAQ), hence some questions about external generalization about brand value influences on stock returns are emerging. The present work has a similar research methodology that Madden et al (2006) used in their study. It compares the stock market perfomance of the Brazilian most valued brands companies portfolio (provided by Interbrand) with the Brazilian stock exchange as a whole (all companies in Bovespa) and a relevant benchmark (market as a whole minus companies with strong brand values). Two financial models were used - CAPM and three factors model (Fama and French, 1993) - to analyse the portfolios' returns and risks at BOVESPA. Some results in Brazilian market were different from the conclusion get in the U.S. Stock Exchange. Moreover, insights about the possible explanations for the differences in the findings are also presented.

■ SC14

2nd Floor - Room 2240

Services: Customer Relationships

Cluster: Marketing Strategy

Invited Session

Chair: Regina McNally, Assistant Professor, Michigan State University, N370 North Business Complex, East Lansing, MI, 48824, United States of America, mcnally@bus.msu.edu

1 - Customer Relationship Management and Inventory Shortages

Xiaoqing Jing, University of Florida, 1216 SW 2nd Ave, APT37, Gainesville, 32601, United States of America, jingxq@ufl.edu, Michael Lewis

The goals of inventory management and customer relationship management can often conflict. A primary goal of CRM is to maximize customer lifetime value and customer equity. Often a primary method for increasing the economic value of customer assets is to increase retention rates. In contrast inventory management systems often have a cost focus that attempts to balance shortage costs with holding costs. Yield management systems are a special class of inventory management that ration inventory at the segment level. A common consequence of inventory management and yield management policies is that customers occasionally experience stockouts. If stockout rates cause customer attrition it may be beneficial to considering customer management and inventory management simultaneously. In this study we empirically examine how stockouts and fulfillment rates impact long-term customer relationships. We find that stockout rates have a dramatic but nonlinear impact on customer equity. This suggests that firms can achieve many of the benefits of improving fulfiment rates through small decreases in stockout rates. We also find significant differences in how different types of customers respond to stockouts. Specifically we find that prioritizing inventory based on transaction history measures and basket contents can lead to large increases in customer equity while only requiring moderate reductions in stockout rates.

2 - Investigating Customer Churn with Bayesian Survival Analysis: A Study of Automotive Care Services

Lijun Zhang, PhD Candidate, Peking University, Guanghua School of Management, Peking Un, Beijing, China, lijunzhang@gsm.pku.edu.cn, Meng Su

Customer churn has become a critical problem for firms, especially in competitive markets or noncontractual settings. In the automotive care service industry, customers can choose among multiple service providers, and may actively switch from one provider to another. In addition, the churn propensity and customer relationship duration usually vary with different customers. The purpose of this paper is to examine customer churn in the context of the automotive maintenance and repair services and link the heterogeneity with a number of individual specific covariates. Particularly, to capture this heterogeneity, we apply a Bayesian survival approach with the Markov chain Monte Carlo (MCMC) method to estimate when customers will churn and examine how individual characteristics and experiences affect the customer churn risk. The data for this study are obtained from an automotive manufacturer. It comprises the car repair records of about 3,000 customers during a 35-month window from the authorized maintenance and repair dealers in China. In addition, customers' demographic variables, the service quality and satisfaction measures for each authorized dealer at the aggregate level are obtained with survey questionnaires. The results demonstrate an application of Bayesian survival analysis to identify customers who are at high risk of churn and examine how individual characteristic and service experience affect the customer churn. In addition, the findings will help automotive companies understand the time-varying customer churn risks, customize retention programs, and optimize customer lifetime value.

3 - Customers' Affective Experience: Evoked Emotions, Mood or Temperament?

Adam Finn, RK Bannister Professor, University of Alberta, School of Business Bldg, Edmonton, AB, T6G 2R6, Canada, adam.finn@ualberta.ca

Advocates of creating a memorable customer experience (Pine & Gilmore 1999, Shaw and Ivens 2002) have suggested service managers aim to control their customers' affective experience, not just monitor their customers' level of satisfaction. Some propose monitoring customer delight (Keiningham and Vavra 2002); other advocate monitoring the full spectrum of emotions (Shaw 2007). Some have proposed employing behavioral or physiological measures of emotions, such as facial action coding (Cohn, Ambadar and Ekman 2007, Hill 2007). However, such methods are not feasible in the majority of consumption environments, so the only practical and popularly employed alternatives are structured self-reports (Plutchik 1980, Mehrabian and Russell 1974, Watson, Clark and Tellegen 1988). This research specifies a model of the sources of variance in affective responses self-reported by service customers. Then it identifies a crossed generalizability study design that, if implemented, could differentiate between the emotions evoked by a service experience and the effects of respondent mood or respondent temperament (Gray and Watson 2001). However, the design requires respondents to experience all of the sampled services simultaneously, something that is physically impossible. An alternative design provides an approximate solution while allowing the service visits to be spread out over time. The latter approach is illustrated by collecting affective responses from samples of visitors to a sample of on-line retailers on multiple occasions. The proportions of variance due to evoked emotions, mood and temperament are estimated, and their influence on the psychometric performance of self-report measures of evoked emotions shown by reporting relevant generalizability coefficients.

4 - Mandatory Adoption of Customer Relationship Management Software: Impact in Attitude-Intention Models

Regina McNally, Assistant Professor, Michigan State University, N370 North Business Complex, East Lansing, MI, 48824, United States of America, mcnally@bus.msu.edu, Abbie Griffin

Implementing customer relationship management (CRM) does not ensure increased profitability. While technology matters, returns on CRM investments are at risk without appropriate human interaction. Because employees play an integral role in delivering customer service and capturing CRM data, organizational issues are critical for CRM and services research. Both literatures suggest service employees' interactions with technology require additional examination. Technology adoption has been investigated via several attitudeóintention theories, including theory of reasoned action (TRA), theory of planned behavior (TPB), and technology acceptance model (TAM). Also, technology adoption has been investigated in various contexts where users have the option of using the technology or not, and the choice is theirs alone to make. Mandatory technology adoption, as in organizational settings where the technology is an integral part of performing one's duties and there are no alternatives to accomplishing tasks, is under-researched and merits additional investigation. We examine the applicability of attitudeóintention models in predicting CRM software use in call centers, where software use is mandatory and the software is integral to job performance. In voluntary adoption contexts, software use attitude has been found to be an insignificant predictor of intention. Our analysis of survey data from 104 call center agents in the banking industry suggests subjective norms and attitudes predict intentions, while software ease of use and perceived behavioral control are not significant predictors of attitudes or intentions. Also, intentions and agent empathy toward customers increase agents' job knowledge, while software usefulness decreases agents' job knowledge.

■ SC15

2nd Floor - Room 2320

Pharmaceutical Marketing I

Cluster: Healthcare Marketing

Invited Session

Chair: Jens Keller,University of St. Gallen, Dufourstrasse 40a, St. Gallen, Switzerland, jens.keller@unisg.ch

1 - Managing Across Substitute Categories

Jens Keller, University of St. Gallen, Dufourstrasse 40a, St. Gallen, Switzerland, jens.keller@unisg.ch, Koen Pauwels

Both changing competitive intensity and the pharmaceutical industry have become important research topics in economics and marketing. While the economics literature has started to consider the fortunes of generic drug manufacturers, the marketing literature has remained focused on how brand name drug manufacturers should respond to entry and competition from other brand name drugs and from generics. No paper has looked at the marketing actions and their effectiveness for both brand name and generic drug manufacturers. Moreover, research has considered competition and marketing spending within one chemical compound or for a therapeutic class as a whole, instead of distinguishing within-compound from across-compound competition, i.e. among drugs targeting the same therapeutic class with objectively different compounds. This is particularly important for marketing spending allocation because many large brand name and generic drug manufacturers produce several compounds for the same therapeutic class, and thus face a choice of entry strategies and marketing allocation across compounds. Our study uses a Dynamic Linear Model to investigate price response and marketing effectiveness of brand name and generic drug manufacturers. We analyze within-compound and across-compound behavior by incorporating 6 major compound-submarkets of the total antidepressant market.

2 - Maybe Physicians are Getting it Right

Doug Walker, Iowa State University, College of Business, 3129 Gerdin Business Building, Ames, IA, 50011, United States of America, dmwalker@iastate.edu

Ideally, physicians and pharmaceutical companies work together to insure that each patient is prescribed the best drug available to treat their particular condition. But physicians are not always sure which brand in a category is the best choice and pharmaceutical companies are obligated to focus on profits. However, physicians learn which brands work best for particular types of patients over time. Pharmaceutical companies' most effective marketing efforts may be those that contribute to this learning. Efficient marketing reduces the cost of prescription medications, benefiting consumers, pharmaceutical firms, and policy makers. Numerous studies have specified response models of prescription writing, with varying results. Authors consistently suggest that the key missing variable in these studies is the condition of the patient. Assuming physicians attempt to prescribe the brand that will best treat the presenting patient's condition, knowing the percentage of patients best treated with each brand is paramount. This study incorporates the theoretical existence of the underlying brand shares that would result if the best brand for each particular patient's condition was prescribed at each opportunity. Three important contributions result. First, physicians appear to use both their experience with the various brands in a category and detailing to continually improve their ability to choose the best brand for each particular patient. Second, the consideration of an inherent share for each brand in a category affirms and explains the seemingly conflicting findings of many prior studies. Third, the findings suggest implications for pharmaceutical marketers and policy makers.

3 - The Unique Role of Satisfaction, Recommendation, and Retention on the Pharmacy Market

Jaap E. Wieringa, Associate Professor, University of Groningen, Department of Marketing, P.O. Box 800, Groningen, 9700 AV, Netherlands, J.E.Wieringa@rug.nl, Sara T.M. Kremer, Peter S.H. Leeflang

The aim of this research is to study the perception of service quality constructs, the satisfaction level and their effect on retention and recommendation behaviour of pharmacy customers. We combine perceptual data derived from a large scale survey among customers, and purchase data, to relate the perception of the service level provided by the pharmacy to behavioural loyalty to the store. Furthermore we investigate whether satisfaction affects recommendation and to what extent retention related metrics can be explained by satisfaction. The contribution of this study is that we study the above mentioned constructs and their relationships, in a non-contractual setting. Further, in contrast to many other studies that use store level data, we are able to formulate results on a customer level. Finally, we provide new insights on the pharmaceutical market by specifically focusing on under researched, but important players in the pharmaceutical market, i.e. pharmacies. Our results are based on perceptual data of almost 700 customers of 19 pharmacies, all belonging to the same pharmacy chain in the Netherlands. Using structural equation models, we find that (in decreasing order of importance) product availability perception, store perception, pharmacy staff perception, and marketing perception influence the general satisfaction level of the pharmacy. The composite reliability and the percentage of variance extracted by all four groups of variables are very high.

