JOSEPH M katz
Graduate School of Business
University of Pittsburgh

XXVIII INFORMS Marketing Science Conference

Pittsburgh, Pennsylvania June 8-10, 2006

SMU
SINGAPORE MANAGEMENT UNIVERSITY

INFORMS Marketing Science Conference
SINGAPORE June 28-30, 2007

Conference Web site: www.business.smu.edu.sg/mkks2007/

Singapore Merlion

Angkor, Cambodia

Ha Long Bay, Vietnam

Myanmar (Burma)

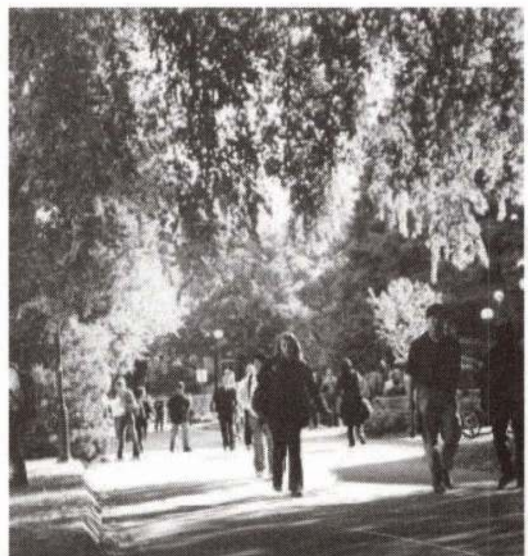
SINGAPORE: Getting there (and back) is half the fun!

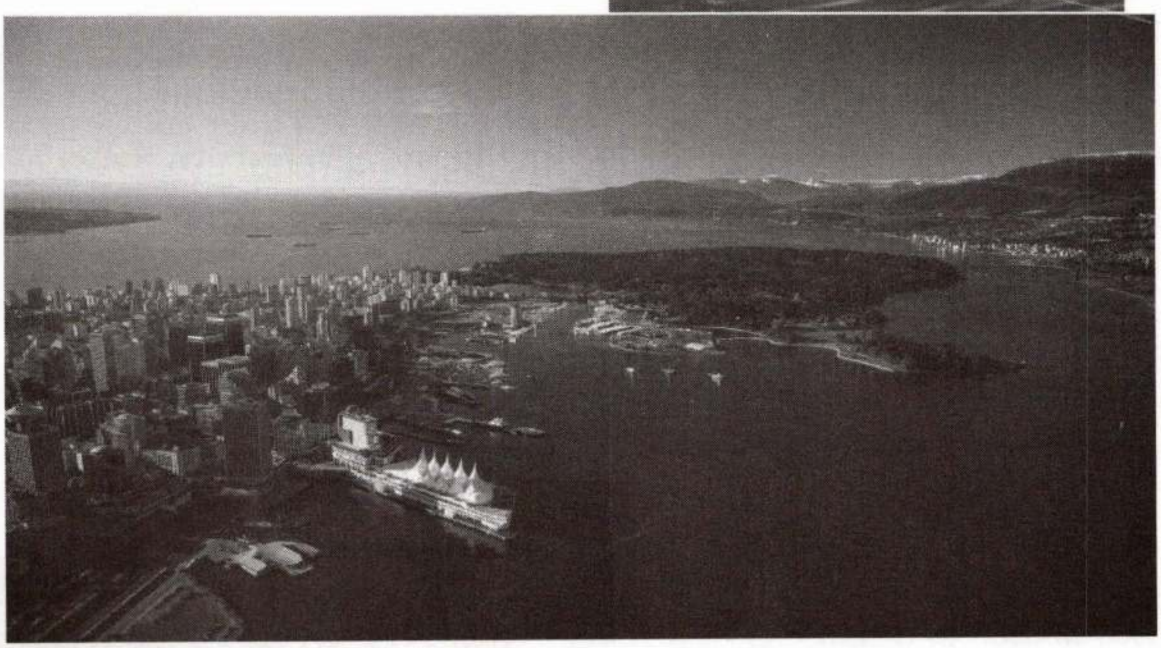
Faculty Contacts:Dave Montgomery, Sundar Bharadwaj, Jin K. Han and Tan Chin Tiong

Marketing Science Conference 2008

The University of British Columbia's Sauder School of Business will host the 2008 INFORMS Society for Marketing Science Conference to be held in Vancouver from Thursday, June 12 to June 14 at 5:30pm. The conference will be held at the Sheraton Wall Centre in Vancouver. Chuck Weinberg will be the conference chair.

SAUDER
School of Business
UNIVERSITY OF BRITISH COLUMBIA





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MARKETING SCIENCE CONFERENCE

Stanford University
(1979)

University of Texas, Austin
(1980)

New York University
(1981)

The Wharton School
(1982)

University of Southern California
(1983)

University of Chicago
(1984)

Vanderbilt University
(1985)

University of Texas, Dallas
(1986)

HEC, France
(1987)

University of Washington
(1988)

Duke University
(1989)

University of Illinois
(1990)

University of Delaware/DuPont
(1991)

London Business School
(1992)

Washington University
(1993)

University of Arizona
(1994)

University of New South Wales
(1995)

University of Florida
(1996)

University of California, Berkeley
(1997)

INSEAD, France
(1998)

Syracuse University
(1999)

UCLA
(2000)

University of Mainz
(2001)

University of Alberta
(2002)

University of Maryland
(2003)

Erasmus University, Rotterdam
(2004)

Emory University
(2005)

JOSEPH M. katz
Graduate School of Business
University of Pittsburgh
(2006)

Singapore Management University
(2007)

University of British Columbia
(2008)

INFORMS SOCIETY ON MARKETING SCIENCE

Institute for 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 (SMS) 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.

Welcome to the 2006 INFORMS Marketing Science Conference!

Dear Colleague,

We are looking forward to hosting you at the Westin Convention Center Hotel in downtown Pittsburgh, from Thursday, June 8 to Saturday, June 10 for the 28th INFORMS Marketing Science Conference. It will be an exciting event, with over 500 presentations, a Thursday reception on the Pitt campus, and a gala on Friday evening at the Heinz History Center.

Pittsburgh is set at the confluence of two rivers, the Allegheny and the Monongahela, which form the Ohio River. There are more bridges (720) in Pittsburgh than in any other U.S. city.

The Westin Hotel is a perfect site for the conference, as most of the meeting rooms are located very near to one another. The hotel rooms are quite nice and the hotel offers a free wireless Internet, so be sure to bring your laptop's wireless network card. The Omni William Penn is our alternate hotel and a Pittsburgh landmark. It is only a short walk from the Westin and has similar facilities.

The following pages contain additional information on our off-site events, the detailed program, and maps to navigate the Westin meeting rooms and downtown Pittsburgh. Do visit our conference website at www.katz.pitt.edu/mks2006 to learn about the city's sights, sounds and food.

We are on a record-setting pace for conference registrations, so this is shaping up to be the biggest, most exciting Marketing Science Conference ever! Please do not hesitate to contact us if you need any additional information or assistance. Welcome to Pittsburgh!!

Sincerely,

Rabi, Jeff, and Venkatesh

Accommodations and Travel to Pittsburgh

Hotel information is available on the conference website.

The Pittsburgh airport was recently rated as the best in the U.S. by J.D. Power and second in the world. A taxi from the airport takes about 20 minutes and costs about $30. The Westin is located close to several restaurants, so you should not need a rental car.

Weather

The average daily temperature in Pittsburgh in June is a high of 79F (26C) and a low of 58F (14C).

Exercise

For those interested in exercising, there is a workout room at the Westin. Also, the hotel is located quite close to the jogging trails that run along the river.

Summary Schedule

Thursday, June 8, 2006	1 – 1.30 PM	Conference Opening
	1.30 – 3 PM	Presentations (TC)
	3 – 3.30 PM	Break
	3.30 – 5 PM	Presentations (TD)
	6 – 9 PM	Reception at the University of Pittsburgh (Buses leave from the hotels at 5.15 PM)
Friday, June 9, 2006	7.30 – 8.30 AM	Breakfast
	8.30 – 10 AM	Presentations (FA)
	10 – 10.30 AM	Break
	10.30 AM – Noon	Presentations (FB)
	Noon – 1.30 PM	Lunch
	1.30 – 3 PM	Presentations (FC)
	3 – 3.30 PM	Break
	3.30 – 5 PM	Presentations (FD)
	6 – 10 PM	ISMS Gala at the Heinz History Center (The center is a short walk from the hotels)
Saturday, June 10, 2006	7.30 – 8.30 AM	Breakfast
	8.30 – 10 AM	Presentations (SA)
	10 – 10.30 AM	Break
	10.30 AM – Noon	Presentations (SB)
	Noon – 1.30 PM	Lunch
	1.30 – 3 PM	Presentations (SC)
	3 – 3.30 PM	Break
	3.30 – 5 PM	Presentations (SD)

Information for Speakers, Session Chairs, and Participants

Speakers: All rooms will be equipped with a laptop with a USB port. **<u>Please plan on using PowerPoint! Please arrive at least 10 minutes prior to your session to load your presentation onto the desktop. Preferably, use a memory stick. We cannot allow presenters to use their own laptops.</u>**

Since most sessions have four presentations in 90 minutes, please plan to speak for 22 minutes <u>including Q&A</u>.

Chairs: The chair is noted in the program, usually an author on the final paper in the session. Please keep the session on time. If a presenter arrives immediately prior to the session, deduct the time that they take to install their presentation onto the desktop from their time allotment.

Be Sure to Attend Our Off-site Events!

Thursday, June 8: 6:00 – 9:00 PM
Conference Reception at the Cathedral of Learning

The University of Pittsburgh's Cathedral of Learning offers a truly unique setting for the official conference reception – it is the second-tallest education building in the world — 42 stories and 535 feet tall. It is also the geographic and traditional heart of the campus.

The reception will be held in the magnificent three-story "Commons Room." This is a great opportunity for you to network with your fellow participants at the conference, while you enjoy the food and drink. We have also arranged for tours of the internationally renowned Nationality Classrooms located in the building, for those of you who might be interested.

This is the only conference event on the University of Pittsburgh campus, and our opportunity to showcase Pitt. So, we really hope to see you there! And spouses are welcome!

Buses will be pick you up from your hotels and drop you back after the event.

Trivia tidbit: The Cathedral of Learning has 2,529 windows.

The Cathedral of Learning

"The building was to be more than a schoolhouse; it was to be a symbol of the life that Pittsburgh through the years had wanted to live. It was to make visible something of the spirit that was in the hearts of pioneers as, long ago, they sat in their log cabins and thought by candlelight of the great city that would sometime spread out beyond their three rivers and that even they were starting to build."

- **Pitt Chancellor John G. Bowman, 1921**

The Nationality Rooms

"Faith and peace are in their hearts. Good will has brought them together. Like the Magi of ancestral traditions and the shepherds of candid simplicity, they offer their gifts of what is precious, genuine and their own, to truth that shines forever and enlightens all people."

- **Nationality Room Committee Chairpersons, 1937**

See pictures of select rooms on the inside back cover

Friday, June 9: 6:00 – 10:00 PM
Gala at the Senator Heinz History Center

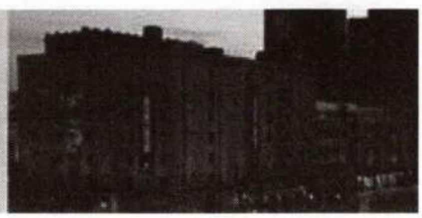
The Friday night gala will be one of the conference highlights. The Heinz History Center is an affiliate of the Smithsonian and is the largest history museum in the state of Pennsylvania. Enjoy mingling with colleagues at the reception in the Great Hall, but leave time to tour the exhibits before dinner.

The museum's exhibits recount over 250 years of regional history. In particular, the Special Collections Gallery houses more than 3000 artifacts that help make Pittsburgh unique, including Mister Rogers' trolley and an Alcoa aluminum bikini designed by Oscar de la Renta.

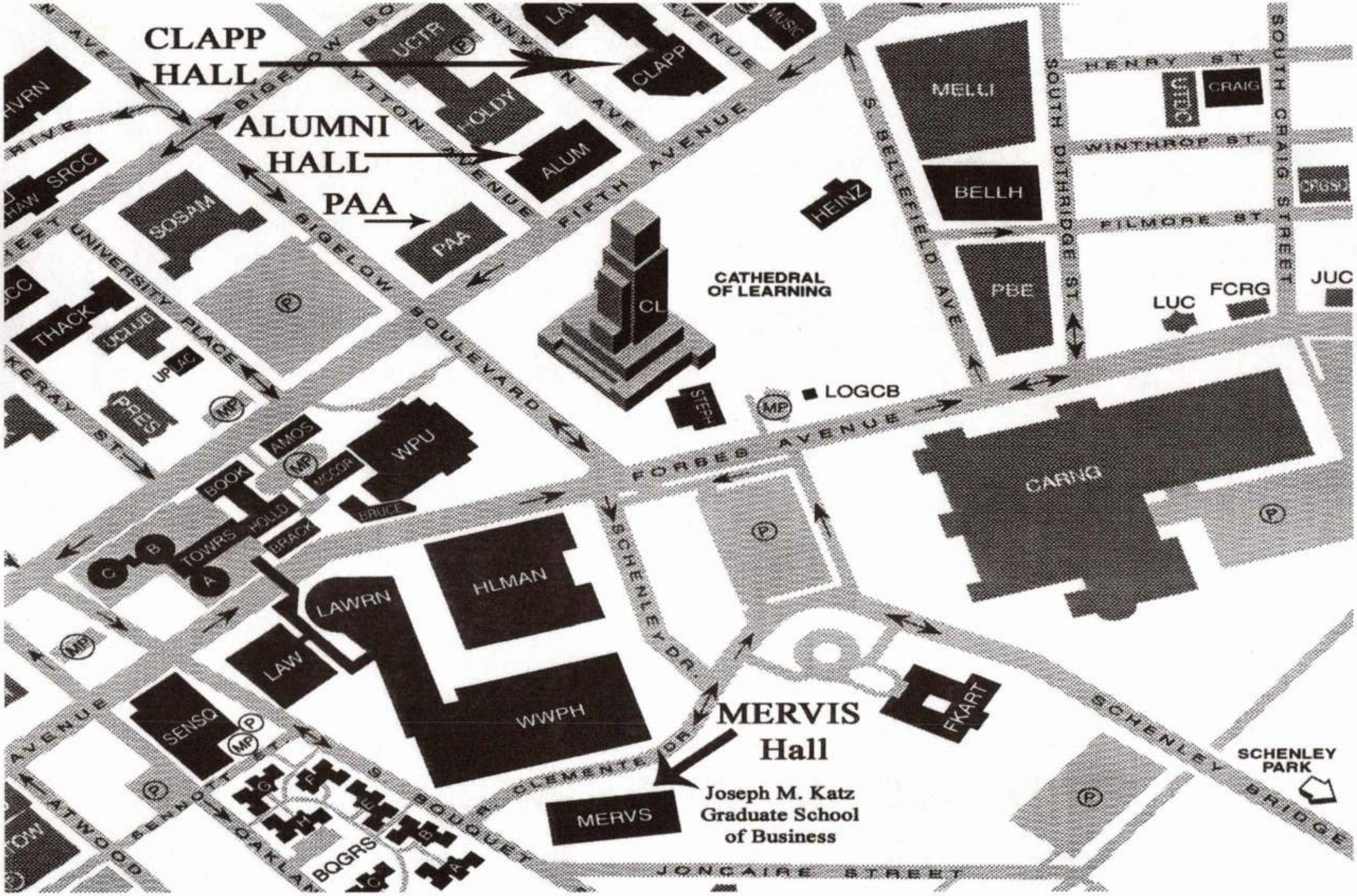
Sports fans should be sure to visit the Western Pennsylvania Sports Museum and relive victories by teams such as the Pirates, Penguins, Pitt Panthers, and – oh yes – the Steelers.

And no self-respecting marketing person should miss the Heinz 57 exhibit. It's the story of the Pittsburgh-born food industry giant H.J. Heinz Company told through memorabilia, vintage photos, advertisements and TV commercials. See how a business that started in a home kitchen just outside Pittsburgh grew to offer 57 varieties of food to the more than 4,000 products it makes today.

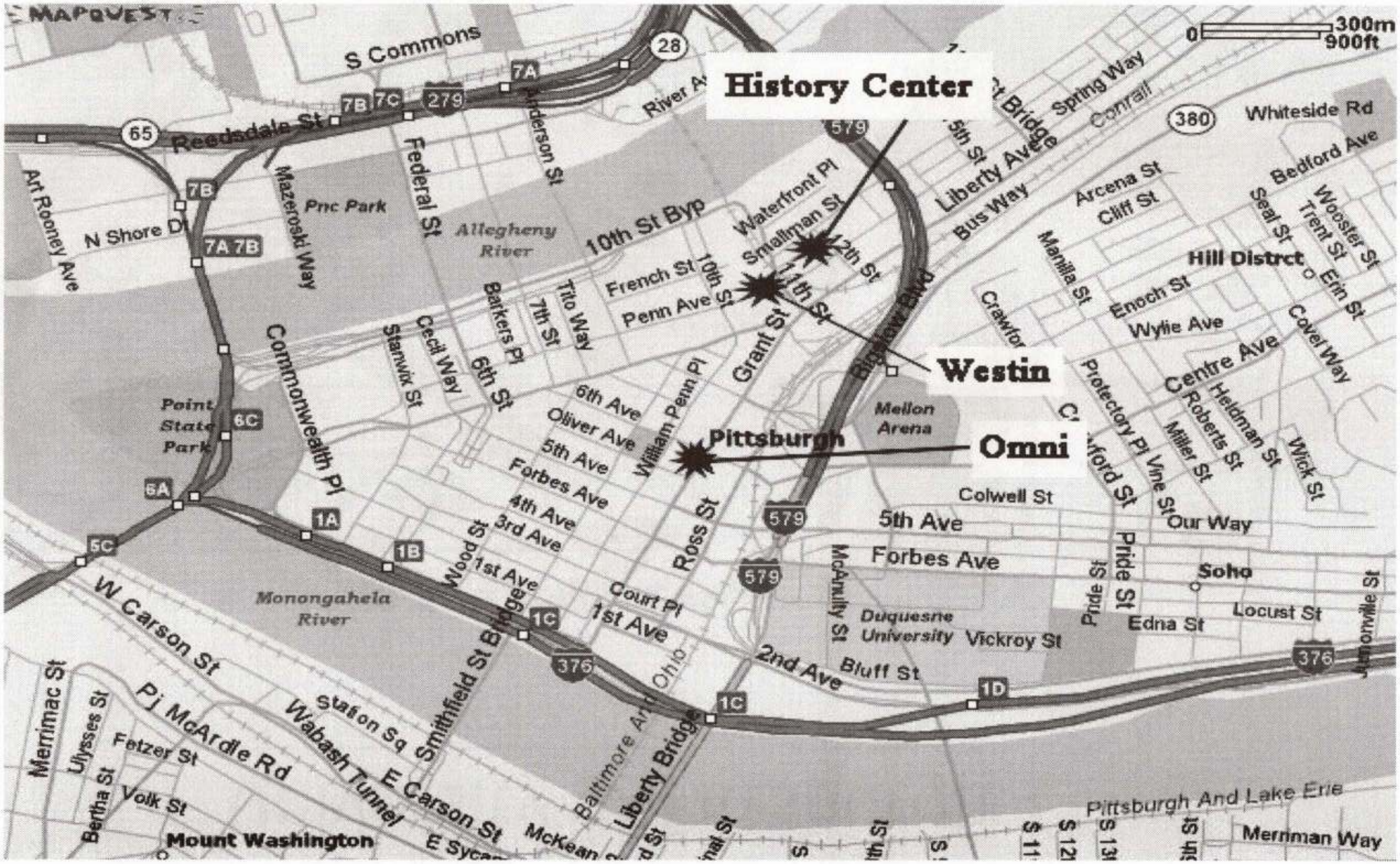
SENATOR JOHN HEINZ PITTSBURGH REGIONAL
HISTORY CENTER
IN ASSOCIATION WITH THE SMITHSONIAN INSTITUTION



University of Pittsburgh



Downtown Pittsburgh



Directions

Walking Directions

Omni to Westin 0.43 miles

- Use Omni exit toward Grant St.
- Turn Left onto Grant St.
- Westin is about 3 blocks down on the left. You will run right into it!

To History Center

From Westin 0.23 miles

- Begin going East on Penn Ave toward 11th St.
- Turn left onto 11th St.
- Turn Right onto Smallman St.

From Omni 0.58 miles

- Combine above directions

Bus Schedule

Thursday, June 8th

Continuous Shuttle: Omni Hotel, Westin Hotel, 12pm-6pm*
Reception, Cathedral of Learning, Univ. Pitt Campus
Pick up at Omni – 5:30pm, 6pm
Pick up at Westin- 5:30pm, 6pm
Return – Pick up 8pm, 8:30pm, 9pm, 9:30pm

Friday, June 9th

Continuous Shuttle: Omni Hotel, Westin Hotel, 7:30am-5:30pm*
Shuttle to/from History Center, 6pm-10:30pm (limited space)*

Saturday, June 10th

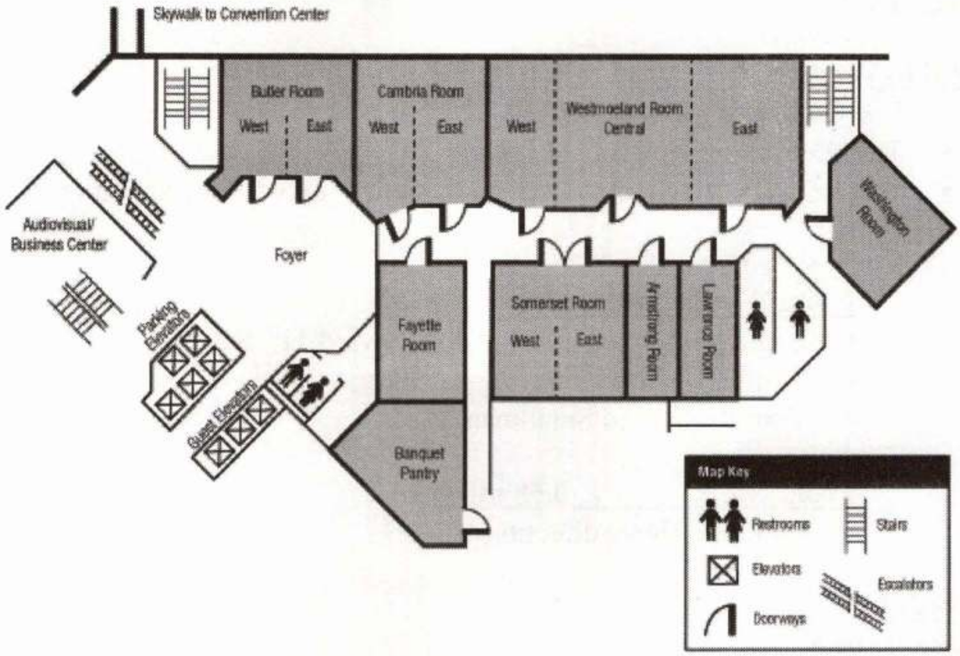
Continuous Shuttle: Omni Hotel, Westin Hotel, 7:30am-5:30pm*
Shuttle will remain available until 10:30 and will make continuous stops*:
Omni, Westin, PPG Plaza, Station Square, Duquesne Incline Mt Washington (top and bottom), South Side Works**

**Shuttle provides limited space. We encourage walking the short distance.*

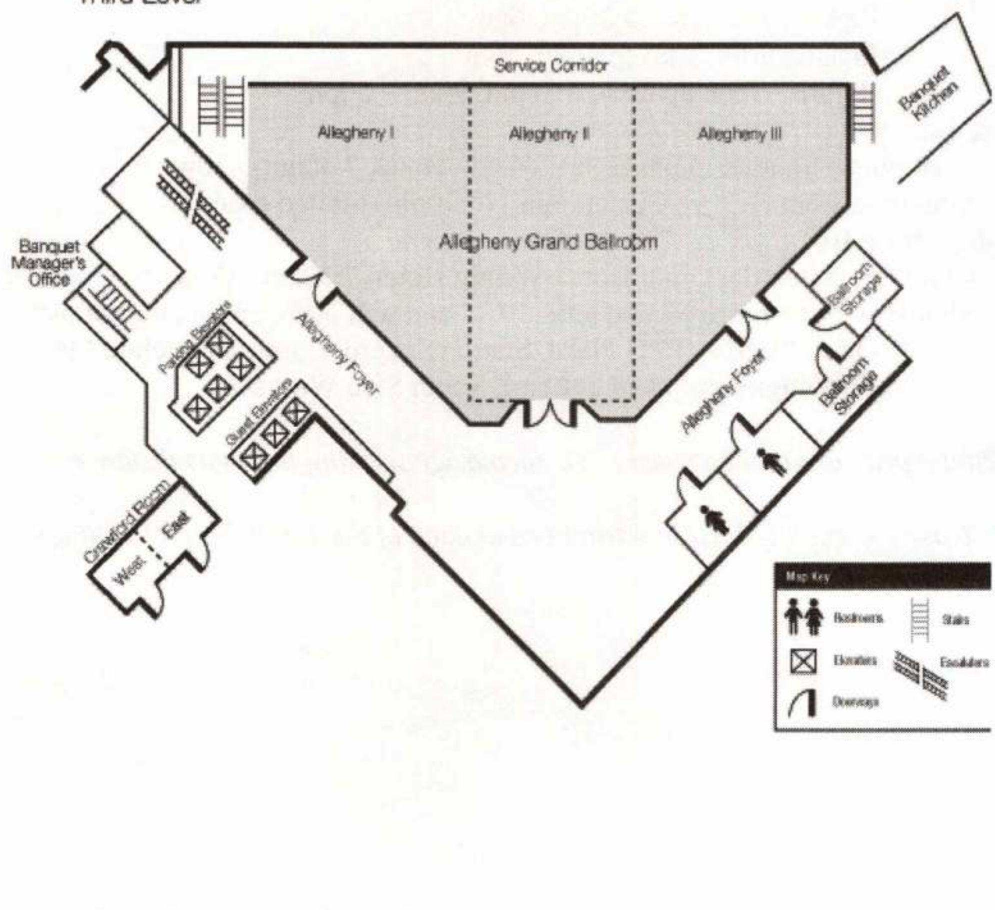
***Please see enclosed list of attractions at each of these Pittsburgh locations.*

Westin Floor Maps

Second Level



Third Level



2006 INFORMS MARKETING SCIENCE CONFERENCE

Thursday, June 8, 2006 3.30 – 5 PM (Session TD)