4 - Product Line Extension in the Pharmaceutical Industry

Jun Yang, Assistant Professor, The University of Mississippi, Holman 356, School of Business, University, MS, 38677, United States of America, jyang@bus.olemiss.edu, Charles Ingene, Yi Yang

In this paper, we use an analytical model to study the Product Line Extension (PLE) decisions by patent drug manufacturers when facing generic competition. We further empirically verify our results by using a unique dataset compiled from several sources (including the Food and Drug Administration). The dataset includes all the drugs whose patents expired between 2000 and 2007. We classify PLE into two categories, minor modification (formulation change or the combination of several existing molecules), and major modification (a new molecule entity introduced in the same drug category). We find a firm's PLE decision depends on whether this drug is a 'blockbuster' drug, and whether this drug is treating chronic disease. A successful drug treating acute condition is the top one category to have PLE. On the other hand, a drug treating chronic condition usually employs PLE, no matter whether it is top selling or not. Furthermore, our results also show that most of the time, a simple formulation based PLE is the most widely used. The molecule based PLE involves extra cost, and is less frequently observed.

Saturday, 3:30pm - 5:00pm

■ SD01

Lower Level - Room 0210

Product Policy

Cluster: Marketing Models

Invited Session

Chair: Ngan Chau,University of Central Florida, College of Business Administration, Department of Marketing, BA-II 308-K, Orlando, FL, 32816, United States of America, nchau@bus.ucf.edu

1 - Minimizing Measurement Cost in Concept Tests with a Desirable Generalizability: A Trade Off Model

Xiaoning Guo, PhD in Marketing, University of Cincinnati, Department of Marketing, Universityof Cincinati, 402 Carl H. Lindner Hall, P.O. Box 210145, Cincinnati, OH, 45221-0145, United States of America, graceguo08@hotmail.com, Xi Zhang, Ling Peng, Chunyu Li

To better anticipate the likely market demand and anticipate the best customers to target with potential new products early in their development, concept tests need to provide adequate data quality for the objectives of measurement. Generalizability theory (G-theory) provides a framework where a Generalizability study (G-study) can be conducted to find out each possible aspect of a measurement as a factor that may be a potential source of variability. However, when limited resources are available, optimizing measurement designs involves making a tradeoff between the generalizability coefficients and cost considerations, i.e., the lowest-cost design among the iso-generalizability designs will be considered optimal. Building on the previous research, this study presents a multivariate-multifacet optimization procedure to achieve the most cost-efficient measurement design under the prespecified G-coefficient constraint. We used the available online concept testing data to illustrate the trade-off model where we sample along the facets that contribute to error variance component in different iso-generalizability designs. The desirable G-coefficient (e.g., 0.90) is specified as a constraint in the model but not an optimization result. The findings would help to facilitate effective tradeoff decision-making in the design of concept test in terms of the sampling of respondents, concepts, items and occasions. Further, the findings would have general applicability to improve the effectiveness and efficiency of other customer tests in marketing.

2 - An Analysis of Short- and Long-term Effects of Marketing Signals in Surmounting Product Recalls

M. Berk Talay, HEC Montreal, 3000, chemin de la Cote-Sainte-Catherine, Montreal, QC, H3V 1G1, Canada, berk.talay@hec.ca, M. Billur Akdeniz

In today's highly competitive environment, it is undeniably essential for all firms to develop products and services with high quality and build brands with superior reputation to survive in the marketplace. However, companies have not been successful to eliminate all defects in their products despite their efforts. When disclosed, these defects lead to product crises which are usually very-well publicized events wherein the defects and dangers are overtly exposed to the public. Therefore it is important for firms to effectively counteract the unfavorable impacts of product recalls by transmitting marketing mix signals (e.g. prices, warranties, promotions etc). On the other hand, despite their important consequences, product recalls have received little attention academic literature, which is mainly focused only on their short-term effects. Drawing on signaling theory and using data on product recalls in the U.S. automobile industry from 1985 to 2005, this study analyzes the role of marketing mix signals in mitigating the complications of product recalls. Specifically, we contribute to the literature by using a time-varying coefficient cointegrating model to analyze 1) the immediate and short-term impacts of the product recalls on various firm performance measures (e.g. sales, market share) 2) the long-term, persistent impact, and 3) the combined cumulative effect over the dust-settling period, which is defined as the time it takes before the convergence level is obtained. The results indicate that while dissipative signals are better suppressants than nondissipative signals which become effective only in the long run.

3 - Product Development and Introduction Strategies of Durable Goods Manufacturers

Ngan Chau, University of Central Florida, College of Business Administration, Department of Marketing, BA-II 308-K, Orlando, FL, 32816, United States of America, nchau@bus.ucf.edu, Ramarao Desiraju

The extant literature on product innovation and new product entry strategies is extensive and provides many insights. As noted in Hauser, Tellis and Griffin (2006), however, several issues remain relatively unexplored and our purpose here is to take a step towards bridging the gap in the literature. More specifically, manufacturers in the high technology sector frequently develop and introduce successive generations of durable goods. Anecdotally, industry experts note some variation in the level of innovation and introduction timing across different hi-tech product categories. Our goal is to add to the extant literature by exploring some of the reasons underlying this observed variation. Accordingly, we develop a mathematical model encompassing two distinct time periods and analyze a durable goods manufacturer's decisions in the presence and absence of competition and network effects. Our model builds upon earlier work (e.g., Purohit 1994, Sun et al 2004) and addresses several decisions related to product development and introduction—-for example, should a firm introduce an innovative product, even if this were to make its current product obsolete, and when should the firm not commercialize an available new product. The paper reports its results related to such decisions, discusses the difference between our findings and those in extant research and identifies directions for further work.

■ SD02

Lower Level - Room 0220

Retailing

Cluster: Channels

Invited Session

Chair: Xiaoling Zhang, Indiana University, Kelley School of Business, 1309 E. 10th St., Bloomington, United States of America, xz7@indiana.edu

1 - Picking Out the Buyers From the Browsers

Xiaoling Zhang, Indiana University, Kelley School of Business, 1309 E. 10th St., Bloomington, United States of America, xz7@indiana.edu, Shibo Li, Alex Leykin, Raymond Burke

When shoppers walk into a store, can salespeople pick the buyers from the browsers based on behavioral cues? If so, then they can focus their energies on the most promising prospects, increasing store sales and their individual commissions. The purpose of this paper is to develop a model forecasting a shopper's purchase likelihood following her initial zone choice based on video tracking of the shopping path and in-store behaviors in an apparel store. Conceptually, the interplay between external variables and the consumer's internal needs determines a consumer's shopping path, which, in turn, influences one's purchase decision. Specifically, we hypothesized that: (a) higher sinuosity (curvature of movement) is associated with a longer shopping path and is positively related to purchase; (b) walking speed is negatively correlated with purchase; (c) touching a product, speaking with a companion, and interacting with a sales associate will each have a positive effect on consumer engagement and purchase; (d) product trial is associated with higher likelihood of purchase; and (e) customers talking on the phone are distracted from shopping, and will take longer to make a purchase decision. The proposed model is a two-stage probit model implemented in a Hierarchical Bayes framework. The first stage is zone choice, followed by the purchase decision. This research makes several contributions. Theoretically, the study sheds light on the shopping processes that are most likely to lead to purchase. Methodologically, the collection and use of video tracking data offer several benefits over the prevailing RFID techniques. Empirically, this research help retailers understand shopper behavior and improve purchase conversion rates.

2 - "The Moment of Truth"- Understanding Consumers' Conduct at the PoS to Gain a Competitive Advantage

Shyda Valizade-Funder, Doctoral Student, University of Mainz, Jakob Welder-Weg 9, Mainz, Germany, valizade@marketing-science.de, Oliver Heil

Shoppers' purchasing decisions are often made at the PoS. It is at the PoS where consumers make or delay purchases. Also, it is through in-store promotion activities where marketers influence consumers' product framing and their likelihood of buying. It is at the PoS where frequency can become sales. In short, it is the PoS at which consumers' shopping behavior needs to be understood. To do so, data should, ideally, reflect consumers' conduct at the PoS completely, continuously and immediately. Despite the extensive body of literature on consumers' behavior, only limited research has been conducted on non-purchase behavior. The research gap may be caused by the lack of a technology allowing to precisely and objectively observe shopping behaviour at the PoS. We propose a video-based technology to analyze PoS purchasing and no-purchasing behavior. Such behavior can be described in remarkable detail by subdividing the purchasing process into individual stages. These stages are analyzed using an automated observation technology. This allows a structured tracking of individual customer flow, dwell time, grabbing items off the shelf and returning them to the shelf or into the shopping cart, etc. Our technology makes such data available for each and every customer in the store at any desired point in time. Purchase termination data also provide an important source of evidence to cross-validate other research findings about the search pre-purchasing process. Additionally, such data can provide important information to retailers and their suppliers, so they can react swiftly and reduce the termination rate in store. We also expect to show that our method can thoroughly enhance existing data mining methods, store and personal management as well as PoS effectiveness.

3 - "Clock Blocks" or "Jugglers"? A Macro Study of UK Retail Shoppers Spatio-temporal Orientations

Vishal Talwar, LSE, Houghton street, London, United Kingdom, vishal.talwar2007@gmail.com, Syagnik Banerjee, Kadir Geyik, Kalyan Raman

How shoppers organize their time has been of interest to many researchers, to understand how marketing activities should be directed at them. Prior researchers have primarily looked at monochronous and polychronous tendencies, where the former like to be "clock blocks" doing one thing at a time and the latter "jugglers" perform multiple tasks together. We examined a database of 800,000 UK Retail customers containing 20 million transaction records which was segmented into Space-Time Fixed, Space Flexible-Time Fixed, Space Fixed-Time Flexible and Space-Time Flexible. These segments identified individuals who buy at Single stores at single times (either weekdays or weekends) , multiple stores at single times, single stores at multiple times (both weekdays and weekends) and multiple stores at multiple times. The authors find that store and time flexibility increase number of visits per shopper to the store, but seem to decrease the quantity, purchase value and product variety with some interaction effects. The findings imply differential targeting of marketing actions to the four segments.

4 - Deviations from the Power Law for Market Shares

Younghan Bae, PhD Student, University of Iowa, 108 PBB S347, Iowa City, IA, 52242, United States of America, younghan-bae@uiowa.edu, Tom Gruca

The power law or Zipf's law (a special case of the power law) describes the relationship between rank and measures of size, scale or frequency. For example, the power law describes the distribution of city populations in the United States, frequency of English words in literature, and the distribution of income in the United States. Some studies in marketing (e.g., Kohli and Sah 2006) have explored the relationship between the level of market shares and the rank order of market shares using the power law. These studies analyze a very limited set of markets (or categories). Our work seeks to generalize these studies by modeling the distributions of market shares across packaged goods categories in the United States. The data consists of 8461 brands in 539 categories sold in grocery stores in the United States in 2000. Our study incorporates category-level variables that explain variations in the relationship between market shares and rank. We fit a hierarchical Bayesian model with the category-level predictors to a Zipf formulation. These category-level variables represent characteristics of a category such as promotional activities, competition, and category importance. We show that the pattern of market shares for each of the markets is represented well by the Zipf model. However, the market shares can be better predicted by adding the category-level variables in the hierarchical Bayesian Zipf model.

■ SD03

Lower Level - Room 0230

Advertising: Metrics

Cluster: Advertising

Invited Session

Chair: Russ A Merz,Professor, Eastern Michigan University, Department of Marketing, Ypsilanit, MI, 48197, United States of America, russ.merz@emich.edu

1 - Does Beauty Pay Off? On the Commercial Success of Award Winning Advertising

Werner Reinartz, University of Cologne, Department of Retailing and Customer Mgmt., Albertus Magnus Platz 1, Cologne, Germany, werner.reinartz@uni-koeln.de, Peter Saffert

Above-the-line advertising (e.g. print, TV) is still the main marketing instrument for most FMCG companies to inform and persuade existing and potential customers. Competing for a share of corporate advertising spending are advertising agencies. Their reputation is partly determined by the number of (creative) awards the respective agency has won for its campaigns. Most awards are given out by professional associations, such as for example the Art Directors Club (ADC), and they are frequently used as an indicator for the creative capability of those agencies and as a key differentiating attribute. However, besides case studies, so far there has been no systematic, quantitative, and sufficiently generalizable analysis of the commercial success of award-winning campaigns. The hypothesis of interest is that award winning ads trigger better commercial performance because the ad is, for example, being recognized ad as more distinctive, thereby creating higher consumer awareness, which then might translate into higher unit sales. The objective of this study is to investigate the relationship between award-winning advertisements and the commercial success of the product that is being advertised. In other words, is the fact that an agency wins an award for a campaign a credible signal for companies in terms of creating tangible business results, such as higher sales and market share - or - is it rather a beauty contest between agencies? Matching an extensive GfK household panel, a Nielsen media panel, and publicly available award information, we use a VARX model to analyze the differential performance effects for award winning vs. non-award winning advertisement in five FMCG product categories in Germany while controlling for media expenses.

2 - Visual Self-representation in Avatar-mediated Environments

Paul Messinger, University of Alberta, School of Business, Edmonton, AB, T6G 2R6, Canada, paul.messinger@ualberta.ca

Is there convergence between people and their visual self-representations as avatars in virtual worlds? This question is important for correctly interpreting avatar-mediated communications for a wide range of growing practical applications in business, education, and government. In this paper, we hypothesize that people (balancing motives of self-verification and self-enhancement) design the image of their avatars to bear similarity to their real selves, but with moderate enhancements. We examine this issue using two corroborative methods: (a) an in-world intercept survey of residents of Second Life and (b) a study that compares coders' evaluations of avatar images in Second Life with photographs of the real people the avatars represent. Both forms of data indicate that people strike a balance between retaining elements of their real appearance and making enhancements. In particular, people retain their most attractive features, but enhance on their less attractive features, including weight, clothing style, age, and body shape. We also discuss new modes of data collection using virtual worlds and virtualization technologies to examine traditional market research questions and the impact of new media. We then show how these techniques can be applied to assess the impact of new media at four levels of engagement, which we refer to as a "hierarchy of engagement. These issues are important for understanding future developments in the market research and advertising professions.

3 - Asymmetric Advertising Responses

Julien Schmitt, PhD Student, HEC Paris, 1 Rue de la Libération, Jouy-en-Josas, 78350, France, julien.schmitt@mailhec.net, Ganaël Bascoul

Companies under pressure from stakeholders to meet profit expectations are often tempted to cut advertising expenses, as this is an easy and fast method to keep resources and reach appropriate bottom line figures. This is particularly the case in times of economic difficulties. However, firms may not fully grasp the actual impact of such drastic advertising cuts on sales. Although previous research has attempted to model the impact of advertising on sales, the general assumption is that advertising effects are symmetric. In other words, the numerical sales impact of a marketing spending increase or decrease is the same in absolute value. While some authors have proposed more general, asymmetric response patterns, they are rarely used in practice. Modern time-series methods such as VAR models have not investigated such important asymmetries. Our paper addresses this gap by developing a new methodology based on the multivariate time-series analysis to capture the dynamic relationship between advertising spending and sales. Our first research question is therefore to what extent is there asymmetric sales response to advertising? Second, are the impacts of positive versus negative shocks to advertising on sales different in magnitude? Finally, are there significant differences in the wear-in and wear-out durations? We answer our research questions by applying Vector Autoregressive (VAR)/Vector-Error Correction (VEC) models with multiple years of data on sales, prices, promotions and advertising expenditure for numerous brands from four product categories. Our results show that there is evidence of asymmetric advertising response and point to the need for using models that allow for such asymmetric effects.

4 - Modeling a CCI Co-creation Index

Russ A Merz, Professor, Eastern Michigan University, Department of Marketing, Ypsilanit, MI, 48197, United States of America, russ.merz@emich.edu, Sheila Sasser

A creativity model emerges using SEM Structural Equation Modeling. A theoretical framework first illustrates client and agency factors as indicators that impact creativity for SEM estimation. In this model, factors including receptivity to new ideas and client sophistication are tested and interact as indicators influencing agency motivation and creative expertise. There is a mitigated effect of the client factors leveraging or propelling the agency factors in either positive or negative directions and this impacts strategy and innovation. A sophisticated client who is willing to explore inspires agency motivation and creative expertise. This effect then results in greater levels of creativity and innovation. Such a three dimensional view of the CCI Index, composed of originality, strategy, and artistry, enables the 3P's of Creativity. The CCI model shows the effect of these factors as indicators, taking the creativity index beyond earlier subjective and normative indices. This conceptual model dynamic was based upon a segment from a total sample size data set of 1664 creative advertising and marketing campaigns from European, United Kingdom, French and United States advertising agencies, reported by 565 respondents.

■ SD04

Lower Level - Room 0240

Pricing: Consumer Response

Cluster: Pricing

Invited Session

Chair: Mike von Massow,McMaster University, Hamilton, Ontario L8S4L8, Canada, vonmasm@mcmaster.ca

1 - A Multiple-discrete Model of Retail Price Promotions

Miguel Gomez, Assistant Professor, Cornell University, 246 Warren Hall, Ithaca, NY, 14853, United States of America, mig7@cornell.edu, Timothy Richards, Geoffrey Pofahl

Most research on the links between promotions and demand employ discrete-choice or continuous demand methods to model consumer response. However, consumers rarely purchase a single variety or a small amount of all varieties in a product category. They buy quantities from several varieties in anticipation to a stream of consumption occasions. Previous studies show that modeling demand as either discrete or continuous alone produce biased estimates. They model the multiple discreteness (MD) nature of demand considering quality differences. We argue that MD is critical to the study of price promotions because their goal is to increase demand for the same product, rather than to induce trial. We develop a MD model of price promotions for apples using2005-06 Homescan data. Earlier MD studies focus on goods where stockpiling may confound promotion impact measurement. We exploit the perishable nature of apples to obtain more accurate measures of the impacts of price discounts on sales. Our study makes two contributions. First, we adopt a distance metric framework in which quality depends on distances in the product attribute space, the household distances in demographic space and the distance between each purchase occasion. This approach uses observed data to create a vertical differentiation measure and preserves linearity of the quality index. Second, although multiple-discreteness is the essence of product differentiation, earlier studies do not model supply. Modeling explicitly the supply side is critical to understand the competition game played by manufacturers and to measure departures from the competitive equilibrium. Consequently, our model allows various types of manufacturer competition, including Bertrand, Stackelberg leadership and tacit collusion.

2 - Pricing Packs for Uncertain Consumption: Are Quantity Surcharges Possible in Consumer Non-durables?

Krishanu Rakshit, Doctoral Candidate, Indian Institute of Management Bangalore, FPM Office, IIM Bangalore, Bannerghatta Road, Bangalore, KA, 560076, India, rakshit@iimb.ernet.in, Srinivas Prakhya, Arnab Mukherji

Product proliferation is an effective tool for today's marketers; offering consumers a wide range of choices, in terms of versions, flavors, sizes, forms and colors. However, in spite of the benefits of product differentiation (and hence, product proliferation), it is difficult for sellers to manage cannibalization across the various product lines. Pricing product lines is often a challenge for sellers who offer similar product lines. Sellers often employ self-selection mechanisms to segregate consumers across product lines. In some cases, quantity surcharges are used as a price discriminatory tool. Contrary to popular belief, quantity surcharges are a reality in many markets. Extant literature in the area of marketing, analyzing pack sizes and quantity surcharges is limited. In our paper, we attempt to segregate between heavy and light users in the consumer non-durables segment by offering 'exclusive' packs. We adopt Gerstner & Hess' (1987) analytical model with consumers' choice governed by holding and transaction costs; where holding costs indicate the average inventory of the good and transaction costs are incurred when the consumer has to repurchase within the specific consumption period. Our model assumes uncertain consumption for consumers; the basic model predicts the impact of this uncertainty on choice of packs and incorporates later in other models the aspect of risk aversion towards transaction costs. The model reveals how the presence of consumers of the "other" type impact the offering made to the marginal consumers. We attempt to predict the possibility of quantity surcharges for certain packs given the nature of risk aversion. The phenomenon of quantity surcharges was supported by the survey across product categories in the Indian market.