TD01-Allegheny Ballroom	TD02-Crawford East	TD03-Crawford West	TD04-Butler West
Practice Prize Rehearsals (special time 4-6PM) Chair: John Roberts BRAN*EQT: A Model and Simulator for Estimating, Tracking, and Managing Multi-category Brand Equity *Venkatesh Shankar, Matthew Fuller, Pablo Azar* Planning New Tariffs at Tele.Ring – An Integrated STP Tool Designed for Managerial Applicability *Martin Natter, Udo Wagner, Andreas Mild, Alfred Taudes*	**Public Policy and Marketing** Chair: Ramnath K. Chellappa Analysis of the Reforms in Chinese State-Owned Enterprises: A Principal-Agent Approach *Emily Yang* Analysis of Consumers' Willingness to Pay for Non-pirated Software *Charlene W.Y. Shiue, Jane Lu Hsu* Don't Quite Super Size Me: Policy Decisions with Context Dependent Demand *Kathryn Sharpe, Richard Staelin, Joel Huber* Incentive Design for Online Personalization Services under Privacy Concerns *Ramnath Chellappa, Shivendu Shivendu*	**Competition and Competitive Response** Chair: Ashwin Aravindakshan Scheduled Delays? Scheduled Time Competition and On-Time Performance in the Airline Industry *Yan Dong, Kefeng Xu* Competitive Response to New Product Introductions: The Mediating Role of Perceived Threat and Intent *Cendrine Fons* Optimal Timing for Software Functionality Additions By Technology Product Vendors *Ping Wu, Robert J. Kauffman* Pricing Implicit Bundles Under Competition *Ashwin Aravindakshan, Brian Ratchford, Venkatesh Shankar*	**Location Models** Chair: Mary Caravella Assessing Location Advantage in the Motion Picture Exhibition Market *Jorge Gonzalez, Catarina Sismeiro* Store Location Evaluation and Choice Based on Geographical Consumer Information *Auke Hunneman, Tammo Bijmolt* Adding Clicks to Bricks: An Empirical Investigation of the Effect of Store Openings on Direct Sales *Mary Caravella, John Deighton, Tom Steenburgh, Jill Avery*
TD05-Butler East	**TD06-Cambria West**	**TD07-Cambria East**	**TD08-Westmoreland West**
Consumer Behavior I Chair: Dilip Soman Incidental Brand Learning in Front of the Shelf *Ralf van der Lans, Rik Pieters, Michel Wedel* Time versus Money as the Cost of Search: Differential Impact on Search Behavior *Ashwani Monga, Ritesh Saini* Border Crossing Consumers and Postassimilationist Studies: Cultural Alternation in the Marketplace *Luca Visconti* Investigating Stopping Decision Criteria for Goal-Oriented Sequential Search *Anocha Aribarg, Dilip Soman*	**Choice Models II** Chair: Sajeev Varki The Price Consideration Model of Brand Choice *Andrew Ching, Tulin Erdem, Michael Keane* Customer Equity: A Measurement Based on Dynamic Segmentation *Jaime Romero de la Fuente, María Jesús Yagüe Guillen* Modeling Hierarchical Conjoint Processes and Data from Integrated Experiments using Latent Variables *Len Coote, Jordan Louviere* Exploring the Cognitive Algebra of Value Perceptions *Sajeev Varki, Albert Della Bitta*	**Product Design Methodologies** Chair: Terry Elrod Using Market Research Methods and Results in Engineering Design: Challenges and Opportunities *R. Jean Ruth, Sharon Zielinski, Artemis Kloess* Optimal Product Line Design for Consumer Durables: An Integrated Marketing and Design Approach *Lan Luo, Shapour Azarm, Babak Besharati, P.K. Kannan* Investigating Endogeneity Bias in Conjoint Models *Thomas Otter, Greg Allenby, Qing Liu* Partial Profile Choice Experiments: An Assessment *Terry Elrod, Keith Chrzan, Michael Patterson*	**Word-of-Mouth II: e-Marketing** Chair: Chris Dellarocas The Effect of the Content of Word of Mouth on Purchase Decisions: The Case of the Movie Industry *Seema Pai, S. Siddarth* Who Actually Matters, Word or Mouth? *Xiaodong Fan, Wenjing Duan, Andrew Whinston* How to Predict Web Users Viral Propensity ? A Bayesian Networks Approach *Christine Balague* What Motivates People to Review a Product Online? A Study of Online Movie Ratings *Chris Dellarocas, Ritu Narayan*

2006 INFORMS MARKETING SCIENCE CONFERENCE

Thursday, June 8, 2006 3.30 – 5 PM (Session TD)

TD09-Westmoreland Central

eCommerce II: Advertising

Chair: Chuan He

Firm Characteristics and Bidding Behavior in Online Search Engine Advertising
Sunil Wattal, Anindya Ghose

From Generic to Branded: A Model of Spillover Dynamics in Paid Search Advertising
Oliver Rutz, Randy Bucklin

Determinants of Permission Email Effectiveness
Jin Li, Paul Messinger, Yu Ma

A Model of Pay-for-placement Advertising
Chuan He, Yongmin Chen

TD10-Westmoreland East

Channels II: Retailing

Chair: Yu Ma

Impulse Purchases in the Supermarket: The Influence of Consumer, Retailer, and Product Factors
James Hess, Douglas Walker, Jacqueline Kacen

Analysis of Shoppers' Mall Entertainment Values
Iksuk Kim, Tim Christiansen, Richard Feinberg, Hyun-Jip Choi

The Effects of Trip Level Attributes on In-Store Decision Making
Karen Stilley, J. Jeffrey Inman

Retailers "Talk the Talk," Consumers "Walk the Walk": Investigating the Impact of Store Layout
Yu Ma, P.B. (Seethu) Seetharaman, Vishal Singh

TD11-Washington

Promotions II

Chair: Kusum Ailawadi

The Impact of In-Store Free Samples on Sample Takers
Carrie Heilman, Kyryl Lakishyk, Sonja Radas

Buyer Heterogeneity and the Design of Frequency Programs
Serdar Sayman, Murat Usman

Learning, Forgetting, and Sales
J. Miguel Villas-Boas, Sofia Berto Villas-Boas

The Determinants of Consumption Flexibility
Kusum Ailawadi, Scott Neslin

TD12-Fayette

CLV I

Chair: V. Kumar

Estimating CLV Using Aggregated Data: The Tuscan Lifestyles Case Revisited
Pete Fader, Bruce Hardie, Kinshuk Jerath

An Empirical Comparison of Models for Customer Base Analysis
Chun-Yao Huang

Customer Base Valuation in a Contractual Setting: The Perils of Ignoring Heterogeneity
Bruce Hardie, Pete Fader

What Drives Cross-buy?
Morris George, V. Kumar, Joseph Pancras

TD13-Somerset West

Pricing II: Reference Effect

Chair: Tulin Erdem

Fairness and Uniform Pricing
Tony Cui, Yuxin Chen

Online Shoppers' Price Acceptability: The Lower the Better?
Wen Yin

Did Big Brands Die the Day the Marlboro Man Fell Off His Horse?
Tao Chen, Vishal Singh, Baohong Sun

Decomposing the Reference Price Effects: Quality Signaling or Price Expectations?
Tulin Erdem, Baohong Sun, Liang Guo

TD14-Somerset East

Mktg. Strategy II: Advertising

Chair: Robert Fisher

Communication and Product Line Design for a Monopoly with Dual Channels
I-Huei Wu, Ning-Hsiu Su,Shan-Yu Chou

Modes of Harm and Reality TV
Jashim Khan, Emma Dresler-Hawke

Movie Advertising and the Stock Market Valuation of Studios
Amit Joshi, Dominique Hanssens

The Differential Impact of Advertising and Product Value on Market Share as Markets Age
Robert Fisher, Bharat Sud, Kersi Antia

Friday, June 9, 2006 8.30 – 10 AM (Session FA)

FA01-Allegheny Ballroom

Practice Prize I
(Special Time: 8.15 – 9.45 AM)

Chair: John Roberts

The Power of CLV
V. Kumar, Rajkumar Venkatesan, Tim Bohling, Denise Beckman

PIN Incentive Planning System: A Disaggregate Modeling Approach Applied to New Car Purchases
Jorge Silva-Risso, Irina Ionova

FA02-Crawford East

Market Structure Analysis

Chair: S. Siddarth

Antitrust Marketing Definition
Fang Wu, Paul Messinger, Terry Elrod

Cost Differentials and Quality Competition
Sergio Meza, Mihkel Tombak

The Strategic Complementarity of Multi-Category Market Structure Analysis and Customer Segmentation
Andrea Godfrey, Maytal Saar-Tsechansky, Leigh McAlister

The Role of Attitudinal Variables in Identifying Substitution Patterns in the U.S. Automobile Market
S. Siddarth, Jorge Silva-Risso, Irina Ionova

FA03-Crawford West

Market Analysis and Response

Chair: Andre Bonfrer

Implementation Intentions, Customer Uncertainty and the Intention-Behavior Link
Murali Chandrashekaran, Frank Kardes,Kristin Rotte, Maria Cronley, Steve Posavac

Common Challenges in Developing Marketing Models in the Retail Industry
Krishna Arangode, Suresh Acharya, Steve Haas, Helen Xu

Effectiveness of Information Marketing with Cultural Considerations
Jane Lu Hsu, Kelsey Jing-Ru Hung

Cross Price Asymmetries and Market Share Response Models
Andre Bonfrer, Ernst Berndt, Alvin Silk

FA04-Butler West

Brand Management I: Portfolios

Chair: Larry Garber

Market Share and Product Distribution: Re-tested and Extended
Michael W. Kruger, Brian Harper

Using Network Analysis to Examine Brand Portfolio Strategies
Kim Serota, Mukesh Bhargava

Consumer Response to Endorsed Branding: An Experimental Study
Ji-Hun Yoo, Corinne Faure

Simultaneous Introduction of Multiple Brands and its Impact on Consideration Sets
Larry Garber, Bibek Banerjee, Sujoy Chakravarty

FA05-Butler East

Consumer Behavior I

Chair: Yinlong Zhang

Threshold Effects in Gambling: An Empirical Analysis
Puneet Manchanda, Sridhar Narayanan

Re-Examination of Maximization: Reliability and Validity Studies and Derivation of a Short Form
Gergana Yordanova, John Hulland, Maureen Morrin, Barry Schwartz

Exploring The Values of Art Film Audiences
Jennifer Chang, Sharon Chuu, Judith Zaichkowsky

Evaluation of Qualitative and Quantitative Mktg. Res. Methods
Yinlong Zhang, Feisal Murshed

FA06-Cambria West

Choice Models III

Chair: Timothy Devinney

The Competitive Implications of Consideration Sets
Joseph Pancras, K Sudhir

Joint Consumption
Wesley Hartmann, Taylan Yildiz

Service Diffusion Augmented by Brand Choice
Vardit Landsman, Moshe Givon

Identifying Segments of Ethical Consumers: A Latent Class Regression Analysis of Choice Experiments
Patrice Auger, Timothy Devinney, Jordan Louviere

FA07-Cambria East

New Product Development I

Chair: Brett Gordon

Innovation, New Product Introductions, and Financial Returns
Wooseong Kang

Long-term Returns to Incremental, Breakthrough, and Market-Dominant Innovation
Jelena Spanjol, Alina Sorescu

Measuring the Impact of Unexpected Innovation Success on Shareholder Value
Michel Clement, Marc Fischer, Björn Goerke

Pricing and the Product Life Cycle in the CPU Industry: An Empirical Investigation
Brett Gordon, Vishal Singh

FA08-Westmoreland West

Word-of-Mouth III: Game-Theoretic Models

Chair: Xinxin Li

Link to Success: How Blogs Build an Audience by Promoting Rivals
Dina Mayzlin, Hema Yoganarasimhan

An Economic Analysis of Online Product Reviews and Ratings
Bao-Jun Jiang, Pei-yu Chen

Information Sharing in Buyer Communities – The Case of Reverse Pricing
Oliver Hinz, Martin Spann

Product Reviews and Competition
Xinxin Li, Lorin Hitt, John Zhang

Friday, June 9, 2006 8.30 – 10 AM (Session FA)

FA09-Westmoreland Central	FA10-Westmoreland East	FA11-Washington	FA12-Fayette
Empirical Strategies for Studying Auction Markets Chair: Robert Zeithammer The Impact of Customer Community Participation on Online Auction Outcomes: Evidence from a Large-scale Field Experiment *René Algesheimer, Utpal M. Dholakia* The Role of Quality Indicators in Internet Auctions: An Empirical Study *Shibo Li, Kannan Srinivasan, Baohong Sun* Charitable Intent and Bidding in Charity Auctions *Peter T. L. Popkowski Leszczyc, Michael H. Rothkopf*	**Channels III: Retailing** Chair: Tansev Geylani The Double Whammy: Restrictive Returns Policies and Limited Information in a Competitive Environment *Jeffrey D. Shulman, Anne T. Coughlan, R. Canan Savaskan* In Pursuit of Retailing Dominance: Market Dominance, Channel Dominance, or Both? *Kinshuk Jerath, John Zhang, Stephen Hoch* Profit Impacts of Optimal Retail Pricing and Merchandising Decisions *Subir Bandyopadhyay, Subir Chakrabarti* Information Transmission in a Channel with Partially Informed Retailers *Tansev Geylani, Esther Gal-Or, Anthony Dukes*	**No Presentations**	**Satisfaction I** Chair: Peter C. Verhoef A Typology of Consumer Dissatisfaction Responses: Exit, Voice, and Loyalty and "More" *Heejung Ro, Anna S. Mattila* Disconfirmation Effect at Aggregate Market Levels: A Cross-industry Investigation *Yan-qun He, Siu-Keung Tse, Vicky M H Chan* A Useful Model of Customer Satisfaction *Michael Preis, Gregory Kellar* Dynamic Effects in Service Satisfaction and Customer Retention – The Role of Critical Incidents *Jenny van Doorn, Peter C. Verhoef*
FA13-Somerset West **Pricing III: Bundling** Chair: Bing Jing Product Bundles under Three-Part Tariff Schemes *Ping Xiao, Tat Y. Chan, Chakravarthi Narasimhan* Why Consumers Buy Multiple Products from a Single Retailer: A Household Production Explanation *Feng Liu, Purushottam Papatla* Bundling and Unbundling of Electronic Content *Nevena Koukova, PK Kannan* Bundling Complementary Goods *Bing Jing*	**FA14-Somerset East** **Mktg. Strategy III: Soc. Welfare** Chair: Luc Wathieu Channel Configuration and Market Outcomes in Real Estate Transactions *Kristin Rotte, Murali Chandrashekaran* Assessing the Value Consumers Ascribe to Corporate Social Involvement in Product Choice *Andre Menc* Opinions of Organic: Attitudes and Purchase Intentions of Packaged Frozen Meals *Robin Sherk* Marketing and Privacy Concerns: Theory and Evidence *Luc Wathieu*		

2006 INFORMS MARKETING SCIENCE CONFERENCE

Friday, June 9, 2006 10.30 AM – Noon (Session FB)

FB01-Allegheny Ballroom	FB02-Crawford East	FB03-Crawford West	FB04-Butler West
Practice Prize II (Special Time: 10 – 11.30 AM) Chair: John Roberts BRAN*EQT: A Model and Simulator for Estimating, Tracking, and Managing Multicategory Brand Equity *Venkatesh Shankar, Matthew Fuller, Pablo Azar* Planning New Tariffs at Tele.Ring – An Integrated STP Tool Designed for Managerial Applicability *Martin Natter, Udo Wagner, Andreas Mild, Alfred Taudes*	**Marketing Dashboards: Metrics** Chair: Koen Pauwels The Problem Isn't "Dashboards," It's "Marketing"! *Tim Ambler, Bruce Clark* Marketing Dashboards and Managerial Intuition *Berend Wierenga* Decomposition of Changes in Customer Equity Over Time *Thorsten Wiesel, Bernd Skiera, Julián Villanueva* Counting what Counts: Designing Marketing Dashboards for Long-term Marketing Productivity *Koen Pauwels, Marije Teerling* Challenging the "Effectiveness" of the Marketing Dashboard as a Tool for Measuring the Impact of Marketing Investments *Pat LaPointe*	**Competition: Game-Theoretic Models** Chair: Preyas Desai CEO Succession and the Impact on Competitive Behavior *Jagmohan Raju, Andre Bonfrer* Renting of Software Services Under Competition *Ram Bala, Scott Carr* Word of Mouth Communication in Business Markets *David Godes* Open v. Closed Used Markets: The Strategic Role of Creating Your Own Competition *Preyas Desai, Debu Purohit*	**Brand Management II** Chair: Raj Sethuraman The Financial Consequences of Brand Management Capabilities *Lopo Rego, Neil Morgan, Douglas Vorhies* Developing Corporate Brands for Competitiveness *Sofia Gaio* Seeking Empirical Generalizations on Factors Influencing Private Label Penetration *Raj Sethuraman*
FB05-Butler East	**FB06-Cambria West**	**FB07-Cambria East**	**FB08-Westmoreland West**
BDT II Chair: Raghunath Rao Confidence in Evaluating: Roles of Uncertainty Detection and Resolution on Discounting *Sandra Burke* Do Promotion-Focused Individuals Have Higher Discount Rates? It Depends on the Valence *Shenghui Zhao, Rongrong Zhou* Choice Representation and Comparibility Variance: A Generalized Approach *Syagnik Banerjee* A Reference Dependent Model of Durable Good Markets *Raghunath Rao, George John, Om Narasimhan*	**Decision Research I** Chair: Theodoros Evgeniou Modeling Consumer Choice of Brand and Shape in the Automobile Market *Alexei Khavaev, Jorge Silva-Risso, Irina Ionova* Strategic Marketing Decisions: A Theoretical Framework to Predict and Explain Channel Choice *Nikolaos Kalogeras, Joost M.E. Pennings, Phillip Garcia* Factors Influencing Expectations of Medical: Traditional Chinese versus Western Medicine *Clyde Warden, Judy Chen* An Empirical Comparison of Hierarchical Bayes and Optimization Based Conjoint Methods *Theodoros Evgeniou, Justine Hollyer, Christina Costa, Philippe Cartwright*	**New Product Development II** Chair: Ashutosh Prasad How Far Can You Rely on a Concept Test : The Generalizability of Testing Over Occasions *Ling Peng, Adam Finn* Firm-Offered and Interpersonal Incentives in Customer Referrals *Laura Kornish, Qiuping LI* New Product Portfolio Optimization *Jehoshua Eliashberg, Min Ding* The Ratio of Internal and External Marketing Communications in New Product Introduction *Ashutosh Prasad, Birendra Mishra, Robert Peterson*	**Word-of-Mouth IV: Diffusion** Chair: Prokriti Mukherji The NPV of Bad News *Barak Libai, Eitan Muller, Jacob Goldenberg, Sarit Moldovan* The Sales Effect of Word of Mouth: a Model for Creative Goods and Estimates for Novels *Jonathan Beck* The Different Roles of Product Originality and Usefulness in Generating Word-of-Mouth *Sarit Moldovan, Amitava Chattopadhyay, Jacob Goldenber* The Role of Word of Mouth in New Product Adoption: A Disaggregate Level Model *Prokriti Mukherji, Shantanu Dutta, Ramkumar Janakiraman*

Friday, June 9, 2006 10.30 AM – Noon (Session FB)

FB09-Westmoreland Central	FB10-Westmoreland East	FB11-Washington	FB12-Fayette
eCommerce IV: eTailing Chair: Ramesh V. Arjunji An Integrated Model of Retail Competition *Yifan Wang* Competing with Free: Impact of Movie Broadcasts on DVD Sales and Internet Piracy *Michael D. Smith, Rahul Telang* Measuring Menu Costs of Online Retailers *Bin Gu, Anindya Ghose* Competitive Strategies Of A Conventional Retailer Faced With An Internet Entrant : Go Head-To-Head Or Move Away *Ramesh V. Arjunji, Arbind Prasad, Subrata K. Sen*	**Channels IV: Retailing** Chair: Hai Che Structural Estimation of Retail Demand Under Unobserved Out of Stocks *Andres Musalem, Eric Bradlow, Marcelo Olivares, Christian Terwiesch, Daniel Corstens* Marketing Actions and Firm Growth: Insights from Growth Models for Multi-Outlet Retailers *Rajdeep Grewal, Raji Srinivasan* Category Captains: Manufacturers, Retailers or Both? *Tolga Akcura, Ram Bezawada* The Effects of Retail Stockouts on Consumer Choice *Hai Che*	**No Presentations**	**Loyalty Programs** Chair: K Sudhir Brand Loyalty Programs: Are they Shams? *Steven Shugan* Loyalty Cards: Success or Failure? *Karthik Sridhar* The Effect of Retail Credit Cards on Consumer Purchase Behavior *Kanishka Misra, Eric Anderson, Karsten Hansen* Punish or Reward Loyals? Effects of 80/20 Rule and Information Asymmetry on Loyalty Program Design *K Sudhir, Jiwoong Shin*
FB13-Somerset West **Pricing IV: Structural Models** Chair: Jean-Pierre Dube Estimating Multimarket Contact Effect in a Business to Business Market *Donglei Qiu, Xin Wang, Teck-Hua Ho* Optimal Pricing with Implied Informative Priors *Alan Montgomery* Retail Category Pricing with Consumer Traffic Effects *Edward Fox, John Semple, Steve Postrel* Category Pricing with State Dependent Utility *Jean-Pierre Dube, Guenter Histch, Peter Rossi, Maria Ana Vitorino*	**FB14-Somerset East** **Mktg. Strategy IV: Frameworks** Chair: Mark Bergen A Multi-Market Perspective to Incumbent Survival in New Markets *Sungwook Min, Jonathan Bohlmann* Towards a Framework for Channel Evolution: Structure and Institutions of the Motion Picture Channel *Paul Messinger, Keri Kettle* A Study of Strategy in Marketing: A Longitudinal Perspective of the Content and Impact *Ruud Frambach, Leo Paas, Rajendra K. Srivastava, Bob Rietveld* Pricing Structure and Structuring Price *Mark Bergen, Mark Zbaracki*		

2006 INFORMS MARKETING SCIENCE CONFERENCE

Friday, June 9, 2006 1.30 – 3 PM (Session FC)

FC01-Allegheny Ballroom **No Presentations**	**FC02-Crawford East** **Marketing Strategy I** Chair: Mark E. Hill Emergent Heterogeneity and the Marketing of Skill Goods *Chun Qiu, Paul Messinger* When Do Firms and Industries Matter? Cross-Disciplinary Approach to Firm Vs. Industry Debate *Ekaterina Karniouchina* Managing Customers' Product Returns *J. Andrew Petersen, V. Kumar* The Marketing Paradox *Mark E. Hill, John Mcginnis, Jane Cromartie*	**FC03-Crawford West** **Latent Variable Models** Chair: Adam Finn Prospecting for Customers in Geographic and Latent Space *Wagner Kamakura, Stephen Samaha* Specification and Identification of Structural Equation Models Including Formative Constructs *Dirk Temme, Lutz Hildebrandt* Nonparametric Latent Instruments with an Application to Modeling Consumer Heterogeneity *Peter Ebbes, Michel Wedel,Peter Lenk* The Generalizability of Marketing Theory Testing: The Case of Customer Delight *Adam Finn, Ujwal Kayande*	**FC04-Butler West** **Brand Mgmt. III: Brand Equity** Chair: Douglas Bowman How Do Marketing Investments Benefit Brand Equity? *Shuba Srinivasan* Assessing Individual-Level Brand Personality: Applying Q-Methodology to Brand Personality *Annie P. Cui, Paul Albanese, Robert Jewell* Understanding the Effects of Customer Heterogeneity on Brand Equity *John Roberts, Pamela Morrison* Consumer Mindset as a Mediator of the Effect of Marketing Mix on Brand Performance: Financial Metrics *Douglas Bowman, Raj Srivastava*
FC05-Butler East **Consumer Behavior III** Chair: Dipankar Chakravarti The Joint Effects of Moral Identity and Gender on Charitable Donations *Karen Page, William Ross, Vikas Mittal* To Upgrade, Downgrade or Maintain? A Model for Consumer Decisions in Not-for Profit Contexts *Detelina Marinova, Jagdip Singh* Truth in Lending Disclosures: Realities of Consumer Impact and Implications for Public Policy *Sharmila Chatterjee, Rachel Kaitz* If You Smile Does the World Smile With You? How Facial Expressions Influence the Interpretation of Concession Cues in Marketing Negotiations *Rajesh Bagchi, Dipankar Chakravarti*	**FC06-Cambria West** **Choice Models IV** Chair: Bill Moore With No-Choice Options, Which Decision Mode is Preferred? *Thanh Tran, Kanghyun Yoon* The Invariant Proportion of Substitution (IPS) Property *Tom Steenburgh* Throwing Cold Water On Order: Accounting for Variance *Paul Burke, Ian Bateman, Paul Wang, Jordan Louviere* Screening Rules and Consumer Choice: A Comparison of Compensatory vs. Non-Compensatory Models *Bill Moore, Ekaterina Karniouchina*	**FC07-Cambria East** **New Product Development - III** Chair: Juanjuan Zhang Competence Acquisition in Co-Creation Relations: The Dual Role of Knowledge Stocks *Corine Noordhoff, Benedict Dellaert, Kyriakos Kyriakopoulos, Pieter Pauwels* Selling New Products to the Sales Force *Steven Brown, Frank Fu* Regulatory Focus Theory and New Product Team Decisions *Jonathan Bohlmann,William Qualls* Dynamic Segmentation and Product Design *Juanjuan Zhang*	**FC08-Westmoreland West** **Diffusion I: Agent-Based Modeling** Chair: Kilian Plank A Closed-Form Multiproduct Adoption Model with Correlated Awareness Diffusion Marginals *Kilian Plank* Modeling Purchase Timing Decisions in Group Buying Mechanism *Kanghyun Yoon, Thanh Tran* Diffusion of Multiple Generations of an Innovation: An Agent-Based Modeling Approach *Serdar Durmusoglu, Erin Cavusgil, Goksel Yalcinkaya* Modeling Diffusion Using An Agent-based Model Instantiated By Conjoint Analysis *Rosanna Garcia, John Hauser*

2006 INFORMS MARKETING SCIENCE CONFERENCE

Friday, June 9, 2006 1.30 – 3 PM (Session FC)

FC09-Westmoreland Central

eCommerce V: Clickstream Analysis

Chair: Glen Urban

Online Purchase Behavior Across Multiple Shopping Sessions
Yuanping Ying, Michel Wedel, Jie Zhang

Reducing Shopping Cart Abandonment at Retail Websites
Patrali Chatterjee, Shibo Li

Understanding Information Search Behavior of Online Travel Purchases
Ciju Nair, Tat Chan, Amar Cheema

Morphing Site Designs for Individual Search and Decision Styles
Glen Urban, Gui Liberali, Fareena Sultan, John Hauser

FC10-Westmoreland East

Channels V: Pricing

Chair: S. Chan Choi

Effects of Used Goods on Profits of Rental Stores, Retailers, and Manufacturers: The DVD Case
Pilsik Choi

Pricing by Car Dealers: The Effect of a No-Haggle Internet Option on Optimal Pricing Strategies
Xiaohua Zeng, Charles Weinberg, Srabana Dasgupta