3 - Analyzing Pricing Strategy with Reference Price Models Including Thresholds

Mike von Massow, McMaster University, Hamilton, Ontario L8S4L8, Canada, vonmasm@mcmaster.ca, Elkafi Hassini

We introduce a reference price model with thresholds within which there are no reference effects. Reference price models allow for the explicit incorporation of inter-temporal effects of pricing decisions. Clearly a pricing action in this period will affect demand in this period and may affect demand in the next period. Reference price models build that future demand effects in through a response to an expected price based on previous price exposures. Previous reference models have been structurally limited to either single price or cyclical price strategies but not both. In fact, for loss averse consumers, all reference price models have a single price as an optimal strategy. The incorporation of thresholds allows for both types of pricing strategies for loss averse consumers depending on the specific parameters of demand. We investigate the conditions under which price cycles and those under which an optimal price is constant. As the threshold on loss increases, reflecting, for example, higher switching costs or brand loyalty, price is more likely to cycle and profit increases. Alternately, as the threshold on gain increases due, for example, to factors such as carrying costs or a weak brand, profit decreases and price is more likely to be constant. Understanding the nature of the product demand can help managers develop pricing strategies that maximize their profits. It can also provide insight into the value of investment into brand building both in terms of the growth in demand and the ability to introduce price cycles to increase profits.

■ SD05

Lower Level - Room 0320

Consumer Behavior: Methodology

Cluster: Buyer Behavior
Invited Session

Chair: Kyuseop Kwak, University of Technology Sidney, School of Marketing, City Campus, Box 123, Broadway NSW, Sydney, 2007, Australia, kyuseop.kwak@uts.edu.au

1 - Evaluating the Suitability of Econometric Demand Models in Product Design for Market Systems

Katie Whitefoot, University of Michigan, 2250 G.G.Brown, 2350 Hayward Street, Ann Arbor, MI, 48109, United States of America, kwhitefoot@umich.edu, Bart Frischknecht, Panos Papalambros

Research in product design for market systems employs choice models in order to predict demand in response to changes in product design (i.e., attributes) as well as pricing and marketing variables. Several shortcomings of incorporating existing styles of econometric demand models into a design context are identified along with possibilities for overcoming them. Methods for evaluating the suitability of demand models for design optimization are presented and applied to a newly developed model of consumer demand in the new vehicle automotive market.

2 - More Valid and More Reliable: Tree Models for the Analysis of Self-Reports

Ulf Bockenholt, McGill, 1001 Sherbrooke Street West, Montreal, Canada, ulf.bockenholt@mcgill.ca

Although self-reports are indispensable for both research and policy-making in the social and behavioral sciences, measurement models for the analysis of self-reports put much faith in the abilities of respondents to provide accurate answers. The restrictive nature of these models becomes apparent when respondents are asked personal or sensitive questions that also induce feelings of threats. In this case, the interactions between two response goals - to self-protect but also to provide honest answers - needs to be taken into account. In other applications, it is critical to model that respondents do not only differ in their behaviors under study but also in their motivation to present themselves in a positive light. In this talk, I present a general class of tree models designed for the analysis of self-report data when responses are affected by multiple, possibly conflicting, response processes. These methods are illustrated by using different data collection methods that include randomized-response methods, response times, and predictions about the behavior of other respondents.

3 - How to Identify Potential Attribute by Covariate Interactions in Discrete Choice Models?

Kyuseop Kwak, University of Technology Sidney, School of Marketing, City Campus, Box 123, Broadway NSW, Sydney, 2007, Australia, kyuseop.kwak@uts.edu.au, Paul Wang, Ingo Bentrott, Jordan Louviere, Siggi Gudergan

In discrete choice models, product attributes generally vary over the choice alternatives. Covariates or characteristics of the decision-maker, on the other hand, do not vary over the alternatives. Theoretically speaking, an effective way to account for systematic taste variation or preference heterogeneity across different consumers is to incorporate attribute by covariate interactions into the choice model (Louviere et al. 2000; Train 2003). In practice, however, this modeling approach can be difficult to implement because of the large number of attributes and covariates involved. Covariates may include socio-demographic variables such as gender and income, psychographic variables such as personality, and behavioral variables such as usage level. Apart from having multiple attributes for choice alternatives, a choice survey often includes many of these covariates. Finding meaningful interactions from all possible interactions can thus be a very challenging task. To our knowledge, there is little guidance in the literature on the systematic identification and testing of the attribute by covariate interactions. To bridge this research gap, we propose two methods: one involves using a relatively simple and straightforward unconditional logit model (Long and Freese 2006); the other involves using non-parametric data mining techniques such as CART (Breiman et al. 1984) and MARS (Friedman 1991). We demonstrate these procedures using several discrete choice data sets and provide practical suggestions as to which method to use in different research settings.

■ SD06

1st Floor - Room 1210

Network Influence

Cluster: Special Track: Interactive Maketing
Invited Session

Chair: Raghuram Iyengar,The Wharton School, University of Pennsylvania, 700 Huntsman Hall, Philadelphia, United States of America, riyengar@wharton.upenn.edu

1 - The Weakness of Strong Ties: Homophily, Heterophily, and the Valence of Buzz

Debanjan Mitra, deb.mitra@cba.ufl.edu, Peter Golder, Jinhong Xie

Buzz is the cumulative information about an object disseminated through social interactions, which impacts perceptions towards that object. Past research has examined the dissemination process and finds that weak ties are important for information to cross social networks and disseminate throughout the broader social system. There is also limited research on the differential impacts of positive and negative information. We add to this literature by examining how the relative strength of ties in a social network affects the dissemination of positive and negative buzz. We develop a framework that links buzz with dynamic perceptions within and between social groups in a product-market. We provide evidence that within-group homophily promotes the impact of negative buzz relative to positive buzz, while between-group heterophily promotes the impact of positive buzz relative to negative buzz. Moreover, these differences between the dissemination of negative and positive buzz are magnified for high-reputation objects. We conclude by discussing implications of these results for managers as well as many opportunities for future research.

2 - Censoring, Interdependence and Scalability with Social Networking Data

Michael Braun, Assistant Professor of Management Science, MIT Sloan School of Management, 1 Amherst St., E40-169, Cambridge, MA, 02142, braunm@MIT.EDU, Andre Bonfrer

Marketers are increasingly interested in understanding patterns of how customers interact with each other, and how to predict future interactions. Social networking data is often collected during a finite observation period, so some observed connections may not persist in the future, while unobserved connections may appear after observation has ended. Thus, conditioning on observed data, without taking this uncertainty into account, can lead to misleading inferences and poor predictions. Also, for a dataset of N individuals, there are N(N-1)/2 interdependent dyads to consider, so standard models and methods are intractable for all but the smallest datasets. We present a nonparametric Bayesian framework for modeling censored network data that manages this scalability problem, while accounting for interdependent variation in unobserved customer traits. By exploiting the discreteness of the Dirichlet process, we dramatically reduce the number of likelihood computations at each iteration of an MCMC algorithm. We demonstrate the need for, and effectiveness of, our model using a dataset of call records from a major Chinese cell phone service provider.

3 - Network versus Geography in Social Contagion

Raghuram Iyengar, The Wharton School, University of Pennsylvania, 700 Huntsman Hall, Philadelphia, United States of America, riyengar@wharton.upenn.edu, Christophe Van Den Bulte, Jeonghye Choi

Recently, there has been much interest in using longitudinal individual-level data to document and better understand social contagion processes in various forms of customer behavior, especially the adoption of new products. While some studies use social network data on the actual social ties connecting customers, most use geographical propinquity as a proxy for social connectedness. There is little or no work that compares the two types of data (network vs. geography), leaving two important questions unanswered. First, to what extent is geographical distance a good proxy for social connectivity? Second, when geographical and social network data do not show high concordance, does that mean that one is more informative than the other, or that that each captures a different kind of contagion process? his project answers these questions in the context of the adoption of a new prescription drug. We have data on both social network ties (discussion and patient referral) among physicians within three large cities and on the geographical distance among their places of practice within those cities. We find evidence of social contagion that is affected by both geographical and network proximity, which indicates that the constructs capture different types of social influence. Of particular note is that the effect of geographical contagion is highly localized. Consistent with prior theory in sociology and research on social influence in medicine, this pattern suggests that geographical contagion is driven by social-normative pressures (social risk) whereas network contagion is driven by social learning to mitigate functional and physical risk. These results indicate there may be value in collecting information on both social and spatial networks.

■ SD07

1st Floor - Room 1220

Social Influence: Social Media

Cluster: Social Influence

Invited Session

Chair: Prabirendra Chatterjee, University of Washington, 2600 NE 125th Street, Apt # 5, Seattle, WA, 98125, United States of America, prabir16@u.washington.edu

1 - P-to-P in B-to-B: The Role of Peer-to-Peer Social Networking in Need Recognition and Focused Search

Purushottam Papatla, Associate Professor, University of Wisconsin-Milwaukee, 3202 N. Maryland Avenue, Milwaukee, WI, 53211, United States of America, papatla@uwm.edu, Steven Smith

Social Networking on sites such as Facebook.com and Myspace.com is widespread among consumers. It is an increasingly popular activity in the business-to-business context as well. Sites such as linkedin.com, jigsaw.com and ryze.com have many members who use them for interacting, exchanging information and building relationships for professional use. Interestingly, despite their growing popularity and use, there is little research on how social networking affects purchase decisions in business-to-business markets. This is the issue that we investigate in this research. Drawing on the literature on social networks, we assume that business customers participate in social networking to gather information that can assist them in their professional activities. This assumption leads us to our hypotheses that, in a purchasing context, the recognition of needs due to peer-to-peer interactions influences business customers' interest in evaluating products that they learn about. We test our hypothesis empirically using data from a survey of over 650 business professionals at various ranks of management, across multiple industries and businesses of various sizes in terms of annual revenues and employee bases. In order to control for the role of the other sources of information, other than peer-to-peer interaction, that business customers can turn to, we collect additional data on other sources of information that our respondents use. To account for the potential inter-relationships between these sources and their likely influence on the role of peer-to-peer interactions, we analyze the effect of all the sources jointly using a multivariate model in a Bayesian framework. We present the substantive, methodological and research implications of our findings.

2 - Peer-to-peer Advertising Through Social Networks -A Model of Stability and Efficiency Analysis

Prabirendra Chatterjee, University of Washington, 2600 NE 125th Street, Apt # 5, Seattle, WA, 98125, United States of America, prabir16@u.washington.edu, Sumant Kumar Rai

Peer-To-Peer advertising is the newest trend in online advertising age. The Facebook gift phenomenon or invention of Application directories in Orkut or rapidly increasing usage of Avatars in Second-Life, all lead to new market dynamics as far as advertising is concerned. Starting from small entrepreneurs to big marketers - people are getting increasingly interested with this latest form of advertising in the web. Virtual gifts sharing, online ratings of movies, adding music/video in user profile, providing web deals and coupons through Avatars - all of these are serving as important advertising strategies. We develop a strategic model of information acquisition through game theoretic analysis and explain how peer-to-peer link formations in social networks affect the advertising dynamics in electronic space. Following Jackson and Wolinsky (1996) we study the stability and efficiency of this advertising network as effectiveness of advertising through social networks is yet to be established. However, unlike Jackson and Wolinsky's model the cost components of this network not only include link maintenance cost but also include users' privacy cost which may increase as the length of the diameter of the network increases. In our model the utility of the advertiser doesn't depend only on the intrinsic value of her peers in the network (as assumed in standard Economics literature) but also on the quality of user service the advertiser provides. In addition to the stability and efficiency analysis of the peer-to-peer advertising network we also try to explain the notion of pair wise stability in this context - under what condition an advertiser as well as her peer will not sever the already established link. Lastly, we add heterogeneity (which eventually differentiates the sub- networks) in the social network system on the basis of demographic and economic characteristics and examine how cost and utility of the network users and stability and efficiency of the network itself change.

3 - Diffusion of an Innovation: Understanding Bloggers' Values Through a Marketing Lens

David McArthur, Assistant Professor of International Business & Strategic Management, Utah Valley University, Woodbury School of Business, 800 W. University Parkway, MS-119, Orem, UT, 84058, United States of America, david.mcarthur@uvu.edu, Ramendra Thakur

Weblogs (blogs) are an online web diary where dated entries are written in reverse chronological sequence (McKenna 2007) and are accessed by either a restricted public or the general public through the worldwide web. The diffusion of the phenomenon of blogging has grown exponentially in the last few years (Hanson 2006). Dearstyne (2005) calls it the new informational revolution. Understanding how and why this phenomenon diffuses so rapidly is important to business practice and science because organizations must be alert to the spread of "news" and the growth of a social system whose "news" may be helpful or injurious to their interests (Stinchcombe, 1990). There are only a handful of empirical studies in the marketing literature that try to explain this exponential growth (Dwyer 2007; Kaye 2005). However, to the best of our knowledge, none of the studies to date deals with the research questions: (a) do bloggers self-value? and (b) do bloggers' motivational values have an impact on their blogging involvement? To fill these gaps we develop a theoretical model that draws on the marketing, psychology and sociology literature. The model is empirically tested using data collected from US consumers involved in blogging (reading and/or writing on a blog). Then a two-step structural equation modeling (SEM) approach was applied for analysis. Results indicate that both bloggers' self-value and motivational value are a significant predictor of bloggers involvement in the phenomenon. We discuss related implications for marketing managers, consumers, public policy and future research.

■ SD09

1st Floor - Room 1240

Marketing Impacts of Counterfeits

Cluster: Marketing Models
Invited Session

Chair: Yi Qian,Northwestern University, 2001 Sheridan Road, Evanston, IL, 60208, United States of America, yiqian@kellogg.northwestern.edu

1 - Impacts and Remedies of Counterfeiting

Yi Qian, Northwestern University, 2001 Sheridan Road, Evanston, IL, 60208, United States of America, yiqian@kellogg.northwestern.edu

In this paper, I theorize the impacts of entry by counterfeiters and analyze potential responses to it under weak intellectual property rights. My theoretical framework has general implications for endogenous sunk cost investments, and can be applied to entry with asymmetric information. One of the key theoretical predictions of this study is that entry would induce incumbent to upgrade product quality if and only if the entrant's quality relative to the authentic quality is lower than a threshold level. This helps to explain the innovation strategies that authentic firms employ in response to entry by their counterfeiters in the real world. In addition, the model demonstrates how authentic producers could invest in self-enforcement to increase counterfeiters' incentives to separate themselves. Vertical integration and other costly devices are shown to be effective in signaling and complementing a company's own enforcements against counterfeits. All these strategies push up authentic prices and are effective in reducing counterfeit sales. These predictions are validated using a unique panel data I collected from Chinese shoe companies covering the years 1993-2004.

2 - Bayesian Model of Heterogeneous Effects of Counterfeiting

Hui Xie, University of Illinois at Chicago, huixie@uic.edu, Yi Qian

Using a unique panel dataset, this article identifies the effects of counterfeit entry and sales on authentic-product prices. We propose a Bayesian random-changepoint simultaneous equation model that jointly models the price outcome, the endogenous counterfeiting treatment variable, and the latent changepoint in price for each authentic company in the sample. Using this new methodology, we find both a temporary negative short-term effect and a stable positive long-term effect for the change in treatment variable (i.e., counterfeit entry or sales) on the authentic-product prices. Furthermore, the long-term effect on authentic-product prices kicked in at different times for different companies. Besides the benefit of obtaining estimates on the latent changepoints, the data analysis and simulation studies demonstrate that the proposed model improves on the entry-effect estimates, as compared with those parameter estimates obtained from the regular instrumental variable estimation without modeling the changepoints. In particular, our analysis shows that ignoring the heterogeneous latent changepoints, when present, can lead to grossly inconsistent estimation of the treatment effect.

3 - Advertising and Spillover Effects of a Low-quality Entrant

Eric Anderson, Associate Professor, Northwestern University, Marketing Department, 2001 Sheridan Rd, Evanston, IL, 60208, United States of America, eric-anderson@kellogg.northwestern.edu, Yi Qian, Duncan Simester

In the framework of Mussa and Rosen (1978), entry of a factory store with discounted lower quality products would conceptually have two opposing effects: category expansion effect to capture new low-end customers; and business-stealing effect due to substitutions of discounted products for catalog products. In addition, there could be a third advertising effect of factory store, which could also result in new local customers and substitutions in promotions via other channels. In this paper, we utilize a unique database of a catalog company that introduced its factory store in 2002 to estimate these effects. The database include complete scanner data for all itemized transactions via various channels (phone, mail, internet, each retail store and factory store) from January of 1995 to December of 2007. We found that the outlet entry in fact increased purchase visits and annual expenditures by the outlet adopters through the other traditional channels, as compared to the non-outlet shoppers with similar demographic characteristics and past purchasing habits. This positive spillover effects of outlet adoption is larger for segments of customers who were less pre-disposed to adopt the outlet. This finding generalizes the advertising effect of counterfeits as identified in Qian (2009).

4 - Brand Enforcement and Quality Decisions

Qiang Gong, Peking University, China Center for Economic Research, Beijing, 100871, China, qgongpku@gmail.com, Yi Qian

We analyze the business strategies of authentic branded firm when there are multiple counterfeit competitors. The authentic firm is the leader in both quality and quantity. We solve closed-form solutions of the game, and derive comparative statics of various firm strategies in response to counterfeit entry and quality. We find that when the counterfeit product becomes less likely to be detected by others and when the quality gap between the authentic and counterfeit product is bigger, the authentic firm will increase its quality if they have big market share. When the market share is small, the authentic firm would decrease its quality if the quality difference is huge but increase its quality when the quality difference is small. When more counterfeit firms enter into the market, authentic firm prefer to decrease its quantity if the market share is low and increase its quantity if the market share is high.

5 - Income Inequality and Counterfeiting

Derek Rucker, Kellogg School of Management, d-rucker@kellogg.northwestern.edu, Yi Qian

To gain some insights on the determinants of counterfeiting popularity based on aggregate consumer responses, we gathered rich field data in China in two studies. Exploiting both time-series and regional variations, the field data reveal a positive and significant relationship between income inequality and counterfeiting. To establish causality, we conduct lab experiments where we manipulate the income inequality of the treatment and control groups through random assignments. We calibrate the range of income inequality in the treatment and control conditions based on the maximum and minimum values of the inequality variable as observed in the field data. We also conduct experiments to test the underlying mechanism and moderating factors for the relationship between income inequality and rate of counterfeiting.

■ SD11

2nd Floor - Room 2210

Choice Models: Design, Pricing, and Retailing

Cluster: Choice
Invited Session

Chair: Ashish Kumar, PhD Student, State University of New York at Buffalo, Amherst, NY, ak73@buffalo.edu

1 - Details and Full Pictures: Consumer use of Actual Prices and Price Images When Choosing a Store

Carlos Lourenco, Assistant Professor, Erasmus University Rotterdam, P.O. Box 1738, Rotterdam, 3000 DR, Netherlands, carlosjsl@ese.eur.nl, Els Gijsbrechts

Price is typically considered in store choice research as one of the main drivers underlying consumers' decisions. Apart from using actual, week-to-week retailer prices, consumers may also adopt more holistic price information about stores. Yet, despite the importance for retail managers and policy makers, we have limited knowledge about how the two sources of price information - actual prices and store price images - influence store choice; who are the consumers inclined to use one or the other, and why. In this paper, we investigate the heterogeneous role of different price information on individuals' weekly patronage decisions. In particular, we consider both short-term, weekly store prices and long-term shaped consumer price perceptions. While the former are common to all consumers visiting a particular store in a particular week, the latter are consumer-specific. Furthermore, the two are not independent: store price images are formed and adjusted over time based on the actual prices consumers are exposed to. In other words, store price images are endogenous to weekly store prices, something we explicitly account for in our model. Our methodology combines a mixed multinomial probit model of store choice including both types of price information, with a Bayesian learning model of store price image formation. The methodology allows retailers to trace the impact of price changes on store choice both directly, and through their effect on store price perceptions. In addition, by linking the posterior parameters to individual characteristics, we can profile consumers in terms of their proneness to use detailed, short term price information and holistic, long term price perceptions when making store choices.