The Economics of Demonstrations: The Effect of Competition on Demonstration, Price and Rebate Policies
Amir Heiman

Channel Coordination via Nonlinear Pricing under Price Expectation
S. Chan Choi

FC11-Washington

Promotions III

Chair: Brian Ratchford

Double Couponing as Commitment to Gain Bargaining Power within a Distribution Channel
Chyi-Mei Chen, Chi-Cheng Wu, Shan-Yu Chou

The Effects of Promotions on Profitability – The Intermediate Role of the Type of Shopping Trip
Peter Leeflang, Jenny van Doorn

How Competition and Market Area Characteristics Affect Retail Promotion Sensitivity
Ann Petersen, Thomas Gruca, Lopo Rego

Revisiting the Role of Promotions on Store Performance
Dinesh Gauri, Debabrata Talukdar, Brian Ratchford

FC12-Fayette

Customer Loyalty I

Chair: Paulo Oliveira

Success of Service Firms: In the Context of Relationship Management
Dena Hale, Ramendra Thakur

Exploring Spatial Variation in the Customer Satisfaction-Customer Loyalty Relationship
John Zhu, Lopo Rego, Gary Russell

Combining Exploratory with Predictive Methodology for Analyzing Shopping Basket Data
Thomas Reutterer, Yasemin Boztug

Should Firms Prevent Service Delays? The Role of Customer Experience
Paulo Oliveira, A. Parasuraman, Juan Carlos Ferrer, Miguel Angel Arancibia

FC13-Somerset West

Pricing V

Chair: Mark Parry

Pricing Strategy for Virtual Products Created by Online Gaming
Enping Mai, Jun Yang

Versions, Successive Generations and Pricing Strategy in Software Markets: Theory and Evidence
Ke-Wei Huang, Anindya Ghose, Arun Sundararajan

The Effect of Downward Leakage on Price Discrimination Policies of Rationed and Non-Rationed Deals
Aharon Hibshoosh, Uri Ben Zion, Uriel Spiegel

Rethinking Resale Price Maintenance
Mark Parry, Charles Ingene

FC14-Somerset East

Mktg. Strategy V: Advertising

Chair: Peter Danaher

Advertising and Pricing Decisions for National and Store Brands: A Channel's Perspective
Salma Karray, Guiomar Martin-Herran

The Short Term Impact of an Advertising TV Campaign on Brand Sales
Philippe Aurier, Anne Giroux

Kidfluence and the Quebec Advertizing Ban
Tirtha Dhar, Katherine Baylis

The Effect of Competitive Advertising Interference on Sales for Packaged Goods
Peter Danaher, Andre Bonfrer, Sanjay Dhar

2006 INFORMS MARKETING SCIENCE CONFERENCE

Friday, June 9, 2006 3.30 – 5 PM (Session FD)

FD01-Allegheny Ballroom

Meeting The Editors

[In alphabetical order] The following editors (journals) are represented:

- *John Deighton (JCR)*
- *Huber Gatignon (IJRM)*
- *Dhruv Grewal/Michael Levy (JR)*
- *Joel Huber (JMR)*
- *Rajiv Lal/Peter Rossi (QME)*
- *Jagmohan S. Raju (Mgmt. Sc.)*
- *Ram C. Rao (RoMS)*
- *Roland Rust (JM)*
- *Venkatesh Shankar (JIM)*
- *Steven Shugan (Mktg. Sc.)*
- *Charles Weinbert/Bart Weitz (Mktg. Ltrs.)*

FD02-Crawford East

Financial Value of Marketing

Chair: Ashish Sood

Impact of Customer Churn on Financial Performance and Market Value of Telecommunication Securities
Debdulal Mallick,Katherine Lemon,Rajendra K. Srivastava

Linking CLV to Shareholder Value
V. Kumar

Value of Brands: Is Value in the Eye of the Beholder?
Suleyman Cem Bahadir, Sundar G Bharadwaj, Rajendra K. Srivastava

Total Market Returns to Innovation
Ashish Sood, Gerard J. Tellis

FD03-Crawford West

Experimental Methodologies

Chair: Min Ding

Too Many Pairs: A Method to Aid Participants in Evaluating
Larry Garber, Eva Hyatt, Unal Boya

The Interpretation of Moderated Regression and Anova
Joachim Vosgerau, Hubert Gatignon

Managerially Efficient Experimental Designs
Olivier Toubia, John Hauser

A Truth-Telling Sleuthing Game for Survey Research
Min Ding, John Hauser, Jehoshua Eliashberg

FD04-Butler West

Brand Management IV

Chair: Hemant Patwardhan

A Tobit Model Analysis on How Websites Deliver Differentiated Experiential Branding Strategies
Yanan Wang, Jordan L. Le Bel, Demetrios Vakratsas, Ashesh Mukherjee, Laurette Dube

A Study on the Factors Affecting the Brand Switching in Korean Mobile Telephony Market
YongSung Lee, Sung Soo Han, Hyun Chung

Multidimensional Customer Based Brand Equity, Marketing Actions, and Brand Profitability
Janell D. Townsend, Sengun Yeniyurt

Brand Romance: An Interpersonal Relationship Approach to Investigate Consumers' Brand Attachment
Hemant Patwardhan, Siva Balasubramanian

FD05-Butler East

Consumer Learning I

Chair: Robert Meyer

Cross Category Learning and Brand Valuation Evolution
Lei K. Wang, Eric Anderson, Karsten Hansen

When Children Teach Parents New Food Habits
Kafia Ayadi

Disentangling Preferences and Learning in Brand Choice Models
Sangwoo Shin, Sanjog Misra, Dan Horsky

Myopia in the Hurricane Belt: Why Consumers and Managers Fail to Learn from Experience
Robert Meyer

FD06-Cambria West

Discrete Choice Experiments

Chair: Jordan Louviere

Designing Optimal Discrete Choice Experiments
Leonie Burgess, Deborah J. Street

Using New Design Construction Methods To Relate Choice Consistency in Discrete Choice Expts. to Design and Task Chcs.
Jordan Louviere, Towhidul Islam, Nada Wasi, Deborah J. Street, Leonie Burgess

Analysis and Comparison of Completion and Non-Completion Rates in Online Discrete Choice Experiments
Jordan Louviere, Leonie Burgess, Deborah J. Street

Estimating Discrete Choice Models for Single Individuals by Integrating Optimally Efficient Designs with Best-Worst Choices
Jordan Louviere, Nada Wasi, Leonie Burgess,Deborah J. Street,A. A. J. Marley

FD07-Cambria East

New Product Development IV

Chair: Praveen Kopalle

Does Better Quality Really Pay? Stock Market Response to Quality Dimensions
Joseph Johnson, Gerard Tellis

Analyzing the Impact of Consumers' Interaction with New Product Purchase Using Agent-based Approach
Hideaki Kitanaka, Naoki Shiba

Creating New Product Ideas with Idea Markets
Arina Soukhoroukova, Bernd Skiera, Martin Spann

Comparing the Expectation and Satisfaction Processes for New Products in US, China and India
Praveen Kopalle, John Farley, Donald Lehmann

FD08-Westmoreland West

Diffusion II: Network Externalities

Chair: Qi Wang

Impact of Heterogeneity and Heterophily in Consumer Networks on Intention Dynamics via Word-of-Mouth
Kerimcan Ozcan, Venkat Ramaswamy

A Signaling Explanation for the Performance of Viral Marketing Campaigns
Guiyou Qiu, Purushottam Papatla

Adoption of Innovation in Network Markets: A New Model of Competitive
Chander Velu, Sergei Savin

Intra-Standard Price Competition in Markets with Network Effects
Qi Wang, Jinhong Xie

Friday, June 9, 2006 3.30 – 5 PM (Session FD)

FD09-Westmoreland Central

eCommerce VI: Shopping Behavior

Chair: Nai-Hwa Lien

Web-to-Store Shopper: The Dynamics and Feedback Loops between Online Information and Offline Buying
Marije Teerling, Peter Leeflang, Eelko Huizingh, Koen Pauwels

Differences Between Online and Offline Shopping Behavior
Marta Arce, Javier Cebollada

Predicting User Involvement in Internet Social Networks
Michael Trusov, Anand Bodapati, Randy Bucklin

The Influence of Webmosphere on Shopping Values and Impulsive Buying Intention
Nai-Hwa Lien, Shih-Yin Fan

FD10-Westmoreland East

Channels VI: Multi-Channels

Chair: Xubing Zhang

Identifying Cross-Channel Dissynergies for Multi-Channel Service Providers
Maik Hammerschmidt, Jeroen Schepers, Tomas Falk

Adoption of Multi Channel Banking by Customers in Indian Banks: An Empirical Analysis
Vimi Jham, Poonam Garg

Shelf-Space Dependent Incentive for National and Private Brands' Competition
Nawel Amrouche, Georges Zaccour

A Model of Multichannel Retailing: The Information Provision Function of the Online Channel
Xubing Zhang

FD11-Washington

Promotions IV

Chair: Jie Zhang

Improving Trade Promotions Through Virtual Forward Buying
Amit Poddar, Naveen Donthu

Demand, Cost or Past Price: When do they Drive Retailer-pricing Decisions?
Koen Pauwels, Shuba Srinivasan, Vincent Nijs

Merchandizing as a Moderator of the Effect of Price and Promotion Sensitivity on Product Sales
Astrid Keel,Douglas Bowman

Optimal Feature Advertising Design under Competitive Clutter
Jie Zhang, Rik Pieters, Michel Wedel

FD12-Fayette

CRM II

Chair: Baohong Sun

Returns on Investments in Customer Relationship Management -A Case of Indian Manufacturing Companies
Sridhar Ramaswami, Harmeen Soch

The Impact of Multiple Channels On Customer Acquisition, Tenure, and Profitability
Kersi Antia, Ranjan Banerjee, Shantanu Dutta

The Integration of Supermarkets Marketing and Sports Marketing in Taiwan
Hsiang-Ting Su, Tzong-Ru Lee

Improving Effectiveness of Customer Service in a Cost-Efficient Way
Baohong Sun, Shibo Li

FD13-Somerset West

Issues in Remote Retailing

Chair: Eric Anderson

A Structural Model of Customer Return Behavior
Eric Anderson, Karsten Hansen, Duncan Simester*

Fairness and Inter-Temporal Pricing
*Eric Anderson, Duncan Simester**

State Use Taxes and Consumer Behavior: A Field Experiment using Catalog Purchase Choices
*Eric Anderson, Duncan Simester, Catherine Tucker**

The Causal Effect of Opening a New Channel
Eric Anderson, Karsten Hansen, Duncan Simester*

*Presenting author

FD14-Somerset East

Mktg. Strategy VI

Chair: John Hulland

Market Signals for Sticky Purchases: The Case of Start-Up Firms
Jade Sturdy, Ajay K. Kohli

Interaction Orientation: An Empirical Assessment
Girish Ramani, V. Kumar

Market Orientation and Firm Performance:The Moderating Role of Dynamism and Strategy Type
Rui Wang, Rajdeep Grewal, John Liechty

Marketing Strategy Implementation in Ambidextrous Organizations
Matthew Sarkees, John Hulland

2006 INFORMS MARKETING SCIENCE CONFERENCE

Saturday, June 10, 2006 8.30 – 10 AM (Session SA)

SA01-Allegheny Ballroom

No Presentations

SA02-Crawford East

Financial Services

Chair: Thomas Gruca

Does Channel Usage Have an Effect on Customer Behavior and Customer Profitability?
Sonja Gensler, Martin Boehm, Peter Leeflang, Bernd Skiera

A State-Space Model of Predicting Consumer Repayment Behavior in the Credit Card Market
Yi Zhao, Inseong Song, Ying Zhao

The Effect of Modes of Acquisition and Retention Strategies on Customer Profitability
B.P.S. Murthi, Ram Rao, Erin Steffes

A Retrospective Analysis of Customer Acquisition under Adverse Selection
Thomas Gruca, Yong Cao

SA03-Crawford West

Bayesian Methodologies

Chair: John Liechty

Relaxing Measurement Invariance In Cross-National Consumer Research Using A Hierarchical IRT Model
Martijn de Jong, Jan Benedict Steenkamp, Jean-Paul Fox

A Bayesian Multi-Level Factor Analytic Model of Price Sensitivities
Sri Duvvuri, Thomas Gruca

Estimating A Random Coefficient Logit Model Using Aggregate Data – Bayesian Approach
Renna Jiang, Puneet Manchanda, Peter Rossi

Modeling Consumer Heterogeneity using Super-Clusters
John Liechty, Peter Ebbes

SA04-Butler West

Personal Selling I

Chair: Srinath Gopalakrishna

A Configuration-Theory Assessment of How Incongruity in Sales Force Control Systems Drives Salespeople
Vincent Onyemah

The Mediator-Moderator Model of Salesperson Performance
Steven Michael Burgess, Sabine Koen, Esther Venter

Investigating Performance Gains In Sales Teams
Jason Garrett, Srinath Gopalakrishna

SA05-Butler East

BDT III

Chair: Joydeep Srivastava

The Impact of Marketing on the Choice of Insurance Deductibles
Michael Braun, Stephen Shore

Learning with Successes and Failures: An Empirical Study of Learning Evolvement at Auctions
Ye Hu, Xin Wang

Two-stage Prize Promotions and the Value of Unresolved Uncertainty
Ernan Haruvy

Transaction Bundling: Effect of Price Presentation on Consumer Perceptions
Joydeep Srivastava, Dipankar Chakravarti

SA06-Cambria West

Marketing Models

Chair: Glenn Mayhew

Strategies for Building New Brands
Berk Ataman, Harald van Heerde, Carl Mela

Managing Customer Evolution and Marketing Mix Allocation for Long-Term Profitability
Ricardo Montoya, Kamel Jedidi, Oded Netzer

Uphill or Downhill? Locating Your Firm on a Profit Function
Murali Mantrala, Hari Sridhar, Esther Thorson, Prasad Naik

Multi-Spell Hazard Modeling for CLV
Glenn Mayhew, Kerimcan Ozcan

SA07-Cambria East

New Product Development V

Chair: Federico Rossi

Born to Win: Network Structure at Founding and Open Source Project Survival
Girish Mallapragada, Rajdeep Grewal, Gary Lilien

A Forecasting Model of 3G Mobile Service Diffusion after Converting Cumulated into Bernoullian Data
Sandro Bencini, Margherita Pagani

Designing Distribution Channels for An Innovative Durable Product with After-sales Service
Xiuli He, Genaro Gutierrez

An Empirical Model of Dynamic Attribute-Space Competition
Federico Rossi

SA08-Westmoreland West

Diffusion III: New Product Decisions

Chair: Shan-Yu Chou

Spatial and Temporal Competition in Event Ticket Sales
Peggy Tseng, Wendy Moe

How Does Distance Matter? Market Knowledge Acquisition and New Product Outcomes
David Dekker, Paul Driessen

Consumer's Adoption of Continuous Technology Innovations: A Modified TAM with Coping Strategies
Geng Cui, Wenjing Bao

The Optimal Complementary Good Strategy for Duopoly Firms
Shan-Yu Chou, Ho-Lin Tsai

2006 INFORMS MARKETING SCIENCE CONFERENCE

Saturday, June 10, 2006 8.30 – 10 AM (Session SA)			
SA09-Westmoreland Central **eCommerce VII: Mktg. Mix Decisions** Chair: Charles Ingene Non-Linear Pricing in E-Commerce. *Jose Canals-Cerda* Rapid Testing of Online Marketing Communications *Xavier Dreze, Andre Bonfrer* Competitive Emailing in Direct Marketing *Olivier Rubel, Guiomar Martin-Herran, Georges Zaccour* Geographically-Customized Promotions for Netizens *Charles Ingene, Rahul Govind*	**SA10-Westmoreland East** **Channels VII** Chair: Anthony Dukes Impact of Discount Store Entry on Small Businesses, Employment, and Wages: An Empirical Investigation *Vishal Singh, Ting Zhu* Understanding Market Dynamics through Channel Migration *Cheryl Bergeon, Arvid Johnson, Avu Sankaralingam* The Strategic Role of Private Labels in Upstream Competition *Om Narasimhan, Xinlei (Jack) Chen, George John, Tirtha Dhar* Strategic Assortment Reduction *Anthony Dukes, Tansev Geylani, Kannan Srinivasan*	**SA11-Washington** **Promotions V** Chair: Marnik Dekimpe Cross-Category Promotions: Which Strategy Is Most Effective and Under What Circumstances *Ty Henderson, Neeraj Arora* Why are Rebates so Hard to Redeem? Analyzing the Effect of 'Hassle Costs' on Firm Profits and Consumers *James Lemieux, Kissan Joseph* Manufacturer vs Retailer: A Study of Promotional Benefits *Sanjib Mohanty, Minakshi Trivedi, Karthik Sridhar* How to Improve Promotional Effectiveness?: An Individual Promotion Analysis *Katrijn Gielens, Marnik Dekimpe, Berend Wierenga, Francesca Sotgiu*	**SA12-Fayette** **CLV II** Chair: Sunil Gupta Customer Equity and an Individual Level RMF Analysis based on a Consumer Behavior Model *Makoto Abe* Customer Profitability: A Practitioner Viewpoint *John Waldes, Denise Beckman* The Value of a 'Free' Customer *Sunil Gupta, Jose Vidal-Sanz, Carl Mela*
SA13-Somerset West **Pricing VI: Dynamic Pricing** Chair: Martin Spann Minutes at Risk: Dynamic Pricing of Services *Anja Lambrecht, Katja Seim, Bernd Skiera* Dynamic Pricing of Seasonal Goods: An Empirical Approach *Gonca (Cengiz) Soysal, Lakshman Krishnamurthi* Pricing Digital Services *Fernando Nascimento* Skimming or Penetration? Test of Dynamic Pricing Strategies for New Products *Martin Spann, Marc Fischer, Gerard J. Tellis*	**SA14-Somerset East** **Multichannel Marketing** Chair: Venkatesh Shankar From Clicks to Bricks: The Long-term Revenue Impact of Adding Physical Stores *Scott Neslin, Koen Pauwels* Targeting Customers for Channel Adoption *Rajkumar Venkatesan, V. Kumar, Nalini Ravishanker* Optimal Multichannel Allocation Of Marketing Efforts *Tarun Kushwaha, Venkatesh Shankar* Channel Blurring: An Analysis of the Evolving Retail Market Structure *Ryan Luchs, J. Jeffrey Inman, Venkatesh Shankar*		

2006 INFORMS MARKETING SCIENCE CONFERENCE

Saturday, June 10, 2006 10.30 AM – Noon (Session SB)

SB01-Allegheny Ballroom

Practitioner Perspectives: Vanguard Issues in Marketing Science Practice – Next Five Years

Chair: Roland Rust

Panelists:

Gaurav Bhalla (TNS)

Jan Hofmeyr (University of Stellenbosch)

Nigel Hollis (Millward Brown)

Roger Sant (Research International)

SB02-Crawford East

International Marketing I

Chair: Jaap Wieringa

Getting a Grip on the Saddle: Cycles, Chasms or Cascades?
Deepa Chandrasekaran, Gerard J. Tellis

Strategic Sourcing and Imitative Competition
Jiong Sun, Sunder Kekre, Laurens Debo, Jinhong Xie

A Global Investigation into the Individual and Cultural Drivers of Socially Desirable Responding
JB Steenkamp, Martijn de Jong, Hans Baumgartner

Balancing the Fit and Logistics Costs of Market Segments
Jaap Wieringa, Gerard Sierksma, Marcel Turkensteen

SB03-Crawford West

Marketing Research I

Chair: Dan Putler

The Effect of Shape Complexity on Perceived Package Volume
Larry Garber, Unal Boya, Eva Hyatt

Procrustes Analysis for Categorical Data Applied to a Transactional Data Base on Power Consumption
Garmt Dijksterhuis, Jaap Wieringa, Michel van de Velden

Estimating the Value of a Single Marketing Contact
Peter Bouman, Ed Malthouse

Biases in Sales Potential Estimates Due to Limited Demographic Information
Dan Putler, Kirthi Kalyanam

SB04-Butler West

Empirical I/O

Chair: Carl Mela

Evaluating the Short and Long Term Effect of New Brand Introductions on Stock Market Performance
L.H. Pattikawa

Pricing and Market Concentration in Oligopoly Markets
Ting Zhu, Vishal Singh

Structural Demand Estimation with Varying Product Availability
Hernan Bruno, Naufel Vilcassim

The Role of Spatial Demand on Outlet Location and Pricing
Carl Mela, Jason Duan

SB05-Butler East

Perceived Quality

Chair: Raghuram Iyengar

Done Anything for Me Lately?
Abhijit Guha, Mitchell Lovett, William Boulding, Richard Staelin, Norris Bruce

Practice: The Construction Of Quality Perceptions And Choice Decision
Jianping Liang, Kyle Murray, Kersi Antia

The Effect of Marketing Communication on Informational Spillovers: A Structural Model
Ramkumar Janakiraman, Catarina Sismeiro, Shantanu Dutta

A Model of Consumer Learning for Service Quality and Usage
Raghuram Iyengar, Kamel Jedidi, Rajeev Kohli, Sunil Gupta, Asim Ansari

SB06-Cambria West

Choice Models V: Multi-Category Choice

Chair: Gary Russell

Consumer Decision Rules for Complementary Product and Service in the Presence of Exclusivity
Natasha Zhang Foutz, Anocha Aribarg

A Multi Category Model of Brand Choice, Purchase Incidence and Purchase Quantity Decisions
Nitin Mehta, Hemant Sangwan, Yu Ma

Optimizing Purchase Behavior at the Basket Level
Vijay Ganesh Hariharan, Minakshi Trivedi

A Multivariate Logistic Choice Model to Investigate SKU Competition
Kyuseop Kwak, Sri Duvvuri, Gary Russell

SB07-Cambria East

High Technology I

Chair: S Sriram

Buy a 26 Inch LCD-TV Today or a 32 Inch Next Month? Modeling Purchases of High-tech Durable Products
Erjen van Nierop, Tammo Bijmolt

Investigating the Temporal Nature of Network Effect in High-tech Markets
Eden Yin, Rakesh Niraj, Gerard Tellis

Redefining m-business with Wi-Fi
Vinoth Gunasekaran, Fotios Harmantzis

Studying the Adoption of Technology Products Across Multiple Categories Using Individual Level Data
S Sriram, Manoj Agarwal, Pradeep Chintagunta

SB08-Westmoreland West

Diffusion IV: Competitive/International

Chair: Christophe Van den Bulte

Understanding Coverage, Intensity, and Competition in the Spatial Diffusion of Health Care Services
Inwoo Nam, Thomas Gruca

The Influence of Within-Brand and Cross-Brand Word-of-Mouth on the Growth of Competitive Markets
Renana Peres, Eitan Muller, Barak Libai

Testing for Inter-Country Differences in Diffusion Using Penalized Splines
Aurélie Lemmens, Stefan Stremersch, Christophe Croux

What Drives the Speed of New Product Diffusion at Early versus Late Stages?
Christophe Van den Bulte, Stefan Stremersch

Saturday, June 10, 2006 10.30 AM – Noon (Session SB)

SB09-Westmoreland Central

eCommerce VIII: eMarketing

Chair: Siva Balasubramanian

A Critical Review of Online Affiliate Models
Julie Wolfe, Subir Bandyopadhyay, Ranjan Kini

Analyzing Social Influence in Gift-giving Behavior
Yun K. Oh, Xin Wang

Shelf Sequence and Proximity Effects on Online Grocery Choices
Els Breugelmans, Els Gijsbrechts, Katia Campo

Antecedent and Consequences of Attitudes Against Spam
Siva Balasubramanian, Obaid Al-Shuridah

SB10-Westmoreland East

Channels VIII: Game Theory

Chair: Nara Youn

Impact of Information Agents on Channel Strategies
Abel Jeuland, Nanda Kumar

Choosing the Best Channel Structure in a Multi-Brand Multi-Outlet Market
Weon S. Yoo, Rex Du, Eunkyu Lee, Richard Staelin

Signaling Ingredient Quality
Liyuan Wei, Sridhar Moorthy, Mengze Shi

Competition and Integration of Digital Content Distribution Channels
Jeong-ha Oh, Nara Youn, Yong Tan

SB11-Washington

Services Marketing I

Chair: Ajay Kalra

Understanding the Effects of Service Quality on Acquisition, Usage and Retention for a VOD Service
Sungjoon Nam, Pradeep Chintagunta, Puneet Manchanda

Development of Team Efficacy in Customer Service : A Longitudinal Examination
Ad de Jong, Ko J.C. de Ruyter, Martin Wetzels

How do Refunds and Payment Depreciation Affect Service Cancellations? Some Experimental Results
Martina Steul, Thorsten Posselt

Why do Consumers Purchase Extended Warranties?
Ajay Kalra, Baohong Sun, Tao Chen

SB12-Fayette

Satisfaction II

Chair: Purushottam Papatla

Satisfaction and Behavior Intention: The Antecedents of Relationship Share in the Context of CRM
Ramendra Thakur, Siva Balasubramanian, John Summey

Financial Payoffs of Customer Satisfaction-Productivity Tradeoffs: The Strategic Role of Mergers
Vanitha Swaminathan, Christopher Groening, Vikas Mittal

Applying the Structural Equation Model to Investigate Customer Values Delivered by Airlines Serving Taiwan
Jin-Ru Yen, Ger-Yuan Hsu

An Investigation of the Dynamics of Customer Satisfaction in Multi-stage Services
Nadezhda Toskova, Purushottam Papatla

SB13-Somerset West

Auctions

Chair: Srinivas Reddy

Jump Bidding in Online Auctions: A Double-edged Sword
Yongfu He, Peter T. L Popkowski Leszczyc

A Dynamic Model of Supply and Demand in Online Auctions
Junjun Xie, Terry Elrod, Peter T. L Popkowski Leszczyc

The Impact of Intermediaries in Online Consumer-to-Consumer (C2C) Market: An Empirical Investigation
Wenjing Duan, Andrew Whinston, Bin Gu

Modeling Online Art Auction Dynamics Using Functional Data Analysis
Srinivas Reddy, Mayukh Dass

SB14-Somerset East

Mktg. Strategy VII: Advertising

Chair: Norris Bruce

Autocatalytic Phenomena in IMC
Kalyan Raman, Prasad Naik

Toward a Theory of Integrated Marketing Communication (IMC)
Sreedhar Madhavaram, Vishag Badrinarayanan

Optimal Advertising Strategies under Debt Financing
Lu Hsiao, Shan-Yu Chou, Chyi-Mei Chen

Non-Linear Bayesian Tracking of Forgetting and Wearout Effects for Media Schedules
Norris Bruce

SB15-Armstrong

Strategic Marketing II

Chair: Tobias Mann

Indirect Network Effects in New Product Growth and Takeoff
Stefan Stremersch, Gerard J. Tellis, Philip Hans Franses and Jeroen L.G. Binken

Optimal Multi-Tiered Pricing of Products and Services: A Structural Conjoint Approach
Raghuram Iyengar, Kamel Jedidi, Rajeev Kohli

Consumers' Extraction of Hidden Information on Product Recommendations
Fabio Caldieraro, Marcus Cunha Jr.