2 - An Empirical Investigation of Consumer Purchases and Intertemporal Pricing of Retailers' Extended Service Contracts

Tao Chen, Assistant Professor, University of Maryland, 3317 Van Munching Hall, College Park, MD, 20742, United States of America, taochen@rhsmith.umd.edu, Baohong Sun

This paper examines consumers' purchases of Extended Service Contracts (ESCs) and products along the product lifecycle in the electronics market. ESCs are important to electronics retailers since they contribute to half of the profit. It is interesting to investigate how consumers' ESC purchase decisions change over time. Our results also provide insights for retailers to design dynamic pricing strategies for ESCs. We model a forward-looking consumer's joint decisions on product purchase timing and ESC purchase to analyze the intertemporal purchase pattern. Previous literature on durable product adoption shows that consumers are strategic in deciding when to buy a product. They form expectations of future prices and consider the tradeoff between consumption utilities and prices. ESCs impact this strategic tradeoff for a forward-looking risk-averse consumer and thus impact the product purchase timing. This is the first paper to study how consumers make ESC purchase decisions along the product lifecycle. In particular, we explore the following questions: (1) How is the timing of consumer product adoption interrelated with ESC purchases? (2) How are the joint decisions driven by the speed of the decline in a product's future price? (3) As a percentage of the product price, is the current ESC pricing policy in line with the consumer dynamics? A unique dataset on consumer electronics product and ESC purchases enables us to answer these questions. We build a dynamic structural model in the optimal stopping framework. We demonstrate how the product adoption timing and ESC purchase affect each other. We use simulation to show the impact of different ESC price paths on ESC purchases.

3 - A Study of Differential Response Behavior Across Store Formats

Ashish Kumar, PhD Student, State University of New York at Buffalo, 215 Jacobs Management Center, Amherst, NY, 14226, United States of America, ak73@buffalo.edu, Karthik Sridhar, Minakshi Trivedi

Consumers tend to shop across stores/store formats for products in different categories but also sometimes for products in the same category. Understandably, given that consumer sensitivities may be inherent traits, most prior research has focused on addressing these as uniform across store formats particularly when considering the same product category. In some cases, however, particularly when the product category involved is a ëprestige product' or has social implications, consumer purchases may well be characterized by differential responses to marketing mix variables (prices and promotions) and even differential preferences. In this study we investigate the asymmetric behavior of consumers purchasing in the same category across different store formats while accounting for the influences that the diverse response parameters and preferences have on one another. Using a multivariate probit model of consumer choice, we account for differential sensitivities and preferences for categories within as well as across store formats. The model accounts for heterogeneity in consumer sensitivities as well as seasonality effects. We use a unique, scanner panel household level data set for the candy category with purchases across two different store formats to test the model as well as two benchmark models. We expect results to help managers understand how various formats may compete using different strategies.

■ SD12

2nd Floor - Room 2220

B2B

Cluster: B2B Marketing

Invited Session

Chair: Xing Zhang,Washington University in Saint Louis, Campus Box 1133, 1 Brookings Drive, Saint Louis, MO, 63130-4899, United States of America, shuyuzhang2007@gmail.com

1 - Success Factors in Business Process Outsourcing

Sharmila Chatterjee, MIT, One Amherst Street, E40-166A, Cambridge, MA, 02420, United States of America, schatterjee@mit.edu, Gayathri Sundar, Paul Fouts

There is extensive literature in the domain of success factors for Information Technology (IT) Outsourcing. However, research on success factors for Business Process Outsourcing (BPO) is sparse. Using an integrated conceptual framework, this study aims to identify factors that are related to the success of business process outsourcing (BPO) relationships. The theoretical model draws upon concepts from transaction cost economics, resource based view and social exchange theory. The research method involved two phases: Phase I consisted of key informant interviews with executives involved in BPO relationships and Phase II comprised a web survey of business firms. Results indicate that factors such as retention of core business functions, access to critical resources through outsourcing, operational control coupled with strategic flexibility, service quality and partnership quality relate positively to BPO success. On the contrary, outsourcing of asset specific business functions as well as human specific assets relate negatively to BPO success. The study draws attention to the importance of having a well defined governance structure to manage BPO relationships. The study reinforces the criticality of "partnership" in business process outsourcing success, bringing attention to the commitment required to make BPO relationships successful.

2 - The Pricing Process as a Capability: Conceptualization, Measurement, and Impact on Performance

Sebastian Bonnemeier, TUM Business School, Leopoldstr. 139, Munich, Germany, bonnemeier@wi.tum.de, Christoph Ihl, Ralf Reichwald

Global competition and declining margins have made enterprises in diverse industries increasingly aware that assuring low cost, product performance and high quality is no longer sufficient for long-term success. Strategists following the resource-based view argue that firms can generate rents through value creation. To create value, firms develop and use resources and capabilities that other firms cannot imitate, trade for, or substitute other assets for. Even if a firm has created value, however, it may not capture the potential rents associated with that value. To capture rents, a firm must be able to set the right prices for its offerings (Dutta, Zbaracki, and Bergen 2003). Most views of pricing assume that a firm can readily set appropriate prices. In contrast, we argue that the process of setting and changing prices is a capability for value appropriation based on specific resources and routines. Therefore, extending previous work of Dutta, Zbaracki, and Bergen (2003) the first contribution of our research is a generic pricing process derived from fifteen in-depth interviews. Additionally, based on these exploratory results we (1) conceptualize a higher-order construct of the pricing process and its dimensions, (2) operationalize and empirically validate the construct in a quantitative study, and (3) investigate performance consequences of pricing processes using 3SLS-regression analysis. In sum, the second outcome of our work is a theoretically sound pricing process measure that outlines five key stages: pricing strategy, price analysis, price definition, price enforcement, and price controlling. The third key contribution is that the implementation of pricing processes has a moderately positive association with company performance.

3 - Modeling Inter-purchase Time When Customers Split Store Patronage

Amiya Basu, Professor, Syracuse University, 721 University Ave. Room 628, Syracuse, NY, 13244, United States of America, abasu@syr.edu

Marketers have long been interested in modeling the time between purchases by a customer. The research literature in the area includes direct modeling of inter-purchase time as well as hazard function modeling. Empirical research in both of these streams assumes that for a given customer, the time of every purchase is known. We examine the case where a given marketer records the purchase times by a customer and only knows the times when the customer purchased from that store. In between, there may be unrecorded purchase events when the customer purchased from other stores. We propose a model where purchase incidence and store choice are independent of each other. Store choice is assumed to be a binary variable (focal store, or any other store) that follows a Bernoulli distribution. Different values of the Bernoulli parameter indicate different levels of customer loyalty to the focal store. Inter-purchase time is assumed to follow an Erlang distribution. Using simulated as well as actual data, we show how the model can be estimated.

4 - Analyzing Price Variation in B-to-B Market

Xing Zhang, Washington University in Saint Louis, Campus Box 1133, 1 Brookings Drive, Saint Louis, MO, 63130-4899, United States of America, shuyuzhang2007@gmail.com, Ying Xie, Tat Chan

The objective of this paper is to study the underlying factors which drive the variation of transaction prices between buyers and sellers in a B-to-B market environment. We use a unique dataset provided by a biotechnology firm specialized in supplying biomedical and chemical products to the science community in US. In recent years the firm has heavily invested in keyword advertising on Google, Yahoo! and MSN. Customers may place order either from its website or through offline methods such as telephone and fax. Our data contains rich customer information including demographics, previous transaction history, order methods and whether or not they have searched for pricing information using the search engines prior to transactions. The preliminary data analysis reveals a large variation in transaction prices across customers, even after controlling for the time trend and the size of the transaction, which leads to an interesting question: whether the aforementioned customer characteristics could explain a significant amount of the price variation. Our result will therefore shed light on the importance of bargaining as a pricing policy compared to set prices.

■ SD13

2nd Floor - Room 2230

Brands and Branding

Cluster: Brands and Branding

Invited Session

Chair: Margot Loewenberg,University of Trier, Universitaetsring 15, Trier, Germany, m.loewenberg@uni-trier.de

1 - Product Coolness: Dimensions, Antecedents and Strategic Implications

Gerard Tellis, Marshall School of Business, University of Southern California, Los Angeles, CA, 90089, United States of America, tellis@marshall.usc.edu, Eden Yin

Apple iMac, iPod, Mini Cooper, Nintendo Wii are products that captivate the hearts and minds of consumers across the globe. Consumers refer to them as "cool". Despite the importance of this notion of "cool" in product strategies, no one seems to have a clear definition of it. What is cool appears to be a highly subjective notion and everyone seems to have an opinion on it. There does not seem to be any consensus about this important concept. This research sets out to address the following questions: What is cool? Do consumers agree on common dimensions of cool? Do consumers agree on which brands are the most cool and the least cool? What are the antecedents of product coolness? What are the strategic implications of product coolness? Research on this important issue is extremely sparse. To the best of our knowledge, there are no published studies that examined this issue. So, our study, to this date, represents the first serious efforts in tackling the questions listed above. We develop and pre-test an instrument that explores the various synonyms, dimensions, and antecedents for cool. The instrument also ask subjects to ranks brands, categories, and corporations on coolness. The sample is currently drawn from two continents and will ultimately be drawn from 5 countries across three continents. Preliminary results indicate that consumers have a high agreement about the synonyms and dimensions of coolness. They also agree to a great extent on which brands, corporations, and categories are cool and which are not. Most importantly, the dimensions of coolness can explain a great deal of variance in the use of the term across cultures. The authors discuss the implications of these results for marketing, branding, and innovation, strategy.

2 - Rapid and Objective Brand Awareness Mapping

T. Bettina Cornwell, Professor of Marketing and Sport Management, The University of Michigan, 1402 Washington Heights, Ann Arbor, MI, 48109, United States of America, tbettina@umich.edu, Emerald Quinn, Michael S. Humphreys, Andrew E. Smith

Marketing researchers have had a long-standing interest in mental brand maps that are thought to influence consumer decision making. The term "brand map" seems to consistently describe the consumer's elicited memory of brands and the associations these brands hold to other concepts in memory. This consistency stems from the fact that an associative network model of memory (Anderson 1983) underlies either implicitly or explicitly most brand mapping protocols. In the most recent addition to the techniques proposed to map brands, the BCM method (John 2006) it has been suggested that there are three important criteria for mapping across branding applications, namely, ease of administration, flexibility across research settings, and quality of the obtained data in terms of reliability and validity (p. 551). We would like to add two additional criteria to this line up: time to usable results and level of objectivity. The purpose of this paper is therefore to present a brand awareness mapping approach using text analysis that performs well across all five proposed criteria. We firstly introduce the BCM approach and the ZEMET approach (Zaltman 1997) and follow by contrasting these approaches to the proposed text analysis system. Using two slightly different tasks, 40 study participants from a major state university were asked to write a two page script regarding the fast food restaurant, McDonalds and their conversations or ordering experience. Based on a lexical co-occurrence content analysis, maps of the tasks are produced and compared. These consumer generated maps are then contrasted with maps generated from newspaper articles about the firm. Results are presented and the discussion aims to show how this approach may either supplant others or work with them.