Strategic Marketing: Humor as a Source for Competitive Advantage
Tobias Mann, Oliver Heil

2006 INFORMS MARKETING SCIENCE CONFERENCE

Saturday, June 10, 2006 1.30 – 3 PM (Session SC)

SC01-Allegheny Ballroom

No Presentations

SC02-Crawford East

International Marketing II

Chair: Eleonora Cattaneo

Simultaneous Consumer and Country Segmentation on Direct Marketing Affinities
Kay Peters, Heiko Frenzen

Cultural Distance, Entry Timing, and Brand Personality
Wenyu Dou, Zhilin Yang

UK Retailers' Perceptions of Manufacturers from LDC's With Negative Image: Case Study Pakistan
Huma Amir, TC Melewar

The Value of Made in, Brand-identity and Marketing Communication in Italian Enterprise Clusters
Eleonora Cattaneo, Carolina Guerini

SC03-Crawford West

Marketing Research - II

Chair: Raymond Burke

Cooperative Game Theory Uses in Marketing Research
Ken Powaga, Shon Magnan, Stan Lipovetsky

An Empirical Test of Six Stated Importance Measures
Keith Chrzan, Natalia Golovashkina

Coupling PLS and R Square Decomposition Methods for Derived Importance
Kevin Lattery

Automated Customer Tracking and Behavior Recognition
Raymond Burke, Alex Leykin, Huifang Mao

SC04-Butler West

Brand Management V: Brand Equity

Chair: Sudhir Voleti

Measuring and Managing Brand Image
Andreas Waldeck,Oliver Heil

Measuring a Star Player's Brand Equity
Yupin Yang, Mengze Shi

Changes of Brand Equity in Brand Extensions
Xin Liuersity

Brand Equity as a Revenue Multiplier
Sudhir Voleti, Sanjog Misra, Paul Nelson

SC05-Butler East

Consumer Learning II

Chair: Ron Goettler

Investigating the Impact of forgetting on the Informative Effects of Advertising
Kannan Srinivasan, Nitin Mehta

An Empirical Study of Cell Phone Service Usage
Ying Zhao, Yue Zhao, Sha Yang, Tulin Erdem

Brand Loyalty, Search Costs, and User Skills
Mike Moffatt, Kyle Murray

Price Discrimination with Experience Goods: a Structural Econometric Analysis
Ron Goettler, Karen Clay

SC06-Cambria West

Decision Research II

Chair: Albert N. Greco

Behavioral Aspects of Trade-ins
Jungkeun Kim, Kyeongheui Kim, Akshay Rao

Consumers' Mental Representation of Complex Decisions
Benedict Dellaert, Theo Arentze

Demand-Related Information, Managerial Over-Acting, and Marketing Productivity
Vera Magin, Oliver Heil, Reinhard Selten

The Scholarly Book Buyer's Decision Process: A National Survey of University Faculty
Albert N. Greco, Robert M. Wharton, Hooman Estelami

SC07-Cambria East

High Technology II

Chair: Mrinal Ghosh

The Impact of SFA Systems on Sales Force Activities and CRM Processes
Moutot Jean-Michel

Is Internet Use Associated With Different Choice Patterns for Automobiles?
Gauri Kulkarni, Brian Ratchford

Calibrating Consumer Preferences for Large Sets of New Services – An Application of ASEMAP
Phil Hendrix

An Empirical Investigation of Restricted Technology License Rights In Marketing Agreements
Chae Un Lim, Stephen Carson, Mrinal Ghosh, George John

SC08-Westmoreland West

Pharmaceutical Marketing I: Empirical I/O

Chair: Harikesh Nair

The Role of Free Samples in the Pharmaceutical Industry: An Empirical Analysis
Sridhar Narayanan, Puneet Manchanda

The Dynamics of Drug Detailing
Qiang Liu,Sachin Gupta, Sriram Venkataraman

First-Mover Advantage In Generic Drug Entry
Yu Yu, Sachin Gupta, Rahul Guha

Asymmetric Peer Effects in Physician Prescription Behavior: The Role of Opinion Leaders
Harikesh Nair, Puneet Manchanda, Tulikaa Bhatia

Saturday, June 10, 2006 1.30 – 3 PM (Session SC)

SC09-Westmoreland Central

eCommerce IX: Channels

Chair: Anita Elberse

Third Party Distributor in the Hotel Industry: An Analytical Study of their Contract Design
Jun Yang

How Does Location Shape Consumer Use of Online Channels?
Avi Goldfarb, Chris Forman, Anindya Ghose

Electronic Markets, Physical Markets, and Hybrid Markets: An Empirical Comparison in a B2B Context
Eric Overby, Sandy Jap

Entertainment Products in Online and Offline Channels: An Examination of the "Long Tail"
Anita Elberse, Felix Oberholzer

SC10-Westmoreland East

Channels IX: Relationships

Chair: Tarun Dewan

Performance Implications of Relationship Sub-networks in Channel Agency Relationships
Tianjiao Qiu

What Leads to Long-term Relationships? – An Event Study of Inter-firm Asymmetries and Benevolence
Qiong Wang, Debanjan Mitra

Collaboration Behavior and Interorganizational Governance: An Integrative Approach
Jongkuk Lee, William Qualls

Cooperative Advertising within Distribution Channels
Tarun Dewan, Xubing Zhang

SC11-Washington

Services Marketing II

Chair: Scott Dacko

A Model of Active Learning for University Students
Avinandan Mukherjee, Neeru Malhotra

Intellectual Structure of Marketing Discipline for 1983-2003: A Author Co Citation Analysis
Vivek Natarajan, Xueming Luo, Sridhar Nerur

MSc in Marketing vs. MBA: What Marketing Skill Development Priorities?
Scott Dacko

SC12-Fayette

CRM III

Chair: Mike Lewis

Estimating Complaint Management Efficiency
Sagit Harel, Sanjog Misra

Understanding Customer Commitment and its Impact on Customer Value
Gina Pingitore, Jay Meyers, Adriana Gigliotti

Brand Building and Customer Relationship Management: An Analysis of Alumni Giving Patterns
Younghan Bae, Mike Lewis

SC13-Somerset West

Pricing VII

Chair: Bernd Skiera

Signaling and Sacrifice Effects of Price
Franziska Voelckner, Henrik Sattler

Price Skimming Paradoxes
Gary Gebhardt

Measuring Willingness-to-Pay with Choice-Based Conjoint Analysis
Sven Theysohn, Sonja Gensler, Bernd Skiera

Enhancing Conjoint-analysis to Estimate Willingness-to-pay Function
Agnieszka Prokopowicz, Bernd Skiera

SC14-Somerset East

Mktg. Strategy VIII: Firm Performance

Chair: Denish Shah

Return on Marketing Investment: Integrating Tactical and Strategic Actions
Ashish Sinha, Rajendra K. Srivastava, Mukesh Bhargava

Myopic Marketing Management:The Phenomenon and Its Long-Term Performance Consequences
Natalie Mizik, Robert Jacobson

An Empirical Study on Marketing for Stock Investors: Segmentation and Advertising Effect
HwaYeon Lee, PilHwa Yoo

Linking Marketing-Mix Variables to Firm's Performance
Denish Shah, S Sriram, V. Kumar

2006 INFORMS MARKETING SCIENCE CONFERENCE

Saturday, June 10, 2006 3.30 – 5 PM (Session SD)

SD01-Allegheny Ballroom

No Presentations

SD02-Crawford East

International Marketing III

Chair: Meng Zhu

The Influence of Internet on Export Marketing Performance: A Knowledge-based Perspective
Ingrid Beckers, Ko J.C. de Ruyter, Martin G.M. Wetzels, Pieter Pauwels, Luis F. Lages

Exploring Environmental Consciousness Among Egyptian Consumers
Khaled Gad

Strategic Brand Management of International Fashion Retailers
Hasan Gilani, TC Melewar

A Latent Interaction Approach: Assess the Effectiveness of Influence Strategies in Export Channel
Meng Zhu, Cristian Chelariu, Daniel Bello

SD03-Crawford West

Marketing Research III

Chair: Arnaud De Bruyn

Validating the Relative Importance of Consumer Contacts in Any Category using the Bootstrap Method
Marek Winiarz, Gordon Wade

Assessing Pharmaceutical Marketing Effectiveness Using State Space Models
Ernst Osinga, Peter Leeflang, Jaap Wieringa

Advertising over the Business Cycle: A Cross-country Investigation
Barbara Deleersnyder, Marnik Dekimpe, Jan Benedict Steenkamp, Peter Leeflang

Short Term Impact, Long Term Doom: Optimizing Direct Marketing Fundraising
Arnaud De Bruyn

SD04-Butler West

Personal Selling II

Chair: Amiya Basu

Risk, Incentives and Selection in Salesforce Compensation Contracts
Ho-Fu Desmond Lo, Mrinal Ghosh, Francine Lafontaine

Understanding The Role of Salesperson in Customer Profitability in Business-to-Business Markets
Tae-kyun Kim, Shantanu Dutta, Kenneth Wilbur, Ji Sook Hong

Salesforce Control Systems and Salesperson Knowledge Development
Chiu-chi Angela Chang

Multi-tasking, Effort Interaction and Compensation
Deepika Jha, Amiya Basu

SD05-Butler East

Attribute Effects

Chair: Sanjay Puligadda

Attribute-Value Functions and the Importance of Attributes
Koert Van Ittersum, Joost M.E. Pennings

A Study on Relative Importance of Product Attributes in New Telecommunication Service
Hyun Chung, Sung Soo Han, YongSung Lee

Driving Inferences for Umbrella Brands Using Claims Involving Narrow versus Diverse Product Samples
Arjun Chakravarti, Reid Hastie

Universally and Variably Evaluated Attributes: A Study of Consumer Evaluation of Mass Customization
Sanjay Puligadda, Frank Kardes, Rajdeep Grewal, Arvind Rangaswamy

SD06-Cambria West

Choice VI: State Dependence

Chair: Sharon Hodge

Explaining Cognitive Lock-In: The Role of Skill-Based Habits of Use in Consumer Choice
Kyle Murray, Gerald Häubl

An Experimental Test of Line Extensions Up and Down in Quality: Effects on Initial Choice and Subsequent Switching
Timothy B. Heath, Michael S. McCarthy, Devon DelVecchio

Modeling Latent Effects in Scanner Panel Data
Rick Andrews

Mental Accounting and Subsequent Purchases: The Impact of Savings and Losses on Consumer Spending Decisions
Sharon Hodge, Charlotte Mason

SD07-Cambria East

High Technology III

Chair: Paul Wang

Integrating Advertising and Trial: The Moderating Role of Expertise
Wan-jiun Paul Chiou, Chiu-chi Angela Chang

The Competence of Customer Co-Designers : Empirical Findings of a Cross-Industrial Study
Melanie Mueller, Ralf Reichwald, Frank Piller

An Attitude-based Theoretical Model to Explore the Consumer Adoption of 3G Mobile TV Services
Margherita Pagani

Consumer Characteristics and Their Influence on New Product Decision States
Paul Wang, Harmen Oppewal, Mark Morrison, David Waller

SD08-Westmoreland West

Pharmaceutical Mktg. II: Marketing Mix Decisions

Chair: Marta Wosinska

Understanding the Role of Sampling in Physician Prescription Behavior
Ying Xie, Xiaojing Dong, Michael Li

An Analysis of Detailing Intensity and Presentation order in the Pharmaceutical Industry
Franklin Carter, James Dearden

Pharmaceutical Marketing and the PBM(Pharmacy Benefit Manager)
Ozden Gur Ali, Murali Mantrala

Direct-to-Consumer Advertising, Media Publicity and Demand for Prescription Drugs
Marta Wosinska, David Bradford

2006 INFORMS MARKETING SCIENCE CONFERENCE

Saturday, June 10, 2006 3.30 – 5 PM (Session SD)

SD09-Westmoreland Central	SD10-Westmoreland East	SD11-Washington	SD12-Fayette
eCommerce X: Choice Processes Chair: Tammo Bijmolt When Decisions need to be Made for Future -An Empirical Investigation of Consumer Choice of Services *Yacheng Sun, Baohong Sun, Shibo Li* Which Car to Consider? The Impact of Online Search on Consumer Choice *Hongyu Zhao* Predictors of E-Satisfaction in Tourism Industry *Masoomeh Moharrer, Hooman Tahayori* On the Hierarchy of Website Goals *Adriana Krawczyk, Tammo Bijmolt, Eelko Huizingh*	**Channels X** Chair: Els Gijsbrechts Consumer Perceptions and Performance of Store Brands *Romana Khan, Vishal Singh, Karsten Hansen* Big Retailers' Globalization and eCommerce Strategies: Is There a Link? *Ralitza Nikolaeva* Predicting Large-surface Store choice: A Trade-off Between Complexity and Computational Feasibility *Sébastien Markley* Private Label Diversity: How Introducing Economy And Premium Private Labels Influences Brand Choice *Els Gijsbrechts, Inge Geyskens, Katrijn Gielens*	**Services Marketing III** Chair: William T. Ross, Jr. Measuring the Dynamic Asymmetric Effects of Usage within a Multiple Service Lifetime Value Model *Howard Dover, Ram Rao, B.P.S. Murthi* Propensity of Passengers to Switch Airlines *Makarand Gulawani, Jean-Louis Nicolas, Uday Salunkhe* Employees' Readiness for Change and Commitment to Change: The Missing Links to CRM Success *Philip Shum* Value Co-creation: How managing customers' expectations makes them work harder and get more value *Ujwal Kayande, William T. Ross, Jr., Hans Baumgartner*	**Customer Loyalty II** Chair: Vishal Singh Higher Repeat Purchasing by Older Consumers: Impact of Aging or Cohort Effect? *Ganael Bascoul, Raphaëlle Lambert-Pandraud, Gilles Laurent* Asymmetric Offering of Frequency Reward Programs *Qiang (Steven) Lu, Mengze Shi* A Consumer of Many Perspectives *Lygia Rocha* The Myths and Realities of 18-49: Consumer Age, Brand Loyalties, and New Product Trial *Pavitra Jindahra, Vishal Singh*
SD13-Somerset West **Pricing VIII: Psychology** Chair: Vinay Kanetkar An Empirical Analysis of Price Variability Perception Models *Sangkil Moon, Glenn Voss* Effect of Missing Attributes on Price Sensitivity: Brand Choice and No-Choice Option Analysis *Vinay Kanetkar, Jordan Louviere, Towhidul Islam*	**SD14-Somerset East** **Mktg. Strategy IX** Chair: Dung Nguyen Disentangling Pioneering Cost Advantages and Disadvantages *Markus Christen, William Boulding* Relational Exchange and Relationship Performance: the Role of Innovativeness *Erik Mooi* Trick or Treat? An Empirical Analysis of Transaction Profits at Currency Exchange Stores *Dubravko Radic, Eitan Gerstner, Thorsten Posselt* Extending the Lanchester Model to Incorporate Price *Dung Nguyen, Gila Fruchter*		

How to Navigate the Contributed Sessions

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

- This contributed 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 107-115).
- The map and floor plans included in the Front Matter show you where technical session tracks are located.
- 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 107-113) — the session code for your presentation(s) will be shown along with the room location (abbreviated). 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:

Session C	1:30pm -3:30pm
Session D	3:30pm- 5:00pm

Friday:

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

Saturday:

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

Note: Practice Prize Sessions are held at special times. See the listing for these sessions: TC01, TD01, FA01, and FB01

Thursday, 1:30 - 3:00pm (Session C)

■ TC01

Allegheny Ballroom I

Practice Prize Rehearsals (Special time 2-4pm)

Chair: John Roberts, Scientia Professor, Aust Grad Sch Mgt, Randwick, Univeristy of New South Wales, NS, 2052, Australia, johnr@agsm.edu.au

1 - The Power of CLV

V. Kumar, ING Chair Professor in Marketing, University of Connecticut, 2100 Hillside Road, Unit 1041, Storrs, CT, 06269, United States, vk@business.uconn.edu, Rajkumar Venkatesan, Tim Bohling, Denise Beckman

It is no secret that firms treat customers differentially. While one customer spends ten minutes on the phone navigating through automated menu options, only to find out that there are no seats available on that evening flight to Chicago, a "Gold" customer whose phone call gets picked up on the second ring by a friendly service representative is offered a window seat on that same flight. How do firms decide, the customers to whom they should provide preferential treatment that clearly costs more money and resources, to which customer they should interact through inexpensive channels like the Internet or the touch tone phone, and which customer to let go? How do firms decide the timing of an offering to a customer? What kind of sales and service resources should the firm allocate to conduct future business with that customer? Firms do develop a measure of what they consider to be the best indicator of the total profits that a customer is likely to provide the firm and use that indicator to base their marketing decisions. But one firm has been more successful than others in managing their customers profitably and that is due in part to a measure called Customer Lifetime Value (CLV). We present the case study here and also look at the organizational and implementation challenges that surround the adoption of customer value management by this B2B firm. The successful implementation of a CLV-based approach in this B2B firm has resulted in increased productivity from marketing investments.

2 - PIN Incentive Planning System: A Disaggregate Modeling Approach Applied to New Car Purchases

Jorge Silva-Risso, Assistant Professor, University of California, Riverside, 900 University Avenue, 201 Anderson Hall, Riverside, CA, 92521-0203, United States, jorge.silva-risso@ucr.edu, Irina Ionova

Automobile manufacturers spend more than $45 billions per year in incentive programs, which are, typically, structured through a menu of options (cash rebates, reduced APR, etc.). Even though these programs could be transformed into financially equivalent "price discounts," evidence indicates that programs with a similar "price discount" may result in significantly different levels of incremental sales. Furthermore, the structure of the program may affect the way consumers arrange the acquisition. For example, a deep reduction of interest rates for purchases could result not only in substantial incremental volume, but also in a shift from leases to financed purchases. We address these issues by modeling the consumer car acquisition as a set of multiple simultaneous choice decisions: car (e.g., Camry), transaction type (purchase or lease), program type (e.g., cash rebate, low APR, rebate-APR combination, etc.) and financing terms. The model is calibrated on sales transaction data from the Power Information Network division of J.D. Power and Associates. Unobserved heterogeneity is handled by random coefficients or hierarchical Bayes (according to the objective of the implementation). We discuss the implementation of a decision support system that was built on the basis of these econometric models. The system has scenario planning and optimization capabilities and is actively used by several automobile manufacturers. Moreover, the system allows users to map an efficiency frontier that identifies the program structure that maximizes incremental volume for each expenditure level. Substantial savings and efficiency gains (in the order of hundreds of millions) have been documented and validated by independent consulting firms and client technical groups.

■ TC02

Crawford East

Decision Support Systems

Chair: Gerrit Van Bruggen, Professor of Marketing, RSM Erasmus University, P.O. Box 1738, Rotterdam, 3000DR, Netherlands, gbruggen@rsm.nl

1 - A Study of Neuro-Fuzzy Technique in Time Series Forecast Model Selection

Shu-Chen Wu, Department of Marketing, National ChungHsing University, 250 Kuo-Kuang Rd., Taichung City, Taiwan, momou115@yahoo.com.tw, Shihyu Chou, Chin-Shien Lin

Time-series forecasting techniques have been broadly used in various industries. However, selecting an appropriate model for a given time series may not be an easy task. Practitioners fit time series data to different models according to features of time series data on a try-and-error basis, and then select an appropriate model with a competitive performance. This strategy is costly and time-consuming when a large number of candidate models and/or time series are involved. In this study, we propose an intelligent model selecting approach based on the neuro-fuzzy technique. With this approach, a most appropriate model for a time series data can be identified during a reasonable short period. Decision tree techniques, neural networks techniques, discriminant analysis methods, and other meta-learning approaches have been proposed as formal tools for forecast model selection. Nevertheless, they are either constrained by statistical assumptions or lack of the ability to explicitly express the relationship between performance variable and explanatory variables. An expert system is an approach which can formalize knowledge for model selection. However, knowledge acquisition heavily relies on experts who may be expensive and scarce in numbers. In order to tackle the difficulty, the proposed neuro-fuzzy model in this study is trained by actual data to extract model selection knowledge expressed in the if-then rule form. The data of this study are certain magazine weekly sales in 2005 from 305 convenient chain stores in Taiwan. We investigate the problem of selecting the most appropriate forecast model among three popular models in practice.

2 - Good Media Schedules from Bad Media Data

Peter De Maeyer, Singapore Management University, LKC School of Business, 50 Stamford Road, Singapore, Singapore, peter@smu.edu.sg

Two basic inputs in composing an advertising schedule are the reach and cost of the various vehicles under consideration. Both of these are subject to uncertainty at the time of scheduling: Reach estimates because they are subject to sampling error as well as respondent error, and costs because they are usually negotiated post-hoc. Furthermore, media fragmentation has made the issue worse in the case of reach estimates, leading prominent industry commentators to point out that current sample sizes are insufficient. We are interested in studying to what extent error in input data affects the quality of resulting media schedules. On the basis of a number of simulations as well as a theoretical argument, we conclude that input error has little impact on the attainment of the objective under many common media objectives. Or in other words, if error-free data were available, the resulting schedules would only be marginally better than those resulting from less than perfectly accurate data. As such, calls for greater investment in input data quality may be unwarranted.

3 - The Effect of Feedback and Learning on DSS Evaluations

Gerrit Van Bruggen, Professor of Marketing, RSM Erasmus University, P.O. Box 1738, Rotterdam, 3000DR, Netherlands, gbruggen@rsm.nl, Ujwal Kayande, Arnaud De Bruyn, Gary Lilien, Arvind Rangaswamy

Model-based decision support systems (DSSs), designed to help decision-makers make better decisions, often do not help decision makers understand either how or why they work. As a result, there is likely to be a large gap between a manager's mental model and the decision model embedded in the DSS. We suggest that this gap is an important reason for the poor subjective evaluations of DSSs, even when the DSSs have been shown to be of high objective quality, ultimately resulting in unexpectedly poor DSS adoption and usage. In this paper, we hypothesize that to increase its effectiveness, a DSS should not only be of high quality, but must also help reduce any mental model-DSS model gap. We evaluate two design characteristics that together lead users to update their mental models, resulting in better DSS evaluations: providing feedback on upside potential and providing suggestions for corrective actions. We hypothesize that, in tandem, these two types of feedback induce managers to update their mental models, a process we call deep learning, whereas individually, these two types of feedback will only have a small or negligible effect on deep learning. We validate our framework in an experimental setting, using a realistic DSS in a direct marketing context. We conclude with a discussion of both the theoretical and practical implications of our findings.

4 - Predicting What Type of Customer You Will Be Tomorrow: A Stochastic Segmentation Model

Tanya Mark, Richard Ivey School of Business, University of Western Ontario, 1151 Richmond Street N, London, Ontario, N6A 3K7, Canada, tmark@ivey.uwo.ca, Katherine Lemon, Mark Vandenbosch

Using customer profitability as a basis for a dynamic segmentation model is important because it enables firms to allocate resources to customers in the current period based on the future value of customers. This research models the progression of customer-firm relationships over time. First, we estimate the future buying patterns of customers following the beta-geometric/NBD model proposed by Fader, Hardie, and Lee (2005). Next, we segment customers based on profitability using a finite mixture regression model. Finally, we use a first-order Markov process to model customers' migration patterns among the various segments over time. We apply this dynamic segmentation model to the purchasing history of 50,000 households over a several year period. This research offers insight into how well we can predict what type of relationship a customer will become in the future.

■ TC03

Crawford West

Game Theory: Applications

Chair: Shanfei Feng, PhD Candidate, National University of Singapore, c/o PhD Program, Vice Dean Office, 1 Business Link, NUS Business School, Singapore, 117592, g0202267@nus.edu.sg

1 - Platform Battle with Lock-in

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Many services and applications run on platforms like operating systems, web service platforms, and videogame consoles. A widely-accepted marketing strategy is "locking-in consumers and locking-out competitors". Platform providers may lock in adopters by generating substantial cross-platform switching costs (for example, creating incompatibility and reducing interoperability). This paper examines whether such lock-in strategy is profitable to proprietary platform providers. Using a two-period duopoly model in which platform adopters and heterogeneous in their tastes and willingness-to-pay, we give conditions under which the lock-in strategy benefits or hurts platform providers. Specifically, the proprietary platform provider should not lock-in its adopters when he competes with an open-source based platform. But if the platform battle is between two proprietary platforms, platform providers should lock-in adopters if the following two parameters are sufficiently large: (i) the lowest adopter willingness-to-pay and (ii) the relative dispersion of adopter willingness-to-pay; otherwise they should not lock in adopters. We further examine the welfare implications of the lock-in strategy. From adopter's point of view, the lock-in strategy does not hurt all adopters; some adopters can be better off with locked-in compared with an identical market without any switching costs. From social planner's perspective, the lock-in is socially undesirable because it always reduces the social welfare regardless of the competition mode. Lastly, if platforms are characterized with network effects, the network effect does not make platform providers better off in any competition mode; and the network effect reduces the platform provider's desirability to lock-in adopters.

2 - Contracting: Deciding on Length and Rent

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Firms renting out their assets to customers have to decide on two critical aspects: How long the contract term should be and what price to charge. Clearly, these two decisions are interdependent, and depend on many economic aspects including the expected future movement of rents and demand for their assets. This paper examines the joint decision on contract length and rent in a B2B market. The main factors influencing the decision include the demand uncertainty and contracting cost. We solve this simultaneous maximization problem. Using the empirical evidence obtained from the offshore drilling industry, where drilling rigs are rented by the oil companies from the rig owners, we demonstrate the usefulness of our model. The oil companies face the uncertainty of oil demand in world market and this is reflected in their hiring demand of rigs. On the other side, the contractors i.e. rig owners run the risk of not getting any contract in some periods which may cost them huge asset-idling costs. Both the operators and contractors dynamically optimize their profits by negotiating an appropriate rent and length of contract. The insights are also applicable to service industries such as real estate, outsourcing, etc.

■ TC04

Butler West

Tests of Economic Theory

Chair: Aradhna Krishna, University of Michigan, aradhna@umich.edu

1 - Biased But Efficient: An Investigation of Coordination Facilitated by Asymmetric Dominance

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Coordination of decisions is important to reach efficient outcomes in several economic models. Yet coordination failure is a common occurrence. We demonstrate that the well-established psychological phenomenon called the asymmetric dominance effect can facilitate coordination in two experiments. Using the Cognitive Hierarchy model, we clarify that limited steps of thinking alone cannot account for the observed asymmetric dominance effect and that the effect is due to increased psychological attractiveness of the dominating strategy.

2 - Paying a Higher Price to Punish a Firm: Consumer Resistance to Unfair Firms

Yu Wang, yuwz@bus.umich.edu, Aradhna Krishna

Much research in the last decade suggests that firms should offer lower prices to switchers in order to maximize profits. The logic for this result is that consumers incur a switching cost when moving from one firm to another, which hinders a firm's loyal consumers from switching out and keeps them captive. But, the lower price to switchers helps attract consumers from other firms. Recent research points out that this policy may upset consumers who have been loyal to the firm and may result in lower long term profits. However, neither stream of research has actually tested the effect of differential (i.e., targeted) pricing on consumers' choice of firms, i.e., will consumers leave money on the table if they feel a firm is unfair? In this paper, we conduct laboratory experiments and show that when a firm price discriminates between its (potential) consumers, the consumers who are discriminated against tend to choose a competitive firm over the discriminating firm, even when they have to bear a higher total cost by choosing the other firm. This is consistent with observed "negative reciprocity" in simple economic games (i.e., when being treated badly, people punish their offender even at their own cost), but is shown to operate in a marketing scenario. Interestingly, we also find that some of the consumers who can potentially take advantage of an unfairly-set low price actually refuse to do so. Taken together, our results show that contrary to a strong-rationality model, some consumers are willing to seek revenge on an unfair firm at their own cost, and some may try to avoid an unfair firm although this means letting go of potential gains for themselves. We also observe that the tendency to punish or avoid the discriminating firm is magnified when the firm's perceived intention is "bad". Our research extends the extant marketing literature on fairness where the focus is on perceived fairness of price increases, perceived intention of the firm, and deception of consumers.

3 - An Experimental Study of Pricing Behavior in a Duopoly Loyal/Switcher Market: On the Prevalence of Edgeworth and Other Cyclical Behavior

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We examine the applicability of mixed-strategy predictions of the loyal/switcher price promotions model (Narasimhan 1988). In our experiments, pairs of subjects interact in a computer-mediated environment and are compensated in proportion to performance. We manipulate the size of loyal customer segments and the brand preferences of switchers. We find that most players do not randomize from period to period as the model predicts. Instead, most price series follow a vector autoregressive process of order one (and never higher). At the same time, however, the empirical price distribution comes close to model predictions if we ignore the time dimension-particularly under the symmetric treatment condition. Under asymmetric treatments, the empirical price distribution lies somewhat below theoretical predictions. To account for such behavior, we compare several alternative hypotheses at the aggregate and individual levels (the latter allows for behavioral heterogeneity). Under the symmetric treatment condition, the best fitting alternative hypothesis involves Edgeworth cycles, which consist of a "sawtooth" pattern of price cuts followed by a ratcheting back up of prices once they fall below a certain threshold. Under asymmetric treatments, the best fitting hypothesis involves a simpler Markovian price pattern, in which price changes depend on the lagged price differences of the competing brands. For a few players, pricing behavior is most consistent with models of fairness (based either on market share or on profits) or random pricing strategies.

4 - Efficiency Enhanced Course Allocation: An Experimental Study

Aradhna Krishna, University of Michigan, aradhna@umich.edu, M. Utku Ünver

Registrars' offices at most universities face the daunting task of allocating course seats to students. Since demand exceeds supply for many courses, course allocation needs to be done equitably and efficiently. Many schools use bidding systems where student bids are used both to infer preferences over courses and to determine student priorities for courses. However, this dual role of bids can result in course allocations not being market outcomes and unnecessary efficiency loss, which can potentially be avoided with the use of an appropriate market mechanism. We report a field experiment done at the Ross School of Business, University of Michigan, in Spring 2004 comparing its typical course bidding mechanism with the alternate Gale-Shapley Pareto-dominant market mechanism. Our results suggest that using the latter could vastly improve efficiency of course allocation systems while facilitating market outcomes. The paper adds to the sparse literature on field experiments and on mechanism design within the management science community. It also tests theory which has important practical implications since it has the potential to affect the learning experience of very large numbers of students enrolled in educational institutions.

■ TC05

Butler East

BDT I

Chair: Gerald Häubl, School of Business, University of Alberta, Edmonton, AB, Canada, gerald.haeubl@ualberta.ca

1 - Determinants of Justification and Self-Control

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A great deal of research on self-control has examined intertemporal preferences between tempting vices, which provide immediate pleasure, and virtues, which fulfill long-term goals. Based on the idea of over-control ("hyperopia"), the present research investigates the ex-ante justifications that allow people to relax their self-control and select vices. Building on prior analyses in the social sciences, we propose two complementary routes to justifying self-gratification: one through hard work or excellent performance (an entitlement justification) and the second through the attainment of vices without depleting income. A synthesis of these two routes leads to several new predictions, which are tested using actual effort tasks and real choices adopted from prior research on self-control. Supporting the two justification routes, the results indicate that (a) higher required effort enhances preference for vice rewards, but a reverse effect is observed when the interchangeability of effort and income is implied; (b) providing (bogus) excellence feedback on an effort task enhances choices of vice over virtue rewards, unless the interchangeability of effort and income is suggested; and (c) willingness-to-pay in effort is greater for vices than for virtues, but willingness-to-pay in money or in effort framed as income is higher for virtues than for vices. Consistent with the conceptual framework, the aforementioned effects are more pronounced among individuals for whom selecting vice over virtue represents a greater sacrifice of long-term goals and among individuals with stronger (manipulated or measured) self-control guilt. The final section of the paper discusses the ability of the two justification routes to explain the findings of prior research on self-control.

2 - Assessing the Diversification 'Bias' via Discrete Choice Models

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Diversification occurs when people anticipate they will like more variety than they really do. It manifests in many contexts when choices need to be made for the future, and is widely considered a bias. This 'diversification bias' is typically attributed to underlying preference shifts or a desire for variety, and assessed via statistical models which impose constant stochastic variation, such as ANOVA, OLS or logit. We examine stochastically induced variation in choice behavior, and measure its degree directly in a discrete choice framework. We find strong evidence that time delay increases stochastic variation in anticipated future utility, leading to greater preference uncertainty and greater observed choice variety, yet without necessitating changes in underlying preferences. Further, experimental and econometric results show that several alternative explanations -- such as variety-seeking or differential weighting of preferences -- do not add substantively in explaining the phenomenon. Finally, we find that the only provably necessary effects arising from diversification will often require relatively enormous samples to detect via common statistical models, compared with an approach based on discrete choice methods.

3 - Memory Reconstruction and Consumer Choice

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Memory limitations are known to influence consumer decisions on current and future consumption. Such effects of limited memory are attributed to forgetting whereby people take their fallible memories of past events as accurate and use these as a basis for inferences that drive current and future choices and decisions. Indeed memory based models of bounded rationality (e.g., Mullainathan 2002) address these issues formally and derive predictions regarding consumption choices that offer opportunities for empirical testing. At the same time, these papers ignore a fundamental property of memory beyond simple forgetting. Thus, as recent research (e.g., Braun 1999) has shown, memory processes involve significant levels of reconstruction that allow opportunities for systematically distorted retrieval of prior events. Such reconstructed memories, if used as inputs to current and future consumption decisions, may guide choices and decisions away from a veridical basis and toward those implied by the reconstructed (and distorted) memory. We develop a model incorporating memory distortions both as a function of consumer personality (loosely characterized as euphoric, optimistic, pessimistic and depressive - and modeled by corresponding "distortion functions") and as a function of how current events bias memory of past events as a function of the degree of similarity (or association between them). We derive the implications of this model for consumers' current and planned future consumer choices and test these implications in a lab experiment.

4 - Aspects of Endowment: A Query-Theory Account of Value Construction

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How do people judge the monetary value of objects? One clue is provided by the typical endowment study (e.g., Kahneman, Knetsch, and Thaler 1991), where some participants are randomly assigned to either receive an object (such as a coffee mug) or choose between that object and various amounts of cash. Those given the object typically demand at least twice as much to give it up as do those given the choice, a prediction inconsistent with economic theory. This result is usually explained by loss aversion, the observation that losses have a greater impact on judgments than equivalent gains. We provide a memory-based account of this phenomenon, suggesting that people construct their valuations by posing a series of queries whose order differs for sellers and choosers. Because of output interference, these queries may reveal different aspects of the object and the medium of exchange, resulting in different valuations. We report the results of three experiments that were designed to test a set of hypotheses implied by this query-theory account of value construction. The results provide strong support for these predictions. In particular, they show that the content and structure of the aspects considered depends upon whether one is selling or choosing, and that these aspects help predict the effect of ownership on valuations. We also demonstrate that merely altering the order in which queries are posed can eliminate the endowment effect, and that changing query order can produce endowment-like effects without actual ownership.

■ TC06

Cambria West

Choice Models I

Chair: Richard Staelin, Edward and Rose Donnell Professor of Business Administration, Duke University Fuqua School of Business, Box 90120, Durham, NC, 27708, United States, rstaelin@duke.edu

1 - Investigating Dynamics in Purchase Behavior: The Determinants of When, What and How Much to Buy

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The timing of purchases, the choice of brands and the choice of quantities in consumer goods markets have been of central interest to marketing researchers for years. In this respect, the influence of promotional induced dynamics like stockpiling, state dependence or the long-term effect of promotions on these three decisions has been investigated with panel data and weekly sales data and evidence of these effects have been found in both. Further, research about forward-looking consumers has either included variables that are related to consumer choice dynamics or else introduced a structural dynamic utility maximizing framework. In this paper we follow the first stream and incorporate dynamic variables into consumers' utility functions in order to account for dynamic effects on choice behavior. In particular, price sensitivities are a function of past exposure to promotions and therefore we do not have to solve the fully dynamic structural model in order to account for consumers' expectations. We model the decisions when consumers buy, what they buy and how much they buy within a unifying framework. Thus it is ensured, that the combination of these three decisions provides highest utility to the consumer. Our approach is much easier to implement then a fully structural model, it also contains dynamic effects and therefore provides a flexible solution when dynamic effects affect consumers' choice behavior. We also contrast our results to a sequential modeling approach which is, due its simplicity and ease of estimation, still used by some researchers.

2 - Modeling the Dependence in Timing, Incidence and Quantity Decisions in a B-to-B Context

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Managers in business-to-business (B-to-B) markets involving multiple products need to decide on the appropriate allocation of sales force efforts when the accounts differ on the type of products purchased as well as the timing and volume of such purchases. In this regard, developing a joint model of purchase timing and quantity across multiple product categories will help in assessing the probability and timing of an account's purchase in each product category as well as the expected volume of purchase. Such an assessment will help managers with limited sales force resources decide on which accounts to contact as well as when to contact them. Further, if these product categories are related, information on the timing and volume of a customer's purchase in one category can provide extra regarding the timing and volume of purchase in other categories. In this paper, we develop a joint model of purchase timing and quantity across related product categories. In doing so, we account for the dependence between the timing and quantity decisions of firms as well as the relationship between purchases in different categories. Based on this model, we show that managers can make better inferences about which accounts to contact, when, and for what product.

3 - Modeling Latent Consumption Rate to Forecast Purchase Timing: A Hierarchical Bayesian Approach

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The authors present a new model that links an interdependent relationship between purchase quantity and purchase timing behaviors. Most of previous models are developed to only focus on these two variables disjointedly. We adopted the inventory consumption behavior concept to capture dynamic changes in the lengths of the interpurchase time, depending on the most recent purchased quantity. The relationship between inventory consumption and purchase incidence has been discussed by many studies. Most of these studies used scanner panel data to model the purchase incidence and employed a proxy for inventory consumption as an exogenous covariate that is assumed constant (Bucklin and Lattin 1991, Chiang 1991 and Chintagunta 1993) or flexible (Aliwadi and Neslin 1998) over time. However, in post-purchase behavior, the inventory consumption in nature is endogenous. The proposed inventory consumption model (IC model) is constructed by a hierarchical Bayesian approach with data augmentation to obtain individualized parameter estimations. IC model incorporates the data with three kinds of analysis units, including the unit span, the purchase incidence or consumption cycle, and the individual customer. Because the IC model has a premise that greater the quantity recently purchased is followed longer interpurchase time, we expect the IC model to exhibit better predictive validity on a dataset that has a more positive relationship between the two purchase behaviors.

4 - A Framework and Field Test of Target Marketing with Choice Sets Forecasted at the Individual Level

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Consider the following problem: A bank making credit card offers has to determine which individuals to offer credit and how much credit to offer. Both the quality of the applicant's credit and the bank's offer influence the value of that consumer to the firm. Moreover, the consumer's decision on whether to accept the bank's offer depends on whether the consumer has applied for other cards and if so the values of the competitors' offers. Firm decisions on what to offer a potential customer in situations where there might be competitive offers are widespread in practice, including hiring, apartments, loans, insurance, and admissions. In many of these situations, managers resort to basing decisions purely on the quality of the candidate. In this research we ask, "How can managers incorporate the uncertain competitor actions into the offer decisions?" We answer this question by providing a general approach for incorporating historical information to understand uncertainty in consumer choice sets in such multi-staged choices. We use Bayesian methods to estimate a model of competitive behavior and a model of the consumers' choices. These model estimates then serve as inputs to optimizing the offer decisions across available consumers. We subject our approach to a field test, applying the model to scholarship decisions in a highly ranked MBA program. This field test answers the question, "How much, if at all, does the approach improve decision outcomes?" We present a series of head-to-head comparisons of our approach to a merit-based approach that ignores competitive actions. In addition, we perform a series of policy simulations to examine counter-factual decisions. Finally, we present limitations and future extensions to this research.

■ TC07

Cambria East

Product Line Management: Game Theory

Chair: Oded Koenigsberg, Assistant Professor, Columbia University, 3022 Broadway, New York, NY, 10027, United States, ok2018@columbia.edu

1 - Product Line Quality Distortion in Marketing Channel with Possible Partial Cannibalization

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Marketing scholars have demonstrated that the optimal product quality levels in a product line should be different from the efficient quality levels in order to prevent cannibalization (Moorthy 1984). This quality distortion which typically manifests itself in a lower-than-efficient quality level for the product targeted at the low valuation consumer segment, becomes magnified when the products are distributed through an independent retailer (Villas-Boas 1998). Although these findings are intuitively appealing, they are based on the assumption that each segment consists of perfectly homogeneous consumers and that product quality levels are determined by a manufacturer. In this study, we extend the existing models in two ways. First, we model consumer segments as clusters of reasonably but not perfectly homogenous consumers, as typically observed in the real world. This within-segment heterogeneity makes partial cannibalization (i.e. some but not all of the segment consumers purchase the product targeted at the other segment) a distinct possibility. Second, in our model a product sold by a retailer may be a store brand, the quality of which is determined by the retailer. By incorporating these new assumptions into a one-manufacturer-one-retailer game-theoretic model, we explore the following questions: -Is cannibalization something to avoid altogether? If not, under what conditions does a manufacturer or a retailer have an incentive to allow partial cannibalization to happen? -With the possibility of partial cannibalization, should the optimal product line still reflect quality distortion? -How is product line quality distortion (or lack thereof) affected by channel structure (vertically integrated or decentralized) and the decision maker (manufacturer or retailer).

2 - Optimal Product Line Strategy and Consumer Welfare in the Presence of Consumer Cognitive Costs

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Consumers generally prefer a larger variety of products to choose from because that reduces their "misfit" cost (i.e., their chances of getting a product closer to their "ideal" increases)- however, they also incur evaluation costs (cognitive costs) as they compare the available options (Shugan 1980). This detracts from their overall utility from consumption of the product, and hence their willingness to pay for the product. These cognitive costs are conceptually different from the more familiar concept of search costs, and hence are modeled differently as well. This paper, to the best of our knowledge, makes the first attempt to answer the following question: In light of this phenomenon (of consumer cognitive costs), what should a firm's optimal product line strategy be- in terms of number of brands to offer, prices and advertising levels? We present an analytical model of a multi-product monopoly, where consumers face uncertainty about exact product locations. The (length of the) interval of uncertainty of each product is dependent on the amount of advertising for the product. We endogenously determine optimal advertising levels, prices and the number of variants that the monopoly should offer in the presence of consumer cognitive costs. Results from the base model (no uncertainty) intuitively suggest that both the optimal number of variants and firm profits decrease as cognitive costs increase. Although the total market shrinks with increasing cognitive costs, the individual market for each product expands; also, a monopoly "under-produces" in the presence of cognitive costs.

3 - Downward Line Extension as a Means of Entry Deterrence

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The purpose of this research is to discuss whether downward line-stretch plays a strategic role on deterring entry. It has been proposed that one of the reasons why a company initially locates at the upper end of the market might stretch downward is to prevent its competitor located at the lower end of the market from stretching upward (Kolter 2003). Previous literature always uses the viewpoint of preempting to show the effect of line-stretch on deterring entry (e.g. Schmalensee 1978, Brander and Eaton 1984, Wernerfelt 1986, Bonanno 1987), which can not give a good economic explanation for the above phenomenon. In this research, we use the logic of optimal product-line design to give an economic rational for this practical phenomenon. We construct a game-theoretical model in which there are two manufactures and several consumer segments with different private quality preference. Assume initially one of the two firms locates at the upper end of the market and the other locates at the lower end. The latter has incentive to stretch its product line to the upper end and the former wants to prevent it. We show that the high-end firm can introduce its low-end product to deter entry. Because doing this makes the high-end firm's low-price commitment of its high-end product credible (due to the cannibalization consideration), and thus derives the low-end firm out of the high-end market. Besides, we also discuss the quality design of the product line under the consideration of entry deterrence.

4 - High-Low or Low-High: Product Line Introduction Strategies

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Determining the specifications of new products to be introduced into the market is one of the most important and difficult tasks facing managers. This task becomes even more complicated when the firm plans to introduce a product line consisting of a number of different models potentially competing with each other. Many times, the different models are introduced sequentially over a period of time. In these cases, the manager has to decide whether to direct the initial efforts towards the introduction of a high end model packed with many features, or toward a lower end model. These decisions are usually made in the face of significant uncertainty regarding the demand conditions in the market. Making wrong decisions regarding the launch of a new product can lead to slower acceptance and diffusion of the product in the market, lost profit opportunities, and even total failure of the product in the market and subsequent withdrawal. Thus, it is important for managers to understand whether to launch a product line from the high end or the low end, and under what conditions each strategy is warranted. In this paper we develop a model of the introduction of a product line consisting of two vertically differentiated models. We derive the optimal introduction strategies under different market conditions, and provide guidelines to managers how they should launch their product line, and whether they should first introduce the high end model or the lower end model.

■ TC08

Westmoreland West

Word-of-Mouth I: Consumer Learning

Chair: Debanjan Mitra, Assistant Professor, University of Florida, Department of Marketing, 300F BRY, University of Florida, Warrington Colleg, Gainesville, FL, 32611, United States, deb.mitra@cba.ufl.edu

1 - Does Action Speak Louder than Words in Social Interaction? Online Consumer Review and Herd Behavior

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Two types of product information are becoming increasingly accessible and important for consumer purchase decisions: online consumer reviews (posted by existing users) and consumer purchase patterns (revealed through recommendation agents at seller's website). These two information sources correspond to two types of consumer social interactions during their purchase process: word-of-mouth learning from others' words and observational learning from others' purchase actions. Based on the data collected from a well-known internet retailer, this study investigates how these two types of information impact consumer purchase behavior and product sales.

2 - An Empirical Analysis on Relationship Formation in Online Community

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Facilitating relationship formation among members is curial for the survival and growth of community-based websites such as myspace.com and epinion.com. In this paper, we study the relationship formation among online community members using the "web-of-trust" data collected from epinion.com, a community site on product reviews. We propose a structural model of relationship formation at the individual member level. A unique feature of our empirical model is that it explicitly takes into account the impact of anticipated reciprocity on relationship formation among individuals. The effect of members' relationship formation on their contributions to the online community (in terms of the quantity and quality of reviews posted) is also investigated. Our results reveal the key drivers behind the relationship formation and members' contributions to the online community we study. As demonstrated in a series of policy experiments, our findings provide important managerial insights to the design of a community-based website regarding the amount, timing, and recency of relationship information made available to the members of the community by the website. The implications of our findings to marketers interested in disseminating product information through online community are also discussed.

3 - Social Network Experiments of Information Flow and Consumer Decision Making

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In an environment of ubiquitously connected consumer communities and proliferating product choices, proper modeling and analysis of word-of-mouth and social networks has become a strategic imperative for marketing managers and scientists. The overarching goal of this study is to monitor and analyze information flow and decision-making dynamics on selected social network structures. To our knowledge, this is the first research study that develops an experimental paradigm to design and capture actual word-of-mouth interactions over social networks longitudinally. Specifically, we assign human subjects to three different small network structures—circular, star, and complete—and track their multi-attribute information processing and decision making processes via actual word-of-mouth transmissions on internet messaging protocol. At the beginning of the experiment, each subject is first presented with product information that is partially complete and then assessed for his knowledge and intention to purchase. During each of the following episodes, subjects are matched with one word-of-mouth partner to discuss the attribute importance and evaluations and subsequently assessed of their updated product knowledge and intention. In combination with rich actual word-of-mouth communication logs, we statistically and linguistically analyze the dynamic evolution of beliefs, evaluations, and intentions across network structures, social positions, and individual characteristics. For marketing researchers, this study will provide a methodological framework and theoretical insights to advance word-of-mouth research from anecdotal and/or indirect to empirical and direct approaches.

4 - The "Buzz" on Business Schools: A Longitudinal Analysis of Scholarly Research and Perceptions

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Peter Golder

Firms perform many different activities and serve multiple segments while pursuing their performance objectives. Past research has highlighted the role of customer perceptions of quality in driving firm and product performance. Perceptions of customers, in turn, are not only influenced by reality but also by word-of-mouth generated by the past perceptions of different customer and non-customer segments. Previous studies have generally focused on the dynamics of perceptions of customers at the aggregate level and do not explicitly include the role of interactions or word of mouth among different segments. Thus, there is limited research on the dynamics of perceptions, particularly with regard to the interaction between customer and non-customer segments. In this paper, we propose a longitudinal framework of organizational activities and the perceptions of multiple segments served by the organization. We explicitly include the effects of the perceptions of other segments on perceptions of a particular segment. We test this framework with a longitudinal analysis of the effects of scholarly research on recruiters', academics', and students' perceptions of business school performance over 15 years using an auto-regressive distributed lag model. We find that academics' perceptions have a significantly high influence on the perceptions of both students and recruiters. In fact, the effect of academics' perceptions on recruiters' is even higher than that of the recruiters' own prior perceptions. This indicates that sometimes creating a "buzz" within a particular segment is best done by focusing on another segment. We present several other interesting empirical findings on the long-term effects of scholarly research on perceptions of business schools.

■ TC09

Westmoreland Central

eCommerce I: Auctions

Chair: Song Yao, Duke University, The Fuqua School of Business, Durham, NC, 27708, United States, song.yao@duke.edu

1 - Bidder Behavior and Bidder Networks in Online Auctions

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Online auctions provide a fertile area to study bidder and bidding dynamics. Particular interest is the potential to systematically study the bidding strategies used in online auctions. Strategic behavior of bidders revealed by the items that they bid on, the number of times that they bid on an item, and the value of their bids can provide interesting insights. Moreover, bidders whose behavior and strategies may appear to be independent may indeed be interconnected. Such interconnected online bidder networks is the focus of the study here. Using network analysis, we not only study the bidder behavior but their relationships with other bidders and how this bidder network evolves over the duration of the online auction. We investigate the structure of bidder networks formed in the context of online auctions of Modern Indian Art. With over $53 million in auction sales in 2005, and several Indian artists ranked in the top 100 artists (based on annual auction sales) in the world, Modern Indian Art is now considered to be one of the leading emerging art markets. More importantly a leading online auction house now sells more Modern Indian Art than the leading auction houses like Sotheby's and Christie's and is a fertile ground to study online bidding behavior. We will demonstrate how insights from these networks can draw light on the intensity of competition and the price formation process during an auction.

2 - Multi-Attribute Diminishing Sensitivity in Online Ticket Auctions

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Multi-attribute diminishing sensitivity (MADS) predicts that when a given feature is added to a relatively superior product, it will result in a smaller increase in the overall value of that product than if the same feature were added to a relatively inferior product. In their 1996 paper, "The effect of new product features on brand choice." Nowlis and Simonson demonstrate this effect in several product categories. MADS should exist where there is economic substitutability between attributes under consideration. In the case of event tickets, consumers determine the value of a given ticket based on two general attributes, seat quality and event attractiveness. I propose that substitutability does exist between these attributes, and therefore MADS should be observed in consumer's willingness to pay as these attributes vary. If MADS does exist, then selling prices should be strictly increasing in both attributes, but decreasing in their interaction. To test this, I examined the outcomes of 3,983 online auctions of Major League Baseball tickets. All tickets were for games at Fenway Park in Boston, MA. With the home team Boston Red Sox held constant and in consistently high demand, event attractiveness is a function of the opposing team's expected performance, and seat quality is a function of seating section in the park. As expected, I find that selling price does increase in both attribute variables and decrease in their interaction, supporting the existence of MADS. This result is robust to the inclusion of several control variables, including auction attributes such as starting price and lead time between the auction and the event.

3 - Bayesian Estimation of Bid Sequences in Internet Auctions Using a Generalized Record Breaking Model

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The motivation for this research is derived from a currently active research topic in both marketing and economics, Internet auctions. A sequence of bids in this market mechanism can be viewed as record breaking events with participants (bidders) having dynamically changing valuations for the auctioned item, but the latent number of bidders "competing" in those events is unseen. Our approach to addressing this problem is through data augmentation in which we stochastically draw the number of latent bidders, and then model the observed bid amounts and bid submission times conditional on the non-seen events. In addition, as our research is among the first attempts to take a descriptive and exploratory modeling approach to auction data by allowing for dynamically changing (bid-by-bid) bidder valuations, we provide a model that is suggestive for those doing theoretical and/or theoretically grounded empirical work in this area.

4 - The Demand for Online Auctions

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Commensurate with the ascendancy of the Internet, e-commerce has witnessed explosive growth. According a US Census Bureau report, e-commerce retail sales increased 24% while retail sales across all channels grew at a more restrained 8%. Central to this increase is the growth of online auctions. For example, in 2005 eBay listed 1.9BB items yielding a gross merchandise volume of $44.3 BB, a 30% increase over 2004. In spite of the size and growth of online auctions, research regarding the effect of auction pricing on gross merchandise volume remains rare. Accordingly, we develop a structural model of buyer and seller behavior in the context of Internet auctions. This facilitates an analysis of the effect of a change in auction fees on equilibrium buyer and seller demand as well as profits for the auction house. Our model supplements previous structural auction models in a number of regards: First, buyer and seller behaviors are integrated. In practice, both parties are strategically interactive and the market equilibrium is determined in part by their interactions. Second, we allow for heterogeneous seller costs. This suggests that auction fee increases can decrease the number of listings by making some of them unprofitable. Multiple listings also imply buyers have a variable number of auctions from which to choose, and this is a third novel characteristic of our model. These advances are central to obtaining insights regarding the effect of the various pricing schedules on the auctioneer's revenue.