3 - Does Endorsing Product Brands Through a Standardized Corporate Brand Pay Off? A Cross National Study

Markus Meierer, University of Trier, Universitaetsring 15, Trier, 54296, Germany, m.meierer@uni-trier.de, Bernhard Swoboda, Margot Loewenberg

Recently a growing number of firms use their corporate brand as an endorsement to their product brands in the FMCG sector. Nevertheless most studies dealing with corporate branding focus on the services sector or on durable goods (Berens, van Riel, & van Bruggen 2005; Hsieh, Pan, & Setiono 2004). However, these studies have given little attention to the direct and indirect effects of a corporate brand on consumers' product loyalty. The reciprocal effect between corporate and product brand has not been analyzed yet. Given its highly competitive nature, much has been written about the impact of specific corporate associations on consumers' product evaluation on a national level (Brown & Dacin 1997). However, the impact of corporate brand management on consumers has rarely been examined from an international perspective. Indeed, perception and effects of corporate brands are gaining in complexity if targeting more than one country market, particularly, in case a firm tends to create a worldwide uniform anchor in the consumers' mind by using its internationally standardized corporate brand as an endorser to its local, regional and international product brands. Addressing these issues, we present an approach to analyze consumers' perceptions and corresponding effects on a cross-national basis considering the reciprocity of corporate and product branding. Referring to schema theory to derive hypotheses, we analyze firstly a cross-sectional sample from Germany, France, Romania and the USA (n=4000) and secondly a longitudinal sample from Germany and Romania (n=1000) applying multigroup SEM. Our results provide strong support that consumers' perceptions and effects of a standardized corporate brand vary considerably depending on product- and country-specific characteristics.

4 - Internal Corporate Brand Management - Analyzing Moderating Effects Across 30 Countries

Margot Loewenberg, University of Trier, Universitaetsring 15, Trier, Germany, m.loewenberg@uni-trier.de, Bernhard Swoboda, Markus Meierer

A strong corporate brand can contribute to an enduring differentiating positioning of business units and products. It is not only beneficial to the relationship with external stakeholders; it can also unite and motivate internal stakeholders. However, corporate brand management has seldom been analyzed in terms of cross-cultural effects among employees in a multinational corporation, but made it recently on the agenda of many practitioners. Contributing to this field, we focus on the moderating effects of culture, market entry and brand implementation decisions on internal corporate branding. Our research is based on a worldwide employee survey, conducted in corporation with a major FMCG manufacturer who introduced an internationally standardized corporate brand in 2001. A total of 286 employees from 30 countries took part in the survey. We analyze the moderating effects by applying a multi-group partial least squares approach. Firstly, we found support that culture has a moderating effect on corporate branding in the five country clusters Germanic Europe, Eastern Europe, Anglo America, Latin America and Far East. Secondly, market entry decisions, such as the year and mode of entry, are found to play a moderating role during the internal branding process. Thirdly, we show how brand implementation decisions, such as the relationship between numbers of persons responsible for communicating the brand within the organization and the number of subsidiaries, influence corporate brand management. When managing an international brand internally, managers thus have to assess the transferability of management practices across culturally different countries and should adapt the most effective instruments for implementing the corporate brand.

■ SD14

2nd Floor - Room 2240

Political Marketing

Cluster: Marketing Strategy

Invited Session

Chair: Mitch Lovett, Assistant Professor, Simon School of Business, University of Rochester, University of Rochester, P.O. Box 270100, Rochester, NY, 14627, United States of America, mitch.lovett@simon.rochester.edu

1 - When Kerry Met Sally: Political Segmentation of Demand for Movies

Jason Roos, Duke University, Fuqua School of Business, Box 90120, Durham, NC, 27708, United States of America, jmr36@duke.edu, Ron Shachar

Political affiliation has been especially absent from choice models in marketing. We argue that the results of general elections provide valuable information about consumers, and that this information is relevant to real-world marketing problems. We demonstrate how election data can be applied to marketing problems by using them to estimate a model of consumer tastes for movies. Our model includes vertical quality, unobserved film attributes, and heterogeneous consumer tastes represented as ideal points in a latent movie attribute space. We create a similar model for elections. By allowing the two sets of ideal points to be correlated, we allow individuals' tastes for candidates to tell us something about their taste for movies. We estimate the model using data provided by a U.S. film exhibitor and election returns obtained from individual state election boards. Our estimation reveals an interesting connection between movies and politics: consumer taste for movies is correlated with taste for Republican and Democratic candidates, even after controlling for a large number of observable demographic characteristics. Put another way, liberals and conservatives appear to like different types of movies, over and above what can be explained simply by their demographic differences.

2 - When Do Own Views Bias Our Inferences About Other Voters?

Yesim Orhun, Assistant Professor, University of Chicago, 5807 S. Woodlawn Avenue, Chicago, Chicago, United States of America, yesim.orhun@chicagogsb.edu, Oleg Urminsky

Political decision-making fundamentally involves strategic behavior, such that decisions about who to vote for, how much resources to devote to a candidate and whether to vote involve beliefs about what others are likely to do. Traditional economic approaches assume that beliefs about others are not systematically biased; while psychological research has provided evidence for systematic biases, with own preferences impacting inferences about others (e.g. false consensus). We present data from four studies of the 2008 Presidential Elections, encompassing local and national contexts. We incorporate different inferential biases into a single context and address scale usage bias and respondent incentive compatibility, generally not accounted for in the literature, as well as inferences regarding full distributions. We replicate the false consensus effect, in which inferences about the candidate ratings of others are systematically biased towards one's own candidate evaluations. Furthermore, we demonstrate that this tendency is largely driven by actual and perceived similarity, such that voters attribute their preferences more when they see the other voters as more similar, and specifically among those choosing their candidate. We extend our findings to inferences about the reasons of others, contrary to prior literature which argued for simple over-attribution of positive motivations to others. Lastly, we demonstrate a new systematic diagnosticity bias, such that voters who report higher differences in similarity to same-candidate voters than opposing-candidate voters tend to see each group as more distinctly homogeneous. We compare and contrast our findings with Bayesian inferences and discuss implications of the biases for strategic behavior.

3 - Integrated Marketing Communications in Political Marketing: An Empirical Study

Mitch Lovett, Assistant Professor, Simon School of Business, University of Rochester, University of Rochester, P.O. Box 270100, Rochester, NY, 14627, United States of America, mitch.lovett@simon.rochester.edu, Ron Shachar

This study focuses on integrated marketing communications in presidential election campaigns for 2000 and 2004. We study the impact of three communication tools - advertising, grassroots contacts, and campaign visits - on voters and also the effect of their interaction. Our sample includes multiple markets and time periods so that we can also examine the dynamic progression of integrated communications. We explore both the effect of these tools to uncover synergies and also examine whether candidates use them as complements or supplements. In other words, we do not consider only the impact of the marketing communication tools but also their strategic use by the candidates.

■ SD15

2nd Floor - Room 2320

Pharmaceutical Marketing II

Cluster: Healthcare Marketing
Invited Session

Ka Lok Lee, University of Pennsylvania, 700 Jon M. Huntsman Hall, 3730 Walnut Street, Philadelphia, PA, 19104, United States of America, kaloklee@wharton.upenn.edu

1 - To Listen or Not to Listen: Response to Unexpected Negative Information Release

Wei Zhang, Assistant Professor, Long Island University, C W Post Campus, 720 Northern Blvd, College of Management, Brookville, NY, 11548, United States of America, wei.zhang@liu.edu, Shibo Li, Ajay Kalra

Since consumers are constantly confronted with negative information about products, their reactions have been of interest to marketers. Much of the research on the impact of negative information has followed the experimental paradigm. We investigate a situation where the content and implications of the negative information are not clear cut. We utilize a multivariate Probit model to capture physician's prescribing behavior over time. Physicians are conceptualized to learn about drug quality in a Bayesian fashion. Physician heterogeneity is accounted for in a hierarchical Bayesian framework. We use APLD data on the diabetes drug Avandia to examine the impact of new negative information. We find that patients with severe conditions, who are older and those who interact frequently with physicians are less likely to be prescribed new prescription of the focal brand. Marketing contacts have direct positive persuasive impact on new prescription of the all drugs. Public negative information release on the focal brand has a significantly negative category-level effect on the new prescriptions. More interestingly, compared to Primary Care Physicians (PCP's) who have lower self efficacy, physicians with higher self efficacy (specialists) tend to be less likely affected by the negative information release. Specialists who are hospital based tend to be more risk-taking and learning from the new negative information has less impact on their new prescriptions. PCP's are more likely to switch to older well established drugs over time than specialists. This study has some important managerial implications. Pharmaceutical companies can utilize these insights to defend their brands with the advent of unexpected negative information release.

2 - Measuring the Informative and Persuasive Roles of Detailing on Prescribing Decisions

Masakazu Ishihara, Rotman School of Management, University of Toronto, 105 St. George Street, Toronto, ON, M5S 3E6, Canada, mishihara@rotman.utoronto.ca, Andrew Ching

In the pharmaceutical industry, measuring the importance of informative and persuasive roles of detailing is crucial for both drug manufacturers and policy makers. However, little progress has been made in disentangling between informative and persuasive roles of detailing. In this paper, we provide a new identification strategy to separately identify these two roles. Our key identification assumption is that the informative component of detailing is chemical specific while the persuasive component is brand specific. Our strategy is to focus on markets where some drug manufacturers engage in a co-marketing agreement. Under a co-marketing agreement, two companies market the same chemical under two different brand-names. With our identification assumption, the relative market share of these two brands, together with their individual detailing efforts, would allow us to measure the persuasive component of detailing. The total market share of the chemical, and the sum of the brand-specific detailing efforts for this chemical, would allow us to measure the informative component of detailing. To demonstrate our identification strategy, we estimate two structural models of detailing and prescribing decisions that have been used in the literature, using monthly product level data on sales, prices, and detailing minutes for ACE-inhibitor with diuretic in Canada. We find that the persuasive component mainly influences brand choice, and the informative component is mainly responsible for the growth of the demand for chemicals. Our results suggest that restricting the detailing budget for pharmaceutical products could potentially lower the consumer welfare because it slows down the rate of learning for physicians.