■ TC10

Westmoreland East

Channels I: Retailing

Chair: David R. Bell, Associate Professor of Marketing, University of Pennsylvania, 3730 Walnut Street, Philadelphia, PA, 19104, United States, davidb@wharton.upenn.edu

1 - A Model of Assortment, Service and Price Competition for Durable Product Retailers

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Retailers of durable products such as consumer electronics attempt to differentiate using multiple instruments (e.g. location, assortment, service, price, etc). But, differentiation involves real costs. Why do stores tend to differentiate on multiple dimensions? How does the choice on one, say assortment, affect the complementary strategy of service provision and/or pricing? Answers to these questions are interesting to understand and important to characterize the behavior of firms in competition. On the demand side, consumers can gather information on prices and attributes more easily but in general have uncertainty about product valuation and what is best for them. It is this uncertainty that retail service provision attempts to resolve. This paper explores a retailer's multi-dimensional strategic decisions in a competitive environment focusing on the three choice variables, viz., depth (quality distribution) of assortment, provision of in-store service and levels of prices charged. Preliminary analysis indicates that when consumers can costlessly free ride on service the store carrying low quality assortment provides service. When free-riding becomes an endogenous decision for each consumer based on the heterogeneous travel cost, the store carrying complete assortment will provide service in order to capture the demand from consumers who decide not to engage in service free-riding. Our study thus helps retailers of durable products in understanding and utilizing factors guiding their multi-dimensional strategic decisions in the dramatic changing competitive environment.

2 - Attribute-Based Assortment Optimization

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Assortment has always been one of the key instruments for retailers to differentiate themselves from competitors. Although extant research has dealt with various issues concerning assortments (e.g., item reductions), surprisingly little research has focused on the actual assortment selection problem. We develop a normative model that provides optimal category assortment solutions at the store-SKU level, the unit of retailer decision-making. The model is able to predict sales for all products, even for those that are not available yet but that are composed of existing attributes. To achieve this, we estimate a new attribute-based SKU sales model with store-level scanner data that captures the substitutability between SKUs in a parsimonious manner. Subsequently, from this model we derive the assortment selection problem as a quadratic knapsack problem, and employ heuristic procedures to derive (near-) optimal solutions. We apply our methodology to three years of weekly store-level scanner data for a selection of categories from a French retail chain.

3 - Detecting Inefficiently Managed Categories at a Supermarket.

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Category management is the prevailing tool for store management at the supermarket industry. Categories are defined as product clusters; each one ideally containing all sku's closely related for the consumer. Categories may play different roles in a store: maximize flux, sales, margin, image, or a mix of them. Most categories have more than one role. To evaluate their performance, retailers use several indicators and formulate Scorecards to guide managers, a clear indication of the multicriteria nature of this task. However, no explicit consideration of trade offs among indicators is made. Evaluating categories performance as well as specifying proper scorecards in supermarket chains becomes very demanding and requires a lot of judgment. Given the definition of what a category is, the multicriteria evaluation task and the large number of categories needed to be evaluated periodically, Data Envelopment Analysis (DEA) seems appropriate. DEA is a well known Linear Programming approach to detect inefficient business units (BU) among a set of them. Each BU is characterized through a set of Inputs and Outputs. The main challenge for applying DEA to supermarket category evaluation is the I/O variables definition and measurement. We propose that the main decision variables (inputs) available to category managers are assortment, space assignment, price, promotions, and feature. The main outputs are sales, margin, market share and penetration. We will discuss different measurements for each of these I/O. Our results, with real data, indicate that the proposed model is able to detect a significant number of inefficient categories per store, and to propose directions for modifying their inputs to make them efficient.

4 - Manufacturer Operation of Co-Located Retail Stores: Effects on the Retail Market

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Traditional domains of manufacturing and marketing activity are becoming intertwined. An important trend in the manufacturing-retailing interface is the emergence of partial forward integration (PFI). PFI describes a channel where a manufacturer reaches end consumers through independent retailers and company-owned stores. Our research focuses on a specific type of PFI: Situations where manufacturer-owned stores and independent retailers co-exist in the same physical location. We study how this arrangement affects the retail market, specifically in terms of prices charged and levels of marketing effort placed behind the manufacturer's brand. To do so, we compare behavior in the retail market under the following two regimes: (1) Independent Structure where production and selling activities are strictly delineated, and the manufacturer designs and produces the good and contracts with retailers who sell it; (2) Partially-Integrated Structure where independent retailers continue to sell the product, and the manufacturer operates a physically co-located retail store and competes with the independents. We find that when competing against company stores (instead of just other independents), independent retailers: (1) charge higher prices, and (2) have more incentive to improve brand support. Moreover, improvements in retailing efficiency at the company store need not hurt the independents. These qualitative results continue to hold when: (1) there is consumer heterogeneity in brand loyalty, (2) independent stores offer multiple brands, and (3) market saturation effects from the company store are not too high. Anecdotal data are consistent with the model.

■ TC11

Washington

Promotions I

Chair: Vincent Nijs, Assistant Professor of Marketing, Northwestern University, 2001 Sheridan Road, Evanston, IL, 60208, United States, v-nijs@kellogg.northwestern.edu

1 - A Loss Leader Explanation for Coupons: Theory and Evidence

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We show that the presence of manufacturer coupons causes lower shelf prices as retailers take advantage of this loss leader opportunity. We derive the strategic complementarity results between coupon and shelf price of couponed products as well as the strategic substitutability between coupons and the prices of complementary products. A series of empirical tests from the packaged goods industry provides evidence consistent with the theory.

2 - "Timing" the Market for Frequently Purchased Goods: Consumers' Performance and Its Determinants

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Within-store inter-temporal price variation is widely prevalent in markets of frequently purchased goods. Naturally, an interesting question in these markets is whether consumers form price expectations and "lie in wait" to take advantage of the inter-temporal price variations. Past research has indeed found evidence of consumers strategically shifting their purchase decisions (timing and quantity) to take such an advantage. The evidence has come in the form of purchase acceleration (or, "stockpiling") and deceleration behaviors at individual consumer level, and in the form of pre-promotion and post-promotion dips in sales at store level. However, there has been hardly any systematic study to investigate the revealed efficiency of such strategic purchase behaviors on the part of consumers in essentially "timing" the market. The insights from such a study will have considerable implications for retailers pricing strategy. The goal of this research is to undertake such a study, which is similar to studies for evaluating efficiencies of "market timing strategy" in financial equity markets. We use a scanner panel data base of over 1200 households that consists of nearly half a million purchase incidences over two years and over 250 UPCs across 15 product categories. We first look at the extent of opportunities for market timing in terms of inter-temporal price volatility and predictability. Then we develop multiple measures to estimate consumers' revealed efficiencies in availing those opportunities through both purchase acceleration and deceleration strategies. Finally, we run analyses to identify the primary determinants of consumers' efficiency variations in terms of consumer, UPC and product category specific characteristics.

3 - Capturing the Heterogeneous Effects of Monetary and Non-monetary Promotions

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During the past two decades, a substantial academic literature has established the drivers and effects of promotions. Despite the remarkable progress, our review of the extant literature indicates that a majority of the previous studies examined a single type of promotion. Even if multiple types of promotions were included in a study, marketing researchers paid less attention to heterogeneous effects of various types of promotions on performance measures. Additionally, most of previous studies, except Narayanan et al. (2004), relied on data captured at different levels of a value chain. For example, price promotion expenditure is typically captured at the retailer level. Yet, it is not clear whether the price promotion expenditure at the retailer level is fully accountable to actual promotion expenditure by a manufacturer. Finally, except Lemon and Nowlis (2002), the interaction effect between promotion and other marketing mix variables has not been properly examined and the potential moderating effects of contextual variables have not been explored. Therefore, we propose a study that bridges the above gaps. First, we categorize different types of promotions into monetary or non-monetary promotion and provide a theoretical explanation on why different effects are expected from each type of promotion. Second, we examine individual and joint effects of monetary and non-monetary promotion expenditures at the manufacturer level through time series models. Third, we identify and test the potential moderating effects of key marketing variables and contextual factors. The proposed study is conducted with ten years of data on sales, sales promotion, and advertising for a consumer durable product — passenger car.

4 - Channel Pricing and Promotion

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In non-vertically integrated channels, manufacturers rely on incentives to influence the prices offered by channel partners. Analytic models predict that competition among brands, distributors, and retailers will influence the effectiveness of these incentives. Extant empirical research on these issues has been limited in several important ways. First, while manufacturers design incentives to affect both the regular price and the promoted price, empirical investigations have been limited to promotional pass-through. Second, extant empirical studies typically rely on data from a single retail chain. There has been no investigation of these issues across geographies or retail chains. Third, extant studies lack detailed data on prices and quantities throughout the distribution channel. Thus, there has been no analysis of how channel incentives affect the profits of channel members. In this paper, we study channel pricing and promotion in a large packaged goods category. We assemble a unique dataset that describes prices, quantities and other financial flows within the entire distribution channel. The three-tier channel includes a manufacturer, distributor, and retailer. Our data includes all financial flows and product flows in the channel, including promotion reimbursements to distributors, product shipments, and manufacturer cost of goods sold. While the channel data is limited to our manufacturing partner, the retail transaction data includes all competitors in the category over a three-year period. The data enable us to investigate the effectiveness of manufacturer incentives to increase and decrease the retail price. We examine how the effectiveness of these incentives varies across brands, distributors, geographical regions, and retail chains.

■ TC12

Fayette

CRM I

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

1 - Investigating Cross-Buying and Customer Loyalty

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It has been widely touted that cross-buying (i.e., the purchase of products from multiple categories) is associated with higher levels of customer retention, revenue generation, and loyalty. Despite these claims, the issue remains as to whether cross-buying is the antecedent to these behaviors and the behaviors are the consequence or whether it is the other way around —loyalty behaviors are the antecedent and cross-buying is the consequence. This research investigates the direction, strength, and nature of the relationship between customers' cross-buying behavior and the associated behavioral outcomes. The challenge in investigating these issues choosing an appropriate measure for the causal links under consideration, as well as capturing the possible endogeneity of the marketing efforts, which may have motivated these behaviors. Using a Granger-type econometric approach, we determine in a direct mail context that cross-buying is the consequence and not the antecedent of behavioral loyalty. In addition, we learn that simply focusing on the number of different departments that a customer buys in is a naïve cross-selling strategy. Rather, we find that the dispersion of dollars spent across categories plays a key role in predicting purchase frequency and revenue generation.

2 - Cross-Buying And Customer Churning Behavior

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Customer switching behavior has been an area of interest both for academics and practitioners. Systematic studies on the effect of cross-buying on customer churn or retention are lacking in the academic literature. This paper empirically investigates if cross-buying multiple products (which can be the outcome of the firm's cross-selling efforts) from the same service provider reduces customer churn. The analysis was done using customer data from a wireless vendor in cellular phone services. Since a customer's propensity to cross-buy may be related to his propensity to churn, this introduces an endogeneity problem in the estimation of the effect of cross-buying on churn. We therefore use a bivariate probit model "with structural shift" which accounts for the simultaneity of cross buying and churn behavior. We find that cross purchase behavior can significantly affect the churn behavior of customer. We also investigate other determinants of customer churn and cross purchase behavior. We found significant effect of search and switching cost to change service providers, service quality and total number of customer care calls emanating from the consumer.

3 - An Empirical Analysis of Customized and Dynamic Cross-Selling Campaigns

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Existing cross-selling literature has focused on developing methodologies to better predict purchase probabilities for the next product that is likely to be purchased. The goal is to find the best customers for a scheduled campaign. In this paper, we formulate cross-selling campaigns as a stochastic dynamic programming problem. We explicitly account for the company's long-term goal which is to maximize the long-term profit of its existing customers while taking into account the development of customer demand over time and the multi-stage role of cross-selling promotion. The model yields optimal cross-selling strategies that are a multi-step, multi-segment and multi-channel cross-selling campaign process about when to target which consumer with what product using what campaign channel (how). Using cross-selling campaign and transaction data provided by a national bank, we demonstrate the dynamic and state-dependent nature of the optimal cross-selling campaign decisions and derive structural properties of the customized and dynamic cross-selling campaign strategies. We show that the suggested cross-selling strategies are both more effective and efficient and the long-term profit is significantly improved.

4 - Acquisition versus Retention: Competitive Customer Relationship Management

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Customer relationship management (CRM) advocates that sellers identify their most valuable customers and provide special products/services to them. The idea is that, treating some customers as special may help form a relationship between buyer and seller and thus benefit both parties to the transaction. To date there has been no theoretical study of the effects of CRM on competition between sellers. This paper provides such research. In this paper, we will address the following questions. (1) Should firms reward their most devoted customers rather than those that are most likely to leave? (2) In equilibrium, should firms provide special service to people just as they are thinking of leaving (the retention strategy) rather than much earlier in an effort to build a sense of commitment to the firm (the acquisition strategy)? (3) What is the effect of customer churn on pricing and CRM tactics? (4) Do the equilibrium strategies depend on whether consumers are myopic or farsighted in anticipating retention tactics? We find that when consumers are farsighted ex-ante symmetric firms pursue asymmetric strategies in equilibrium: one firm pursues an acquisition strategy and its rival pursues a retention strategy. If consumers are myopic the unique Nash equilibrium is for both firms to pursue a retention strategy. The above results assume that churn is the same whether firms adopt acquisition or retention. However, if providing special services early on helps build a sense of commitment to the firm, then an acquisition strategy may cause lower churn than a retention strategy. In that case, the unique Nash equilibrium is for both firms to pursue an acquisition strategy.

■ TC13

Somerset West

Pricing I

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1 - A Competitive Analysis of Personalized Pricing and Quality Customization

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We develop an analytical framework to investigate the competitive implications of personalized pricing and quality allocation (PPQ), whereby firms charge different prices and offer different qualities to different consumers, based on their willingness to pay. We embed PPQ in a model of spatial differentiation, and show how information about consumer preferences affects multi-product firms' choices over pricing schedules and product line offerings. We show that firms' optimal pricing strategies with PPQ will be non-monotonic in consumer valuations. Our model sheds light on the different product quality schedules made by firms, given that one or both firms implement PPQ. Contrary to prior literature on one-to-one marketing, we show that even symmetric firms can avoid the well-known Prisoner's Dilemma problem due to the product proliferation effect. When both firms have PPQ, consumer surplus is non-monotonic in valuations such that some low valuation consumers get higher surplus than high valuation consumers. For a wide range of fixed costs, we also demonstrate some results on the profitability of adopting PPQ and show the emergence of asymmetric equilibria, where one firm adopts PPQ and the other firm does not when the number of loyal customers is less than a critical value. We extend our analysis to asymmetric firms and show that a firm with an ex-ante, smaller loyal segment can be better off with PPQ.

2 - Behavior-Based Discrimination: Is It A Winning Play And If So When

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With advances in technology and data storage, the collection and recording of information from customers at the time of purchase is now common in many categories. This information allows a firm to straightforwardly classify customers as either "new" or "past" customers. This opens the possibility for firms to implement marketing that a) discriminates between new and past customers and b) consists of making offers to the two segments that are significantly different (it can offer special services, options or accessories that are of added value to a past customer as well as a different price). Our objective is to examine the competitive effects of marketing that tailors offers to consumers based on their past buying behavior. Using a two period model with two competing firms, we assume that information collected from consumers in the first period allows the manufacturers to design benefits that improve the utility of the offer for past consumers in the second period. Below a threshold level of benefits, we show that the game has two equilibria, one where both firms implement behavior-based discrimination and the other where they do not. Above the threshold, there is a unique equilibrium where firms implement behavior-based discrimination even though it frequently leads to increased competition and lower profits. Only when the benefits are high enough to eliminate competition in the second period can behavior-based discrimination lead to higher profits for both firms.

3 - A Strategic Analysis of NYOP Channel

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In this paper, we study two variants of channel integration and two variants of demand information disclosure to consumers when a NYOP channel is presented. First, we consider two cases of channel integration, one with independent NYOP retailer and the other with integrated NYOP retailer by the service provider. We show that the service provider generally benefits from vertical integration of the NYOP retailer. We also show that such a vertical integration of downstream NYOP retailer may yield higher posted prices, in contrary to traditional cases where double marginalization exists. When the NYOP channel is owned by the service provider, surprisingly, the provider may not benefit from more precise information about the state of demand when he sets a threshold price for the NYOP channel. (Low level of demand uncertainty, under certain conditions, may hurt the provider as he loses the pre-commitment power of a high posted price.) Second, we study the value of informing consumer with state of demand by the service provider at the NYOP channel. This created two variants of secondary channel with some minimum opacity on the products, one is in the "Hotwire" mode as consumers are fully informed (a new price is posted), the other is in the "Priceline" mode where consumers are not informed and need to submit bids. We show that the provider always charge a higher threshold price when consumers are informed. While both variants provide a secondary channel for the provider to sell distressed capacity, the service provider can achieve his objective at "Hotwire" variant at a lower cost than "Priceline" variant in terms of cannibalization of the direct non-opaque channel of the provider.

4 - Probabilistic Selling

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In recent years, online travel service discussion forums have been abuzz with chat about a type of ticket selling in which the buyer is kept ignorant of the specific airline and flight time until after the purchase transaction has been completed. The offering of "opaque" products, as practiced by firms such as Priceline and Hotwire, might be characterized as probabilistic selling (PS) because the seller offers the buyer a gamble involving an unspecified probability of getting any one of a set of multiple distinct items. One can contrast PS to the traditional deterministic selling in which the seller offers the buyer a specific good at a specific price. This paper examines the basic economics of PS. Specifically, we examine WHY, WHEN and HOW a seller can benefit from introducing a probabilistic product. We address whether sellers outside the travel industry (e.g., without capacity constraints, demand uncertainty, and intermediary channel structure) can benefit from PS.

We explore how the profitability of PS depends on consumer preferences across items in the gamble, vertical and horizontal product differentiation, demand uncertainty, capacity constraints, and the ability of the seller to credibly convey the "honesty" of the presented gamble. We also explore the impact of PS on consumer surplus and social warfare. Our analyses reveal that PS is a general marketing tool that has the potential to benefit many sellers. One main obstacle to realizing the profit potential of PS is the challenge of establishing the "uncertainty credibility" of the seller. However, recent developments in information technology and the internet are providing various commitment mechanisms that help sellers exogenously establish such credibility.

■ TC14

Somerset East

Mktg. Strategy I: Strategic Alliances

Chair: Ursula Sullivan, Assistant Professor, University of Illinois, Urbana-Champaign, 350 Wohlers Hall, MC 706, 1206 S. Sixth Street, Champaign, IL, 61820, United States, uyas@uiuc.edu

1 - Making More or Fewer but Closer Friends? Sales Impact of Breadth and Depth of Alliance Relationships

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Many firms form a large number of alliances, some of which are formed with one time partner firms and some with long term partners. How will a firm's performance (i.e., sales or sales growth rate) be influenced as it continues to add new partners to its portfolio? And how will the firm's performance be influenced as it forms more alliances with its long term partners? This research aims to address these questions. We expect that a firm can benefit by developing deep relationships with more long term partners from which it can learn much and achieve learning depth. On the other hand, a firm may also enhance its performance by establishing alliances with a large number of one time partners because of the access to diverse capabilities, i.e., learning breadth. Furthermore, given that a firm's alliance managing capability and resources are limited, if a firm increases its number of partners with which it formed only a couple of relationships, it limits both its learning breadth and depth and may actually hurt rather than benefit itself. Our study of 2,791 alliances shows that learning breadth only increased a firm's sales, not sales growth rate. As a firm continued to add to its alliance portfolio partners with which it formed only a couple of relationships, its performance suffered. Conversely, a firm's performance improved when it increased the number of long term partners with which it formed six or seven alliances. Our findings suggest that it is the learning depth, rather than learning breath, that contributes positively to alliance partner firms' sales growth. This research adds to our understanding of how to manage and balance alliance portfolios.

2 - Assessing Portfolio Effects on Alliance Performance

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Alliances are ubiquitous in today's competitive environment and account for an estimated 25 to 40 trillion dollars in economic value. They have been shown to create economic value, improve new product development efforts, and positively impact innovation and profitability. This body of evidence suggests that firms' performance objectives are best served by undertaking multiple alliances. However, not all firms are well suited to undertake multiple alliances; as such, it is not surprising that nearly 70% of alliances fail. The present research adopts a portfolio perspective on alliances, and proposes a balanced approach to the management of multiple alliances. In particular, we relate portfolio depth and breadth to alliance performance. Drawing on the resource based view (RBV) and network theory, we also hypothesize these main effects to be significantly moderated by firms' resource-enhancing and/ or resource-economizing strategies. We test our hypotheses using a rich data set of alliances across multiple therapeutic areas in the bio-pharmaceutical sector, using a multivariate multiple-membership cross-classified random effects regression model to predict the likelihood of alliance success across the specific multiple objectives each alliance may have. Our findings speak to the appropriate selection and management of alliance activity.

3 - Exploiting Manufacturers' Resources for Distributors' Profitability

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A resource based view (RBV) of the firm suggests that heterogeneity and immobility in valuable tangible and intangible firm resources are an important explanation for differences in financial performances. However, the constructs of RBV are difficult to operationalize empirically. Furthermore, the current literature in this area has only focused on firms' resources that have been historically acquired, neglecting the possibility that advantage can be taken of other firms' resources. This study complements the above line of research and maintains that firms can perform well financially by implementing other firms' resources. Network theory provides a theoretical framework to understand how firms can benefit from other firms in a network. In distribution, strongly branded manufacturer convey their tangible and intangible resources through distribution network to distributors. Conversely, distributors with few unique resources can exploit manufacturers' resources for their own profitability. We collected survey data from 435 Chinese dealers of a Common Wealth FMCG manufacturer. The dealers are randomly chosen from a list of the manufacturer's distribution network in China. We developed a measurement model of the manufacturer's resources that are perceived to be important to distributors. We estimated a model by summing up the weighted resource values and the empirical results show that, in addition to a promotional "spillover" effect, manufacturers' product value and efficiency can also contribute to the distributors' profitability. Besides, our result implies that manufacturers' market orientation influences distributors' profitability.

4 - Managing Horizontal Distribution Alliances in the Global Airline Industry

Ursula Sullivan, Assistant Professor, University of Illinois, Urbana-Champaign, 350 Wohlers Hall, MC 706, 1206 S. Sixth Street, Champaign, IL, 61820, United States, uyas@uiuc.edu

The focus of this research is to study the use and effectiveness of a specific organizational form—the horizontal distribution alliance (HDA)—that often eases the process of entering a new market or expanding within the market. In particular, we propose to examine how these alliances affect the international competitiveness of the firms in the airline industry. To address our research question, we analyze longitudinal archival data to understand the composition of the alliance agreements held by the airlines, as well as to learn financial and operating information about the airlines. Our main contribution from the research is determining how horizontal alliances help firms compete in the international airline industry.

Thursday, 3:30 - 5:00pm (Session D)

■ TD01

Allegheny Ballroom I

Practice Prize Rehearsals (Special time 4-6pm)

Chair: John Roberts, Scientia Professor, Aust Grad Sch Mgt, Randwick, Univeristy of New South Wales, NS, 2052, Australia, johnr@agsm.edu.au

1 - BRAN*EQT: A Model and Simulator for Estimating, Tracking, and Managing Multicategory Brand Equity

Venkatesh Shankar, Professor and Coleman Chair in Marketing, Mays Business School, Texas A&M University, Department of Marketing, Wehner Bldg, 4112 TAMU, College Station, TX, 77843-4112, United States, vshankar@mays.tamu.edu, Matthew Fuller, Pablo Azar

There is a growing recognition that brands are valuable intangible assets toward improving shareholder value. In recent times, many models have been proposed for measuring brand equity. Existing brand equity models are either developed for firms with a single brand in a single product category or in cases where a firm has the same brand in multiple categories, existing models implicitly assume that the equity of a brand is the same in each category. Because most firms have the same brand in multiple categories and the same brand has different performance outcomes in different categories, existing models can provide wrong estimates of brand equity. In this paper, we develop a model for estimating, tracking, and managing brand equity for multicategory brands based on a combination of customer based survey and firm based financial measures for each product category. This model has two components, (1) relative brand importance (computed from brand choice models such as multinomial logit, heteroscedastic extreme value, and mixed logit models using survey measures on multiple product attributes and brand perceptions) and (2) offering value (computed from discounted cash flow analysis of earnings estimated using financial measures such as expected revenues, EBITDA margin ratio, long-term inflation rate, weighted average cost of capital, marginal tax rate, and investment rate). We apply this model to measure the equity of the flagship brand of a leading insurance company and its leading competitor with the same brand name in multiple product categories. The model allows for spillover effects of the brand from one category to another. We use a combination of hard financial data and survey data to estimate the model. We validate this model by comparing relative brand importance estimates obtained from a brand choice model to those computed from a brand perception score method. Furthermore, we examine the relationship between advertising and brand equity using longitudinal data on advertising and brand equity, and build a decision support simulator. Our model provides reliable estimates of brand equity for the focal brand and a leading competitor brand, and our results show that advertising has a strong long-term positive influence on brand equity. They also show that our brand equity estimator is fairly robust. The model, the brand equity estimates, and the decision support simulator are used by key executives in the organization across multiple functional areas such as marketing, strategy, accounting, and finance. Using this brand equity model and simulator, the organization has substantially gained by significantly reallocating its advertising resources to improve brand equity and shareholder value. We discuss the implications for tracking, building, and managing brand equity based on these results.

2 - Planning New Tariffs at Tele.Ring — An Integrated STP Tool Designed for Managerial Applicability

Martin Natter, Prof.Dr., JWG University Frankfurt, Mertonstrße 17-25, Frankfurt, 60054, Germany, natter@wiwi.uni-frankfurt.de, Udo Wagner, Andreas Mild, Alfred Taudes

Information needs to be transferred efficiently across the organization beyond those who acquire it, and an effective format that facilitates rapid interpretation and communication is needed (DeSarbo et al. 2001). Graphical representations provide such a format and often serve to communicate the very essence of marketing research results. Marketing researchers have developed and applied a large number of mapping, segmentation and conjoint techniques and algorithms for the analysis of marketing data. However, the usefulness of these techniques, in terms of managerial applicability and economic effectiveness, has not been treated very frequently in literature. In this paper, we will describe a new decision support tool that integrates several market research methodologies in a visual and interactive tool in order to bridge the gap between academic research and marketing practice. The tool was applied at tele.ring, an Austrian telecom provider for planning a new tariff. The tariff design by STP methodology resulted in the most successful new tariff introduced in the competitive Austrian market. Managers of tele.ring found that the advantage of this STP tool as compared to other positioning tools lie in its interactive and intuitive nature. As compared to similar new tariff introductions, an increased profit of 23.700.000 was achieved. According to tele.ring CEO, Michael Krammer, ... a telecom provider's chances for surviving are mainly guaranteed by a clear positioning. Tele.ring has shown that this works and how this works (webstandard 2006). References

DeSarbo, W. S., Degeratu, A. M., Wedel, M., and Saxton, M. K., 2001, *The Spatial Representation of Market Information, Marketing Science*, 2001, 20 (4), pp. 426-441.