3 - Modeling Prescription Refill Behavior at Retail Pharmacies

Ka Lok Lee, University of Pennsylvania, 700 Jon M. Huntsman Hall, 3730 Walnut Street, Philadelphia, PA, 19104, United States of America, kaloklee@wharton.upenn.edu

A model of interrefill time in prescription refill behavior at a retail pharmacy is proposed. Traditional models of interpurchase time (Gupta 1991) do not apply because of the highly regulated nature of prescription use. A patient must wait some time before she can actually refill again. The traditional models allow a purchase or visit can occur at any time after the previous one and yet, a refill cannot. Another challenge is the non-contractual nature of prescription refill behavior. That is, a patient (unless monitored closely) is not required to report to her health care providers (physician or pharmacist) when she stops taking a medication. When a patient stops taking a medication (and hence, stops refilling), this is called a lack of persistence. Existing methods to classify the persistence status of a patient use pre-determined heuristics, e.g., no refill in 60 days. However, these heuristics lack uniformity in the literature and none of them captures the sporadic pattern in prescription refill behavior, e.g., timeliness of refilling, long gaps between refills. A probabilistic measure of persistency should be used instead. Therefore, these new constraints and challenges in modeling prescription refill behavior suggest the need for a different model. The proposed model aims to capture different aspects of refill behavior mentioned above and recognize the non-contractual nature of the behavior. The model will be fit to patient-level prescription data in which the patients fill their medications at a nationwide retail pharmacy chain. It expects to produce a probabilistic score of persistency, for each patient in the database, given their medication history, leading to accurate predictions of future refill behavior at both individual and aggregate levels.

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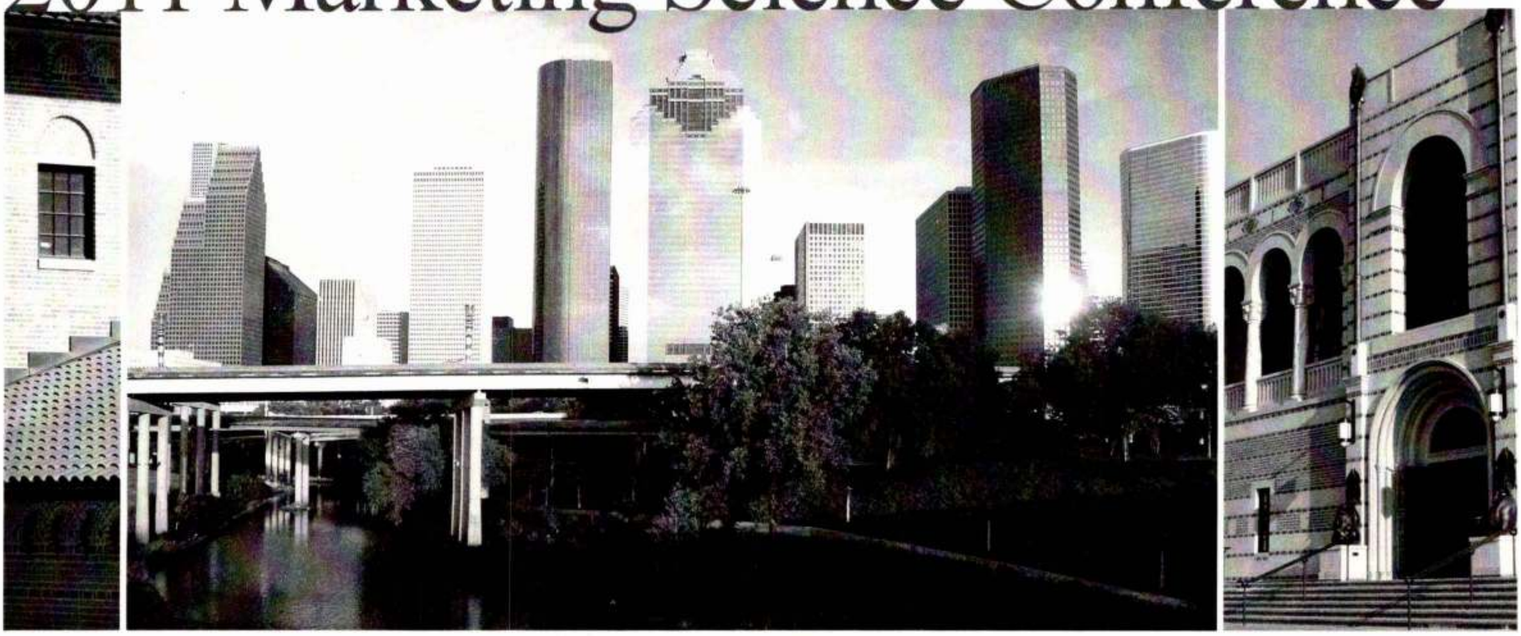

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THURSDAY	7.30AM	Continental Breakfast / Registration													
THURSDAY	8.30AM	Innovation: Tech. Evol. & Product Design		Sales Force: Compens. & Management Modeling		Consumer Behavior: Perception	Interactive Marketing: Search	Internet Marketing: Consumer Behavior	Structural Econometric Models	Purposive Games for Decision Support	Choice Models: Consistency & Cons. Pref.	Marketing & Finance	Entertainment Marketing	Marketing Strategy: Firm Performance	Customer Lifetime Value: Strategy
THURSDAY	10AM	Morning Break													
THURSDAY	10.30AM	Innovation: Strategy	Channels: Competition	Sales Force	Pricing: Retailing	Consumer Behavior: Preferences	Frontiers in Keyword Search Advertising	Internet Marketing: Search	Bayesian Econometrics: Applications	New Technologies for Eliciting Preferences	Choice Models: Consumer Response	Financial Conseqs. of Marketing Strategy	Entertainment Marketing: Internet	Cause, Charity, & Non-Profit Marketing I	Customer Lifetime Value: Strategy
THURSDAY	Noon	Lunch [Note: "Meet The Editors I" convenes in Blau Auditorium during session TC, 1.30-3.00]													
THURSDAY	1.30PM	Innovation	Channels: Price Competition	Promotion: Consumer Response	Pricing: Competition I	Consumer Behavior: Learning	Interactive Marketing: Mobile	Internet: Marketing Relationship Management	Empirical IO	Agent-Based Modeling in Marketing	Choice Models: Applications	Marketing Investments & Financial Performance	Entertainment Marketing: Movies I	International Marketing II	Customer Lifetime Value: Metrics
THURSDAY	3PM	Afternoon Break [Note: "Meet The Editors II" convenes in Blau Auditorium during session TD, 3.30-5.00]													
THURSDAY	3.30PM	Innovation: New Product Development & Design	Channels: Retail Competition	Promotion: Sales Promotion	Pricing: Competition II	Consumer Behavior: Social Influence	Interactive Marketing: Interactivity & Retailing	Internet Marketing: Auctions	Empirical IO: Strategy	Models & Measurement for Bundling Strategies	Choice Models: Methodology	Marketing Issues in the Startup & IPO Context	Entertainment Marketing: Movies I	International Marketing I	Customer Satisfaction
THURSDAY	5-7PM	Reception and Dinner													
FRIDAY	7.30AM	Continental Breakfast / Registration													
FRIDAY	8.30AM	New Products: Diffusion I	Channels: Governance I	Advertising: Consumer Behavior	Pricing: Willingness-to-Pay	Decision Neuroscience	Interactive Marketing: Customer Analytics	Social Influence: Network Effects	Decision-Making: Managerial		Competition: Strategy		Brands & Branding: Brand Equity	Marketing Strategy	Customer Loyalty: Methodology
FRIDAY	10AM	Morning Break													
FRIDAY	10.30AM	New Products: Diffusion II	Channels: Governance II	Advertising: Consumer Response	Pricing: Perception	Consumer Behavior: Decision-Making I	Interactive Marketing: Product Revs./WOM	Social Influence: Modeling	Decision Support Systems I	Methodological Challenges: Forecasting	Competition: Competitive Response	The Marketing-Finance Interface I	Brands & Branding: Brand Extensions	Cause, Charity, & Non-Profit Marketing II	Customer Loyalty: Metrics
FRIDAY	Noon	Lunch													
FRIDAY	1.30PM	New Products: Diffusion & WOM	Channels: Strategy	Advertising: Internet	Pricing: Tariffs	Consumer Behavior: Decision-Making II	Social Contagion & Epidemics	Social Influence: Consumer Behavior	Decision Support Systems II	Method. Challenges: Statistical Validation	Competition: Game Theory	The Marketing-Finance Interface II	Brands & Branding: Brand Identity	Marketing of Fast Decay Products	Customer Loyalty: Programs
FRIDAY	3PM	Afternoon Break and Return to Hotels													
FRIDAY	5.30PM	Gala Dinner at Henry Ford Museum / Buses Depart at 5:30PM sharp / Return to Ann Arbor at Approx. 11PM													
SATURDAY	7.30AM	Continental Breakfast / Registration													
SATURDAY	8.30AM	New Products: Adoption	Channels: Consumer Behavior	Advertising: Strategy	Pricing	CB: Non-Compensatory Choice	Interactive Marketing: Strategy/Measurement	Social Influence: Internet I	Dynamic Models I	Theory-Based Empirical Models I	Choice Models: Multiple Categories	High-Tech Marketing	Brands & Branding: Brand Management	Services	Marketing of Life Sciences
SATURDAY	10AM	Morning Break													
SATURDAY	10.30AM	New Products: Development & Design	Channels: Relationship Management	Advertising: Competition	Aggregate & Multi-Prod. Pricing	Consumer Behavior: Auctions & Bidding	Network Structure/ Process	Social Influence: Internet II	Dynamic Models II	Theory-Based Empirical Models II	Choice Models: Multiattribute Models	B2B: Relationship Management	Brands & Branding: Reviving Brands	Services: Strategy	Health Marketing
SATURDAY	Noon	Lunch													
SATURDAY	1.30PM	New Products: Strategy	Retailing: Category Management	Advertising: Models	Pricing Effects	Recent Progr. on Best-Worst Scaling	Interactivity & Consumer Behavior	Social Influence: Internet III	Marketing Metrics	Theory-Based Empirical Models III	Choice Models	B2B: Relationship Mgmt.& Trust	Brands & Branding: Metrics	Services: Customer Relationships	Pharmaceutical Marketing I
SATURDAY	3PM	Afternoon Break													
SATURDAY	3.30PM	Product Policy	Retailing	Advertising: Metrics	Pricing: Consumer Response	Consumer Behavior: Methodology	Interactive Marketing: Network Influence	Social Influence: Social Media		Marketing Impacts of Counterfeits	Choice Models: Design, Price & Retailing	B2B	Brands & Branding	Political Marketing	Pharmaceutical Marketing II
SATURDAY	5PM	Conference Concludes													