■ TD02

Crawford East

Public Policy and Marketing

Chair: Ramnath K. Chellappa, Emory University, Decision & Information Analysis, Goizueta Business School, Emory Universi, Atlanta, GA, 30322-2710, United States, RKCHELL@emory.edu

1 - Analysis of the Reforms in Chinese State-Owned Enterprises: A Principal-Agent Approach

Emily Yang, Warwick Business School, Warwick University, Coventry, CV4 7AL, United Kingdom, phd02xy@wbs.ac.uk

The objective of my research is to explore the effectiveness of government policy in improving the performance of state-owned enterprises in China and, on the basis of my results, to make recommendations for future improvements in policy reforms. The approach is largely economic in character and takes a principle-agent perspective. In my research, I use a principal-agent framework to approach the modelling of the government policy's impact on the state-owned enterprises' performance. The problem of how owners(principals), the government bureaucracy in this case, of a state-owned company can ensure that managers(agents) use the assets of the company efficiently and in the best interests of the owners is intrinsic to any arrangement where owners do not or cannot undertake the management function directly. The state faces an information asymmetry where it has less information about the firm than do managers delegated with day-to-day operational authority. Government has to consider the managers' incentives when devising new control systems. My econometric model explains productivity variation supported by managers' incentives under governmental policy restrictions. It addresses enterprises managers' behaviour under certain policies. By measuring managers' behaviour, the model predicts the possible impact of instituted reforms on firm performance. Conclusions and policy recommendations for future policy changes relating to Chinese state-owned enterprises will be made in the end. It provides answers to those questions: how has the changing policy on state enterprises over the years influenced managers' behaviour? What impact has it had? What are the issues relating to recommendations for future changes? Recommendations for changes to policy will also be addressed.

2 - Analysis of Consumers' Willingness to Pay for Non-pirated Software

Charlene W.Y. Shiue, Research Assistant, National Chung Hsing University, Department of Marketing, 250 Kuo Kuang Road, Taichung, 40227, Taiwan, yunshiue@yahoo.com.tw, Jane Lu Hsu

Unauthorized software usage has been a prominent problem worldwide. Numerous International organizations like the World Intellectual Property Organization, the International Chamber of Commerce Counterfeiting Intelligence Bureau, the International Intellectual Property Alliance, and the Business Software Alliance have endeavored huge efforts to combat with the usage of unauthorized software. Due to technological development, the losses resulted from software piracy have been increasing in the last decade. The usage of unauthorized software affects not only the benefits of copyright holders, but also the intentions of manufacturers in making investment in research and development. Users of unauthorized software often lack of the concepts to respect to intellectual property rights. Would there be influencing factors affecting consumers' decisions in choosing non-pirated software? This study intends to examine consumers' willingness to pay for non-pirated software in addition to analyzing the influencing factors affecting decisions in the non-pirated software usage. Risk perceptions and attitudes toward intellectual property rights are considered in the study. Consumer survey is conducted at the metropolitan areas in Taipei, Taiwan, to collect data from high school students, college students, graduate students, and individuals who are no longer full-time students. Results of this study indicate students are prone to use pirated software. The dollar amount of willingness-to-pay of authorized software is much lower than the regular market price. Consumers who have positive attitudes toward intellectual property rights and those who have relatively high risk perceptions have tendencies to use non-pirated software.

3 - Don't Quite Super Size Me: Policy Decisions with Context Dependent Demand

Kathryn Sharpe, PhD Student, Duke University, Box 90120, Durham, NC, 27708, United States, Kathryn.Sharpe@duke.edu, Richard Staelin, Joel Huber

The estimated cost of obesity-related healthcare in 1998 in the United States was over $100 billion in 2005 dollars (Finkelstein et al). Our research directly addresses this issue by modeling the consumption of soft drinks within the fast food industry. The government has a number of options available. When faced with rising healthcare costs due to tobacco use, it imposed a cigarette tax to discourage consumption, or it could require the average drink size to reduce. To determine the impact of these two government actions on firm profits, caloric consumption, and average prices paid by consumers, we estimate each consumer's utility function for soft drink size which consists of three terms: (1) a term representing a person's value for the quantity of liquid which we assume is monotonically increasing, (2) a term reflecting individual's price sensitivity, and lastly (3) a term that captures the consumer's aversion to drink sizes located at the extremes of the portfolio offering. Using these estimates we demonstrate that firms, by altering the offering set have the ability to reduce average caloric consumption associated with soft drinks by as much as 15% without increasing the average price paid by the consumers and without decreasing fast food firm profits. We show that this regulatory approach keyed to average usage is superior to imposing a consumption tax on soft drinks. In addition to addressing the obesity problem, our modeling technique also answers the general question: what impact does adding or deleting a product from the extreme versus the interior position in a single attribute ordered product setting have on firms and consumers? Key terms: compromise effect, extremeness aversion, hierarchical Bayes estimation, non-linear optimization

4 - Incentive Design for Online Personalization Services under Privacy Concerns

Ramnath Chellappa, Assoc. Professor, Emory University, 1300 Clifton Road, Atlanta, GA, 30322, United States, ram@bus.emory.edu, Shivendu Shivendu

Online personalization services belong to a class of economic goods with "no-free-disposal" (NFD) property, where due to privacy concerns more services is not always preferred to less. This paper analyzes a monopolist's optimal contract designs for personalization services under information asymmetry in a market where consumers are heterogeneous in their concern for privacy. Not surprisingly, under full information the vendor strictly prefers a variable to fixed contract as he can discriminate in the former and finds that under certain condition providing coupons or incentives with usage to be profit improving. However when considering services-only contracts under asymmetry, a fixed contract is optimal under certain conditions and surprisingly for some markets, a consumer-welfare maximizing contract emerges to be superior for the monopolist. An interesting aspect of the fixed contract is that when the vendor engages in couponing he continues to serve the same proportion of consumers as in the services-only case, even if consumer welfare, producer surplus and social welfare are all higher with incentives. We show that a purely usage-based contract is sub-optimal even when marginal costs are zero, as the monotonicity constraints on incentives become binding. As a result we develop a bunched solution that is weakly superior to all other contracts; interestingly our results shows that an optimal truth revealing contract requires more incentives need to be paid to consumers that value personalization over privacy than the intuitive view that couponing is effective as a tool to bring in privacy-seekers to participate in the market.

■ TD03

Crawford West

Competition and Competitive Response

Chair: Ashwin Aravindakshan, PhD Student, University of Maryland, 1308, Box # 8, Van Munching Hall, Robert H. Smith School of Business, College Park, MD, 20740, United States, aaravind@rhsmith.umd.edu

1 - Scheduled Delays? Scheduled Time Competition and On-Time Performance in the Airline Industry

Yan Dong, University of Minnesota, Department of Marketing, Carlson School, Minneapolis, MN, United States, ydong@csom.umn.edu, Kefeng Xu

A lot of attention has been on the airline industry's overall financial performance as a result of increasingly cutthroat price competition, but airline service performance has also become a focal point of the industry wide competition. This research focuses on airline competition on price and scheduled flight time, as well as the competition's impact on airline on-time performance. This study establishes a sequential game between airlines with respect to price and scheduled flight time, and discusses multiple equilibria of scheduled times under conditions of competition intensities and customer values of on-time performance. This study finds: 1, airlines choose different scheduled flight times when they compete sufficiently intensely on scheduled time and their customers do not value on-time performance either too high or too low; 2, airlines choose similar scheduled flight times when they compete more intensely on price and both have customers with similar values of on-time performance; 3, as competition intensity on scheduled time increases, airlines are less likely to both choose high scheduled times, leading to increased delays. Several related hypotheses will be further tested empirically by controlling for route specific features of customer preferences, and airline specific measures of customer value and loyalty. This research contributes to marketing literature in the area of customer relationship management. In particular, airlines' price and scheduled time decisions serve as customer acquisition measures whereas on-time performance determines customer satisfaction and retention. The findings, therefore, provide implications to how customer acquisition and customer retention interact in airline competition.

2 - Competitive Response to New Product Introductions: The Mediating Role of Perceived Threat and Intent

Cendrine Fons, Doctoral Student, IAE Aix en Provence, 39 Av. Cézanne, Rés. Lou Védigane Bat A, Aix en Provence, 13090, France, cendrine.fons@iae-aix.com

Many studies have tried to link competitive responses to the observable characteristics of a competitive event. What has mainly been studied is a direct link between the nature of the competitive action (type of event, type of competitor, market conditions, etc.) and the nature of the response (magnitude, marketing mix characteristic, timing, etc.). While some effects have been found, the overall explanatory power of the models remains modest. More recent research has argued that managerial interpretation of competitive signals and actions or perceived threat by managers need to be taken into account. We propose that the influence of competitive action on retaliatory reactions is mediated by two main constructs: perceived threat and perceived competitive intent. The magnitude and velocity of competitive reactions will be bigger if perceived threat is high and if competitive intent is perceived as being a direct competitive attack. The concepts of perceived threat and competitive intent are defined and measurement scales are developed and validated. The mediating effect of the two constructs is tested on a sample of product managers and marketing managers from both consumer and industrial goods manufacturers.

3 - Optimal Timing for Software Functionality Additions By Technology Product Vendors

Ping Wu, Ph.D Candidate, University of Minnesota, Carlson School of Management, 321 19th Avenue South,, Suite 3-365, Minneapolis, MN, 55455, United States, pingwu2000@gmail.com, Robert J. Kauffman

Recent research on vendor strategies for technology products has emphasized the importance of choosing the appropriate technology standards for products whose business value may be affected by customer acceptance, production costs, and competitive pressures. This paper focuses on two other important aspects: the optimal timing for adding software functionality to technology products already being sold in the market, and providing normative guidance for appropriately-timed managerial decisions. By adding new functionality, a vendor of technology products will be able to expand its market share and gain more profit. Examples include the expansion of Web site capabilities to provide digital photo storage services, and mass-storage email capabilities by Google GMail and Yahoo! Mail, among other recent product-level technological innovations. We present a two-firm decision model to characterize the vendors' launch timing for functionality additions. The vendors face heterogeneous launch costs and, because of potential delays in market acceptance of the new functionality, they also face heterogeneous time lags for capturing profits (i.e., value latency). Our model suggests that a vendor should compare its own launch cost and value latency with those of its rivals in deciding whether to lead the market in adding software functionality. A vender facing a lower launch cost will choose to be a follower, if it expects longer value latency relative to its competitor. We also characterize the conditions under which a vendor will choose to lead if it faces a higher launch cost but rapid market acceptance for its new software functionality.

4 - Pricing Implicit Bundles Under Competition

Ashwin Aravindakshan, PhD Student, University of Maryland, 1308, Box # 8, Van Munching Hall, Robert H. Smith School of Business, College Park, MD, 20740, United States, aaravind@rhsmith.umd.edu, Brian Ratchford, Venkatesh Shankar

This paper considers the case of pure component pricing in a competitive setting. We develop an optimal pricing scheme for a Firm that has two products. Both its products are sold as pure components. We show that the optimal price charged increases with respect to the degree of relationship between the Firm's two products as well as the degree of relationship between the focal Firm's and its competitor's products. We also derive the consumer surplus when the products are priced independently and when they are priced by taking into account this relationship. We conclude that consumer surplus is higher in the former case.

■ TD04

Butler West

Location Models

Chair: Mary Caravella, Harvard Business School, Morgan 179, Soldiers Field, Boston, MA, 02163, United States, mncaravella@hbs.edu

1 - Assessing Location Advantage in the Motion Picture Exhibition Market

Jorge Gonzalez, PhD student, London Business School, Regent's Park, London, NW1 4SA, United Kingdom, jgonzalez@london.edu, Catarina Sismeiro

Manufacturers rely heavily on retailers for the performance of their products. Comparing channels in their ability to generate sales and profits is then essential for the product's channel decisions. However, assortment differences across retailers make direct comparisons impossible because assortment effects cannot be disentangled from those related to retail location and management. In this paper, we present a methodology to measure the relative performance of competing retailers that accounts for assortment differences and uses information from other markets as benchmarks. Our empirical application uses data from the motion picture exhibition industry. Using data from two theatre chains in a Spanish city, we develop a Bayesian type II Tobit model to analyze the competition and to determine the relative performance of the two chains. Our results show that the proposed modelling approach provides more diagnostic information and is able to correct for assortment differences, while measuring relative theatre performance. Finally, our results also show that the decision to stop or continue the showing of a movie by individual theatres, which is influenced by expectations about future movie revenues, contains valuable information for modelling box-office revenue at the theatre level. Current box office revenue models have been developed to forecast sales for new released movies at the aggregate/country level and do not take into consideration the individual decisions of theatres. We show that incorporating the expectations of theatre managers into the joint estimation of demand, allows us to get more reliable estimates especially when the movie has been shown for few weeks.

2 - Store Location Evaluation and Choice Based on Geographical Consumer Information

Auke Hunneman, PhD student, University of Groningen, P.O. Box 800, Groningen, 9700 AV, Netherlands, a.hunneman@rug.nl, Tammo Bijmolt

The location of facilities is a key variable for retailers and other decision makers, because travelling distance strongly affects where consumers shop, leisure, etc. . In this study, we aim to support site selection for stores by developing a general model in which store, market, and consumer characteristics explain store performance. Recent developments in statistical methodology and customer databases based on loyalty cards offer new opportunities for store location modeling. The newly proposed model combines data on the store, purchase behavior, and consumer demographics while accounting for the location of stores and consumers in a geodemographic space. For a proper understanding of the mechanisms causing changes in store performance, we adopt a decomposition framework to investigate how loyalty program members and nonmembers contribute to revenues. The model results in predictions of (expected) performance of stores at certain sites. The model can be used for (1) explaining performance of existing stores, (2) assessing the impact of changes within markets on store performance, (3) identifying opportunities for building additional stores. We illustrate model application to three years of sales data from 28 clothing stores.

3 - Adding Clicks to Bricks: An Empirical Investigation of the Effect of Store Openings on Direct Sales

Mary Caravella, Harvard Business School, Morgan 179, Soldiers Field, Boston, MA, 02163, United States, mncaravella@hbs.edu, John Deighton, Tom Steenburgh, Jill Avery

Retailers who historically relied on bricks and mortar retail stores to sell to their customers have added direct channels, such as direct-mail catalogs and Internet websites, to expand their reach and frequency. Recently, retailers who have traditionally sold only through direct channels have expanded their channels of distribution by opening retail stores to supplement their catalog and Internet businesses. As the operating costs of retail stores are higher than direct channels, the success of this latter form of channel expansion, adding "bricks to clicks," is particularly sensitive to whether sales through a new retail store channel complement or cannibalize sales through existing direct channels. Paradoxically, the literature on multi-channel retailing includes support for both cannibalization hypotheses, suggesting that adding new channels shifts existing consumers from one channel to another without increasing sales volume, and complementarity hypotheses, suggesting that adding new channels lifts sales volume by either attracting new consumers to the business or by generating increased sales volume from existing consumers. However it is unclear which effect will be more powerful, or how these two effects may unfold over time. In this study we empirically investigate whether opening a retail store complements or cannibalizes direct sales within the related geographic area. Our approach is designed to uncover whether one of the two effects is dominant overall and the time, consumer, and product conditions under which one or the other effects comes to dominate. Estimation uses proprietary aggregate sales data from a leading U.S. retailer across multiple channels, geographic segments, and product categories over an 81 month period.

■ TD05

Butler East

Consumer Behavior I

Chair: Dilip Soman, Corus Chair in Communication Strategy, Rotman School of Management, University of Toronto, 105 St. George St., Toronto, ON, M5S 3E6, Canada, Dilip.Soman@Rotman.Utoronto.Ca

1 - Incidental Brand Learning in Front of the Shelf

Ralf van der Lans, Assistent Professor, Erasmus University, P.O. Box 1738, Rotterdam, 3000 DR, Netherlands, RLans@rsm.nl, Rik Pieters, Michel Wedel

While searching for a specific brand on a product display (e.g., shelf, catalogue, or website), consumers see and reject many competing brands they are not looking for. These rejected brands may become targets in future search tasks. This project examines if consumers have memory for these rejected brands, and how this affects the ensuing search process and performance. Interestingly, previous research findings on learning effects in visual search are conflicting. While some researchers suggest that consumers may indeed retain information of the product display from previous search tasks, others claim that search is memory-less, or even that previously rejected brands are actively inhibited. The present research integrates the possible different memory effects that consumers may acquire while searching for specific brands on a product display. In an eye-tracking experiment, in which over one hundred consumers repeatedly search for two different existing coffee brands, we tested if and how consumers in the second search task use information acquired in the first task. Initial results indicate that consumers indeed use information of previously attended brands. Our findings contribute to the extensive literature on memory in visual search, to the understanding of how consumers incidentally learn brands over time, how shelf-facings may benefit this, and have implications for slotting fees charged by retailers.

2 - Time versus Money as the Cost of Search: Differential Impact on Search Behavior

Ashwani Monga, Assistant Professor, UT-San Antonio, College of Business, 6900 North Loop 1604 W, San Antonio, TX, 78249, United States, ashwani.monga@utsa.edu, Ritesh Saini

Search is integral to consumption. Consumers search for the best products, the lowest prices, the most convenient locations and, in general, any information that can improve their consumption experience. Their extent of search is, however, limited by the costs that they are willing to bear. Experimental researchers frequently conceptualize these search costs in terms of monetary value per unit search. In real-world settings, however, consumers rarely pay the costs of search in terms of money. What they usually spend is time, rather than money, on activities such as searching within stores for the lowest price, and scouring websites for product information. The current research explores how search behavior varies depending on whether the costs of search are monetary or temporal. In two experiments, search costs are manipulated to be either high or low, and are expressed in terms of either money or time. Both experiments demonstrate that consumers are less sensitive to a change in search costs when these costs are expressed in terms of time rather than money. These results provide new insights into prior work on search costs and offer new opportunities for research in this area. Clear implications also arise for practitioners interested in modifying the search costs of consumers.

3 - Border Crossing Consumers and Postassimilationist Studies: Cultural Alternation in the Marketplace

Luca Visconti, Assistant Professor, SDA Bocconi, Viale Filippetti 9, Milan, MI, 20122, Italy, luca.visconti@unibocconi.it

Consumer studies and marketing praxis show an increasing concern for new models of investigation of multicultural markets, under the effects of globalization, transnationalism, and migration flows. Under the "postassimilationist" turn, crossing border consumers have started to be observed through multidimensional lenses, where ethnic consumer identities are no longer positioned along a linear acculturation scale, but acquire composite structures. Traditional criteria of segmentation cease to work on these conspicuous target groups, since their multiple cultural competences are translated into a multiple sense of belonging, making marketplace behaviors more shadowed and unstable. Overcoming assimilation perspective, recent works acknowledge cultural alternation, which has been variously shaped in terms of pendulum logic, dialogic selves, or swapping identities. If state of the art in the field has given empirical confirmation to the emerging construct of consumer cultural alternation, it still provides no richer description of it. Through a 18 months ethnographic account of Egyptian consumers in Italy, this work aims at elaborating an empirical model of cultural alternation, in terms of: 1) its dynamic process of formation; 2) its different facets of manifestation; 3) its implications for consumption behaviors and targeting strategies. Field data, originated by a purposive sample of 21 Egyptians whose food, media and linguistic preferences had been largely investigated, offer a preliminary but rich description of impactful variables, meanings and functioning of alternating cultural selves in multiethnic contexts of consumption. Conclusions are drawn for new segmentation criteria, which can more reliably be built on situational ethnicity and cultural adaptation exits.

4 - Investigating Stopping Decision Criteria for Goal-Oriented Sequential Search

Anocha Aribarg, Assistant Professor, University of Michigan, Stephen M. Ross School of Business, 701 Tappan St., Ann Arbor, MI, 48109-1234, United States, anocha@umich.edu, Dilip Soman

The issue of consumer's stopping decision in sequential search has been extensively studied in previous marketing literature using either economic or psychology theories. While economic-based research has primarily focused on formulating a normative model to suggest an optimal stopping rule, psychology-based research has focused on understanding the actual process that leads to a stopping decision. The objective of this research is to integrate theories from both fields to develop a unified empirical framework that can describe 1) how the actual process of stopping decisions in sequential search deviates from the normative process and 2) what factors can be attributed to such a deviation. To better understand the search stopping process, we incorporate consumer's consumption goal into our modeling framework. We posit that given a consumption goal, in addition to expected marginal benefits and costs of search, consumers also rely on perceived progress in making their search stopping decisions. In other words, not only are search stopping decisions affected by the distribution of option's utility but also by the sequence of options. We test our model using an HB choice model and choice experiment data. We demonstrate that a change in consumption goal leads to changes in relative importance consumers place on different attributes. Importantly, we show that a positive perceived progress makes consumers prolong their search whereas a negative perceived progress makes consumers shorten their search. We also examine different moderating factors of perceived progress effects.

■ TD06

Cambria West

Choice Models II

Chair: Sajeev Varki, Visiting Associate Professor, Carroll School of Management, Boston College, Chestnut Hill Campus, MA, varki@uri.edu

1 - The Price Consideration Model of Brand Choice

Andrew Ching, Assistant Professor of Marketing, Rotman School of Management, University of Toronto, 105 St George Street, Toronto, ON, M5S 3E6, Canada, aching@rotman.utoronto.ca, Tulin Erdem, Michael Keane

A fundamental issue in the brand choice literature is that price elasticities of demand are much greater when estimated from pure brand choice models than from either purchase incidence models or choice models that include a no purchase option. In this paper, we propose a very simple explanation for this problem. The idea is simply that consumers do not observe brand prices in each period. We propose a two stage model in which consumers first decide whether to consider buying in a category. If they decide to consider a category, they then look at prices and decide whether and what to buy. The positive probability that consumers do not even consider the category (i.e., they do not even see prices) creates a wedge between the brand choice price elasticity and the purchase incidence price elasticity. We call this the "price consideration" model. We estimate the price consideration model using Nielsen's scanner data on peanut butter and ketchup, and compare it with MNL and nested MNL (NMNL). We find evidence that the price consideration model fits the data better than MNL and NMNL based on log-likelihood, AIC and BIC. We conjecture that the price consideration model outperforms MNL and NMNL because it is able to generate more flexible substitution pattern among brands and the no purchase option.

2 - Customer Equity: A Measurement Based on Dynamic Segmentation

Jaime Romero de la Fuente, Lecturer, Universidad Autónoma de Madrid, Crta. Colmenar Viejo km 15., (Facultad de CC. Económicas), Madrid, 28049, Spain, jaime.romero@uam.es, María Jesús Yagüe Guillen

This study develops a methodology for customer equity measurement that is based on market segmentation. Our approach links customers' behaviours to lifetime values. We segment market on the basis of purchase patterns that lead to homogeneous contributions to company profits. Subsequently, we analyse customer evolution across segments, following a dynamic perspective of segmentation. Finally, our proposal calculates customer equity from customers' evolution across profitability segments. More specifically, we firstly identify segments whose purchase patterns lead to a homogeneous level of profitability during one period. We repeat this analysis for the subsequent periods. Secondly we analyse customer transition between segments across periods. A first order approach is adopted. Additionally, customer characteristics (socio-demographic variables and shopping habits) are used as transition drivers. We employ Markov switching matrices. A non-buying segment is included, which allows us analysing switching probabilities in terms of acquisition and retention rates. Probabilities are estimated through logistic regressions. The expected lifetime of each customer is built up using these probabilities. Under our approach, customers with the same characteristics follow a similar evolution, which leads to similar lifetime values. Consequently, Markov matrices can be built up for homogeneous customers. This simplifies the analysis of formation of customer equity and reduces the costs associated to a marketing mix personalisation. We present an application to the customer base of a catalogue company. Financed by Project BEC2003-07996

3 - Modeling Hierarchical Conjoint Processes and Data from Integrated Experiments using Latent Variables

Len Coote, Senior Lecturer, UQ Business School, The University of Queensland, St Lucia, Brisbane, Ql, 4072, Australia, l.coote@business.uq.edu.au, Jordan Louviere

Applications of latent variable modeling are typically associated with the analysis of non-experimental data, and especially field survey data. By contrast, the analysis of experimental data using latent variables is not well documented in the marketing literature. This paper illustrates an application of latent variable modeling to the analysis of hierarchical conjoint processes with integrated experiments. The modeling approach parallels an extension of hierarchical information integration theory originally outlined by Oppewal, Louviere, and Timmermans (1994). Hierarchical information integration allows a researcher to include a large number of attributes in a conjoint task by designing sub-experiments for each "decision construct." The design matrix for each sub-experiment is conceptualized as a decision construct, or latent variable, and the factors for each sub-experiment are modeled its posited indicators. Advantages of analyzing hierarchical conjoint processes with latent variables are outlined, including: (1) the sub-experiments are estimated simultaneously in a single model yielding overall measures of goodness-of-fit, (2) coefficients or importance weights, standardized to a common metric, can be derived for each decision construct and for each indictor, (3) statistical estimation is improved by partitioning measurement error, at least from the preference constructs studied, and (4) an ad hoc rescaling procedure, based on the analysis of covariance components, allows for rescaling parameter estimates from a single dataset. The basic approach is illustrated with marketing applications to consumer and managerial decision making, and finally, limitations of the approach are considered.

4 - Exploring the Cognitive Algebra of Value Perceptions

Sajeev Varki, Visiting Associate Professor, Carroll School of Management, Boston College, Chestnut Hill Campus, MA, varki@uri.edu, Albert Della Bitta

The concept of value is of strategic importance to marketing since marketing involves exchanges of value. Though value is often conceptualized as a trade-off between the benefits (e.g., quality) and sacrifices (e.g., price) involved in the exchange, the specific nature of the trade-off is often left unspecified. Some authors follow the economic tradition of utility maximization subject to a budget constraint and consider value to be the quality per unit price (ratio form). By contrast, others follow the conjoint analysis tradition and consider value to be the difference between the utility of quality and the disutility of price (linear difference form). In this paper, we specifically explore which of the two value formation rules applies and what factors influence the trade-off. Implications of this research in terms of how the value formation rules impact communication of value and consumer choice are discussed. he authors acknowledge the assistance of Nir Kshetri, Tim Ozcan, and Dong Zhang in data preparation. The authors thank Arch Woodside, Gerald Smith, Liz Miller, Rich Hanna, and Kay Lemon of Boston College for their thoughtful comments.

■ TD07

Cambria East

Product Design Methodologies

Chair: Terry Elrod, Professor, University of Alberta, 3-30H School of Business, University of Alberta, Edmonton, AB, T6G 2R6, Canada, Terry.Elrod@ualberta.ca

1 - Using Market Research Methods and Results in Engineering Design: Challenges and Opportunities

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For successful product development, the gap between market research and product engineering has to be bridged. Although there is a growing focus on customer-driven design, bridging the gap is often not easy. It is especially challenging for consumer durable products with longer development lead times, requiring high-investment for the producer and high-investment for the buyer, and involving complex designs with numerous features to be traded-off and numerous performance attributes to be balanced, and widely different customers—products like cars and trucks. In this presentation, we consider some of the challenges and opportunities for market researchers to adapt existing approaches to such products, using illustrative examples from vehicle development. Key questions include what type of questions and scales work well for evaluating complex performance attributes? How can we facilitate communication between market researchers and engineers, whose language and terminology are so apparently different? How can we best translate market research results, such as translating customer survey data into product quality information for engineering? What are the strengths and limitations of existing modes of data collection, e.g., mail-or internet-based customer surveys and conjoint studies and in-person clinic ratings or customer observations, for evaluating complex performance attributes, like ride and handling, feel and operation of controls, and light and sound? How can information across modes be combined?

2 - Optimal Product Line Design for Consumer Durables: An Integrated Marketing and Design Approach

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We propose an integrated marketing and design approach to guide the design of an optimal product line for consumer durables. We carry out the product line design in a two stage approach. At stage one, we select a set of product alternatives for the composition of the product line. Historically, the product line design problem has been considered as selecting the best K products out of a finite set of N candidate products. However, the set of technologically and economically feasible products can be very large (virtually infinite sometimes). A subjective prior selection of some "good" products can result in a suboptimal product line (Nair, Thakur and Wen 1995). To address this problem, we propose a Non-Dominated Sorting Genetic Algorithm (Deb 2001) to identify a set of good product alternatives effectively and efficiently. In particular, a common characteristic shared by many consumer durables is that the performance of these products can vary across different usage situations and operation conditions. These variations are considered as undesirable sources of uncertainties. In our fitness assignment, our main focus is to preliminarily eliminate the undesirable product alternatives. At the second stage, we conduct a combinatorial optimization to construct an optimal product line. Our optimization involves selecting an optimal level of variety as a trade-off between satisfying the heterogeneous consumer preferences and achieving the optimal economy of scale. Built upon the work of Ramdas and Sawhney (2001), we introduce a cost model of platform-based products for which the firms purchase the components from outside vendors and conduct the assembly in house. We implement our approach in the development of a power tool product line undertaken by a large US manufacturer.

3 - Investigating Endogeneity Bias in Conjoint Models

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The use of adaptive designs in conjoint analysis has been shown to lead to an endogeneity bias in part-worth estimates using sampling experiments. In this paper, we re-examine the endogeneity issue in light of the likelihood principle. The likelihood principle asserts that all relevant information in the data about model parameters is contained in the likelihood function. We show that adhering to the likelihood principle leads to analysis where the endogeneity bias becomes irrelevant. The likelihood principle is implicit to Bayesian analysis, and discussion is offered about the role of sampling experiments in Bayesian versus frequentist analysis.

4 - Partial Profile Choice Experiments: An Assessment

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Partial profile choice experiments are emerging as an important means for estimating conjoint part worth utilities. These experiments constrain choices in each choice set to differ on a prespecified number of attributes (such as three or five). The design specifies which attributes are varied in each choice set as well as the attribute levels for all choices in the set. This paper compares the efficiency of partial profile and full profile designs in four different studies. Partial profile designs have been avoided in the past because they appear to be less efficient. However, conventional application of efficiency criteria such D-efficiency ignores that consumers can make more choices and make those choices more accurately when alternatives differ on only a few attributes in each choice set. D-efficiency does not require these assumptions, however. A more proper application of D-efficiency shows that partial profile choice experiments provide much more efficient estimates of part worths.

■ TD08

Westmoreland West

Word-of-Mouth II: e-Marketing

Chair: Chris Dellarocas, University of Maryland, 4341 Van Munching Hall, College Park, MD, 20742, United States, cdell@rhsmith.umd.edu

1 - The Effect of the Content of Word of Mouth on Purchase Decisions: The Case of the Movie Industry

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Word of mouth (WoM) has long been recognized as one of the most influential sources of information on products and services, especially for experience goods. The recent increase in internet penetration has led consumers to rely more heavily on online opinion forums and surveys have shown online user reviews to be the second most important influence on purchase decisions behind personal experience with the product. A small body of research has started to examine the impact of online user reviews on sales in a number of categories including movies, textbooks and TV shows. Some salient shortcomings of this work, which our research seeks to address, are: a) it considers only the quantity and not the actual content of the reviews, b) it ignores other relevant sources of WoM and c) it treats WoM as being exogenous to sales. Our research identifies both online and offline sources of word-of-mouth in the movie industry including user reviews, magazine articles and expert reviews. Based on prior literature in consumer behavior and communications, we identify several dimensions of the content of communication, such as valence, timing and source-credibility, which are known to determine the effectiveness of the communication. We also develop a methodology to measure the content of word-of-mouth along these dimensions and estimate a Bayesian VAR model that links sales to these word-of-mouth measures.

2 - Who Actually Matters, Word or Mouth?

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Word of Mouth (WOM) has long been recognized in marketing literature as a significant factor in influencing consumers' decision. WOM communication through digital channels such as on the Internet has facilitated unprecedented information transmission. Large amount of WOM communications can be generated on the Internet by even a small number of people. In this study, we seek to differentiate the influences of two components of WOM on the Internet: the number of participants (mouths) and the number of conversations (words). Using online conversations at Usenet as the sources of WOM data, we aim to establish the relationship between online WOM and motion picture performances. By analyzing our data for 71 movies released in theaters between July 2003 and May 2004, we found that mouths and words have qualitatively similar impact on box office performances. Such a result supports the conventionally used measurement of WOM, i.e., the number of conversations. This result also has important managerial implications. Compared to the number of participants, the measurement of the number of conversations is more achievable for businesses in order to evaluate the influence of WOM. In addition, we also measure WOM by volume and dispersion and find that dispersion plays a more significant role in influencing sales. Finally, our results indicate that WOM in general is more of an outcome of sales instead of a driver.

3 - How to Predict Web Users Viral Propensity? A Bayesian Networks Approach

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Viral marketing creates new challenges for modeling, in that it generates complex multi-agent systems. In these systems, consumers, in return for incentives offered by a company, pass along marketing messages to other consumers (Helm 2000; Jurvetson and Draper 1997; Kaikati and Kaikati 2004; Phelps et al. 2004). Even if this strategy efficiency has been underlined in managerial articles presenting several success stories (Beanie babies, Hotmail, Paypal), few academic research has modeled viral marketing, probably because of the number of consumers involved and of the complexity of the links between successive generations of reactions. In this article, we aim to fill this gap and to better understand web user viral propensity by using Bayesian networks. We illustrate our approach with an on line promotional viral marketing game. In the first part of this article, we present a brief literature on viral marketing , web user behavior modeling and word of mouth. In the second part, we introduce the general technique of Bayesian networks. In the third part, we first define different elements concerning the description of the viral phenomenon (tribes constituted of different generations of parents (web users giving e-mail addresses of friends or acquaintances) and children (those receiving the messages). Secondly, we apply Bayesian networks in order to predict the viral propensity of the web users (measured by the number and the quality of e-mail addresses given by the web users) and validate our model. In the last part, we analyse theoretical implications and future research avenue opened by applying Bayesian networks to Marketing topics.

4 - What Motivates People to Review a Product Online? A Study of Online Movie Ratings

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In recent years online product review forums have been exerting an increasingly powerful influence on consumer choice. However, not all products receive the same amount of attention in these forums. The objective of our analysis is to discover what factors account for the variance in consumers' propensity to review individual products online. We focus our attention on one product category (movies) and one type of online product reviews (semi-structured online movie ratings). Our data set consists of 104 movies that were released in the U.S. during 2002 and 63,889 ratings for these movies collected from Yahoo! Movies. Our dependent variable is an estimate of the conditional probability that a person who has watched a movie will rate it online. We find that the propensity to rate a movie has a U-shaped relationship with the perceived quality of the movie (people are more inclined to post ratings for very good and very bad movies), a positive relationship with the amount of public disagreement regarding the movie's quality, and a positive relationship with the marketing effort surrounding the movie. Remarkably, the propensity to rate a movie exhibits a strong negative relationship with the movie's availability: people have a higher propensity to rate less popular/less widely-released movies. Finally, the presence of large numbers of previously posted ratings has a positive impact on subsequent moviegoers' propensity to post ratings for the same movie, suggesting that social effects, rather than the desire to inform other consumers, constitute an important motivation for rating products online. The implications of these findings for marketing and online forum design are discussed.

■ TD09

Westmoreland Central

eCommerce II: Advertising

Chair: Chuan He, Assistant Professor of Marketing, University of Colorado at Boulder, 419 UCB, Boulder, CO, United States, chuan.he@colorado.edu

1 - Firm Characteristics and Bidding Behavior in Online Search Engine Advertising

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The phenomenon of sponsored search advertising—where advertisers pay a fee to Internet search engines to be displayed alongside organic (non-sponsored) web search results—is gaining ground as the largest source of revenues for search engines. The global paid search advertising market is predicted to have a 37% compound annual growth rate (CAGR), to more than $33 bn in 2010. The sponsored search market is essentially a large auction where businesses place bids for individual keywords. The search engine earns revenue from businesses when it displays their ads in response to a relevant search query from a consumer, when the consumer clicks on the ad. This opens up the possibility of customized advertising between consumers and businesses, with consumers typing in relevant keywords that reveal what they are looking for and search engines displaying highly targeted ads relevant to the specific query. A combination of several features such as continuous bidding and the possibility of advertising through organic links makes the market for Internet advertising unique. Using a cross-sectional dataset collected from Yahoo, we empirically estimate the relationship between bidding behavior and firm attributes among businesses participating in such online auctions. Further, we also investigate the incremental value to firms from participating in such sponsored search advertising and the extent of price dispersion among bid values. We build our analysis using the well known search, credence and experience goods (SEC) framework, which has been widely used in the economics and marketing literature to examine consumer search behavior as well as firms' advertising strategies. Our results point out the additional marginal value that firms derive from participating in such auctions.

2 - From Generic to Branded: A Model of Spillover Dynamics in Paid Search Advertising

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An important category of Internet advertising is paid search. In paid search, marketers can buy generic or branded search phrases. A generic phrase does not contain branded words, e.g., "Hotels LA"; a branded phrase does, e.g., "Hilton Hotels LA". One question a paid search campaign manager faces is how to optimize the mix of search phrases. In our sample, the cost per sale is 10 times higher when it is tied to a generic versus a branded search. However, if spillover occurs from generic to branded phrases, using cost per sale alone will bias the mix towards branded words. Our study investigates the nature and extent of these potential spillover effects in paid search. We base our analysis on the well known Nerlove-Arrow Goodwill Model. We assume that exposure to a paid text link served after a search and exposure to a company website after click-through both function as advertising and affect company goodwill. We use a dynamic linear model to capture the potential effect goodwill has on impressions, clicks and sales over time and estimate the model using a Bayesian approach. Our dataset contains daily information on impressions, clicks and reservations resulting from paid search for a major lodging chain. This information is typically given to advertisers by search engines on a daily basis and advertisers use it to manage search campaigns. We find that generic clicks have an effect on branded impressions, clicks and reservations through positive goodwill. Branded activity, however, does not affect generic activity.

3 - Determinants of Permission Email Effectiveness

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Permission email is an important and growing tool used by firms to communicate with customers. It is fast, cheap, simple to manage, and interactive; but it is easy to overuse. Broadcasting too many messages may result in low opening and click-through rates and high opt-out rates. We analyze the influence of various email design variables on recipient responses. In particular, we examine such relationships as (1) how the subject line length and extent of targeting influence the opening rate; (2) how the message length, number of links, and lead time before a promotional event influence the click-through rate; (3) how the customization level influences the opt-out rate, and (4) the extent to which permission emails become less effective over time for a given audience. We examine these questions using two datasets from a retail chain of bricks-and-mortar stores with a substantial online presence. The first dataset describes aggregate subscriber responses to 645 email campaigns over three years. The second dataset describes individual subscriber responses to email campaigns over a two-month period. The aggregate dataset provides a general picture of the influence of e-mail design factors on recipient responses; the disaggregate dataset permits more detailed analysis with individual-level variables such as experience with the system and frequency of emails received.

4 - A Model of Pay-for-placement Advertising

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Pay-for-placement advertising, where firms having the highest bids are placed in prominent spots when consumers search for related key words using the sponsoring search engine, has emerged as an important strategy for major search engines such as Google, Yahoo, and MSN. The distinguishing features of pay-for-placement advertising are that firms need to submit a bid for each click to the link to its website as well as a set of key words to the search engine. Both the bid and the relevance of the key words determine the placement of a firm's advertisement. We show that the a fore mentioned bidding process does not necessarily lead to efficient allocation of resources and that pay-for-placement advertising is a mixed blessing to consumer welfare.

■ TD10

Westmoreland East

Channels II: Retailing

Chair: Yu Ma, Assistant Professor, School of Business, University of Alberta, 4-30G Business Building, Univ of Alberta, Edmonton, AB, T6G 2R6, Canada, yu.ma@ualberta.ca

1 - Impulse Purchases in the Supermarket: The Influence of Consumer, Retailer, and Product Factors

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Impulse purchases — "when a consumer experiences a sudden, often powerful and persistent urge to buy something immediately" (Rook 1987) — form a major part of supermarket sales. In some categories, 80% of purchases are the result of impulse buying and an estimated $4.2 billion in US annual store volume is generated by impulse sales of things like candy and magazines. Most prior studies only link impulse buying to in-store retail environments (shelf signage, price, special displays). However, no study has tried to establish the relative importance of the retailer, the product's attributes, and consumer factors (such as mood state and impulsive personality trait) as drivers of impulse purchases in supermarkets. To do so, 51 adult panelists were shadowed by a tracker during up to three shopping trips. The panelist's grocery receipt indicated whether the product was on sale and allowed us to classify products as food, ready-to-use, and hedonic. The panelist indicated impulsive purchases by circling items on the sales receipt. Measures of mood state were made at the time of purchase. Finally, consumer characteristics such as trait impulsiveness, variety-seeking, and need-for-cognition were obtained in an initial survey. The total number of items purchased by all panelists across all buying occasions was 3,979 and 9 percent were bought on impulse. The objective of the data analysis is to describe, using a nested logit model, the relative importance of the retail, product and consumer characteristics in predicting a planned, impulse or no purchase. A critical step is describing the retail and product characteristics of products neither planned nor impulsively purchased; a problem of missing data must be confronted.

2 - Analysis of Shoppers' Mall Entertainment Values

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Marketers have long acknowledged the importance of entertainment to shopping. The association of entertainment with shopping habits in malls has received relatively little attention. The purpose of this paper will be focused on 1: a discussion of the meaning of mall entertainment. 2: a presentation of the relationships among mall entertainment, shopper's values, and shopping behavior. 3: an investigation of the individual mall entertainment dynamics. This research was designed to directly test the relationship between the entertainment value of malls and the shoppers' behavior. The graphical-modeling (GM) approach was used to determine the relationships among eight individual entertainment aspects, mall visit frequency and number of purchased items. GM is similar to Structural Equation Model (SEM). GM provides more understanding of multiple equivalent models and following statistical properties than SEM. Findings showed that a relationship exists but the relationship is different for mall manager's views and consumer's views of the entertainment values. Also entertainment values in a shopping mall and shoppers' mall visit are closely correlated. Possibly the most important finding of the research was that only two dimensions of mall entertainment appeared to be driving the number of visits to the mall. One of these dimensions could be categorized as having a hedonic experience while shopping. However, the other appears to be a utilitarian dimension of the shopping trip. Since both of these dimensions had a direct and significant relationship with the number of mall visits, it is important for mall developers and managers to remember that shopping is still an economic activity which provides the shopper with desired items.

3 - The Effects of Trip Level Attributes on In-Store Decision Making

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We explore the effects of trip level attributes, determined by the customer prior to the shopping experience, on in-store decision making. Specifically, we examine the effects of planned spend, number of planned items, and goal specificity on the number of unplanned purchases and the resulting level of unplanned spending. We propose that consumers anticipate that they will make unplanned purchases when shopping for groceries. Their expectation of unplanned purchases may be due to awareness that they have planned inadequately for this particular trip or due to prior experience with making impulse purchases on similar trips. Since most consumers have limited resources, consumers set an implicit budget for the shopping trip in an effort to constrain spending, but may leave themselves an "allowance" for unplanned purchases. We test these hypotheses using a dataset of in-store intercept interviews. Using the same dataset, we then explore whether specifically planning the brands to be purchased is a successful mechanism for minimizing unplanned spending. While intuition might suggest that planning is a useful form of self control, we predict that increased goal specificity will be positively related to unplanned spending based on the goal-theoretic literature which indicates that increased goal specificity results in increased goal commitment. We expect that if consumers have specifically planned the brands they intend to purchase (high goal specificity), then they will be highly committed to purchasing those brands, even if other similar brands are promoted. As a result, consumers who have specifically planned the brands they intend to purchase will not capitalize on in-store opportunities to reduce the amount they spend on those items. Results and conclusions will be presented.

4 - Retailers "Talk the Talk," Consumers "Walk the Walk": Investigating the Impact of Store Layout

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Grocery stores typically contain hundreds, if not thousands, of product categories. Physically arranging these product categories among a limited number of store aisles and shelves is a challenging task. A good store layout can provide at least two key benefits to the store: (1) it can increase store attractiveness by simplifying the consumer's shopping experience at the store; (2) it can encourage purchase co-incidence, e.g., a consumer who goes to a particular aisle to buy rolls of toilet tissue may also buy paper towels if they are on an adjacent shelf. This research examines the second benefit using scanner panel data from a single retailer. We propose a multi-category demand model that considers physical locations of product categories to be important determinants of consumers' purchase incidence decisions in these categories at the store. In particular, we examine such issues as: (1) to what extent does store layout influence shopping basket decisions? (2) what is the optimal store layout in terms of total store profitability? (3) how should a retailer design marketing promotions across product categories conditional on the aisle and shelf locations for these products in the store? Our empirical analyses entail first calibrating the parameters of our proposed demand model using purchasing data from 8 product categories in the store, and then performing what-if analyses regarding store layout and promotion decisions of the retailer.

■ TD11

Washington

Promotions II

Chair: Kusum Ailawadi, Professor of Marketing, Tuck School at Dartmouth, 100 Tuck Hall, Hanover, NH, 03755, United States, kusum.ailawadi@dartmouth.edu

1 - The Impact of In-Store Free Samples on Sample Takers

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This paper examines the impact of in-store free samples on consumers who accept them. We build a comprehensive model of purchase incidence for the promoted product that controls for product characteristics, sampling environment characteristics, and consumer characteristics, some of which are unique to in-store sampling. Many of our hypotheses are based on a congruency theory argument which suggests when, 1) the sampled product, 2) the sampling experience, and 3) the consumer are congruent with respect to the hedonic/utilitarian characteristics defining them, then the likelihood of purchase post-sample will be greater. We present the results of an in-store field study which support many of our hypotheses.

2 - Buyer Heterogeneity and the Design of Frequency Programs

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Some frequency programs consist of a multi-level reward structure; e.g. a coffee shop offering one free muffin after 10 coffee purchases, and two muffins after 15 coffees. In this research we examine the seller's decision between offering a single-level reward structure versus a multi-level one. More specifically, we link the seller's frequency program design to the level of heterogeneity in the buyers' purchase and discount rates. We show that when there are both heavy and light users in the market, seller will be better off with a two-level reward program where the larger reward is intended for heavy users. In our framework discount rate heterogeneity is equivalent to purchase rate heterogeneity. As such, two-level program is also better when there is heterogeneity in buyers' discount rates -- even if there are no heavy users. We provide empirical evidence from two studies that buyers preferring the larger reward in a two-level program have higher purchase rates and / or lower discount rates -- compared to buyers preferring the smaller reward.

3 - Learning, Forgetting, and Sales

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Sellers of almost any product or service rarely keep their prices constant through time, and frequently offer price discounts or sales. This paper investigates an explanation of sales, as a way for uninformed consumers to be willing to experience the product, and learn about its fit, and where informed consumers may forget about (or change) their preferences. We investigate the role of the rate of forgetting on the timing between sales, and of the rate of learning and menu costs on the length of a sale, and the effect of a seller carrying multiple products on the pattern of sales. Using price series from supermarket categories, and given the assumed simplified preference structure, we obtain empirical estimates of rates of learning and forgetting, and of the other model parameters.

4 - The Determinants of Consumption Flexibility

Kusum Ailawadi, Professor of Marketing, Tuck School at Dartmouth, 100 Tuck Hall, Hanover, NH, 03755, United States, kusum.ailawadi@dartmouth.edu, Scott Neslin

In the last decade, researchers have demonstrated that higher levels of household inventory can increase consumers' usage rate of at least some product categories. Direct empirical evidence of this consumption flexibility comes from laboratory experiments (e.g., Wansink 1996; Chandon and Wansink 2002) and indirect evidence comes from scanner data studies (e.g., Ailawadi and Neslin 1998; Bell, Chiang, and Padmanabhan 1999). However, with the exception of Chandon and Wansink (2002), who examine how consumption convenience and product salience moderate the relationship between inventory and consumption, little is known about the factors that determine consumption flexibility. We develop a conceptual model of how characteristics of the household, the product, and the particular purchase moderate the effect of inventory on consumption. To test the predictions from this model, we conduct a 10-week field study of approximately 200 households' consumption of ice cream and flavored syrup. Apart from obtaining a rich set of demographic, psychographic, and shopping behavior variables from this panel of households, we track their purchases and inventory and calculate their consumption. Each week, we obtain information on what brands and flavors were bought and in what quantity, as well as the price paid, whether the product was on promotion, where it was stored in the household, and how much inventory they have. In addition, we offer a promotion in the middle of the ten-week study which allows us to study the effect of an exogenous promotion-induced increase in inventory. Analysis of these unique data reveals several interesting findings about the determinants of consumption flexibility.

■ TD12

Fayette

CLV I

Chair: V. Kumar, ING Chair Professor in Marketing, University of Connecticut, 2100 Hillside Road, Unit 1041, Storrs, CT, 06269, United States, vk@business.uconn.edu

1 - Estimating CLV Using Aggregated Data: The Tuscan Lifestyles Case Revisited

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Despite a recent explosion of academic papers that focus on the notion of customer lifetime value (CLV), most firms do not maintain the kinds of detailed customer-level transaction records required for typical CLV calculations. It is, therefore, much harder to implement CLV models than a casual reading of the marketing literature would suggest. A notable exception to this observation is a case by Mason (2003), "Tuscan Lifestyles: Assessing Customer Lifetime Value." Compared to the usual CLV literature, this case presents a far more realistic data format: a series of histograms showing the aggregate distribution of purchases in each period of time (in this case yearly intervals) for two different cohorts of customers newly "acquired" by a catalog marketer. The case asks the right question ("What is a new Tuscan Lifestyles customer worth?") but stops short of offering any methods to project the future purchasing patterns (and thus the lifetime value) using such coarse data. To tackle this novel problem, we utilize the "buy till you die" BG/NBD model developed by Fader, Hardie, and Lee (2005). While the model was originally conceptualized to utilize individual-level data, we show how its parameters can be estimated using histogram-type data instead. Using the data from the Tuscan Lifestyles case, we estimate this new version of the BG/NBD. We demonstrate its key properties/implications and validate its performance using hold-out histograms. We then go on to project CLV estimates for each of the cohorts. We conclude with a few final observations about other ways to bridge the gap between the luxurious (if not very common) world that offers complete transaction data for every customer, and the much more limited data scenario that we work with in this case.

2 - An Empirical Comparison of Models for Customer Base Analysis

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Owing to practitioners' immense expectation on CRM and the exponential growth of computation power during the past few years, numerous marketing research efforts have been made to customer base analysis (CBA). Although there are various models proposed in the related literature for the analysis of customer retention and/or customer lifetime value (CLV), these models are usually validated by relatively short-term data. Given the supposedly long-term emphasis implicit in CBA, there seems to be a vacuum of an empirical validation/comparison of models through longitudinal customer base data with a substantial time span so that various models' longer-term performances can be more relevantly assessed. Based on a retailer's customer base dataset spanning a much longer time period than that reported in most published CBA research, we empirically compare the performance of Pareto/NBD, BG/NBD, the customer migration model, RFM-related data mining, and simple heuristic in the prediction of customer churn and CLV. For each model, the use and limitation uncovered from the detailed comparison are summarized, and the relevance of the CBA modeling efforts is then discussed.

3 - Customer Base Valuation in a Contractual Setting: The Perils of Ignoring Heterogeneity

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The past few years have seen an increasing interest in taking the notion of customer lifetime value (CLV) and extending it to value a customer base, with subsequent linkages to the value of a firm. As we undertake such valuation exercises, it is essential to ensure that our underlying calculations are correct. The application of formulae presented in standard textbook discussions of CLV sees us performing such calculations using a single aggregate retention rate. However, at the cohort level, retention rates typically increase over time. An important question is whether the failure to recognize these dynamics results in any significant bias in the estimate of an individual customer's CLV and therefore the value of the customer base. In order to accommodate these cohort-level dynamics, we need a model of relationship duration that can be used to project the growth of the retention rates into the future. We consider the case of the shifted beta-geometric model, which assumes that retention dynamics are simply due to cross-sectional heterogeneity. For different values of the model parameters, we compare the value of a customer base as calculated using the naïve approach (a constant aggregate retention rate) with the true value that takes the (heterogeneity-induced) dynamics in the retention rates into account. We find the failure to recognize these dynamics yields a downward-biased estimate of the value of the customer base. More importantly, the magnitude of this bias is unacceptable in the majority of cases. We conclude that any attempt to estimate the expected residual value of a customer base should be based off a formal model of contract duration—one which properly accounts for the heterogeneity among the firm's customers.

4 - What Drives Cross-buy?

Morris George, PhD candidate, University of Connecticut, School of Business, 2100 Hillside Rd, Unit 1041, Storrs, CT, 06269, United States, mgeorge@business.uconn.edu, V. Kumar, Joseph Pancras

Firms have started realizing the importance of cross-selling or cross-promoting their brands/products. Cross-selling gives companies an opportunity to increase the revenue contribution from their existing customers. The benefits of cross-buy are also supported in academic research. Cross-buying (i.e. buying multiple categories from the same firm) is shown to positively impact the lifetime value of the customers. However, how does a firm identify customers who are most likely to cross-buy? Can we explain the cross-buying behavior using behavioral variables? Are customers who cross-buy different from customers who do not in terms of customer-based metrics? These are some of the important questions which are yet to be answered. In this study, we answer the above-mentioned questions. More specifically, the objectives of this study are (1) to identify the drivers of cross-buy, and (2) to see whether cross-buy helps to improve revenues and other customer-based metrics such as profitable lifetime duration, likelihood of purchase, and customer lifetime value. We group the drivers as customer characteristics and firm's marketing effort. We use customer database from a catalog retailer and employ econometric models to achieve the objectives of this study. In addition to its contribution to academic literature, the results of this study have implications to practitioners as well. Identifying the customers for cross-sell helps firms to allocate their limited marketing resources to the right customers in the most effective manner. Knowledge about the drivers of cross-buy will enable firms to come up with customer-specific strategies so as to encourage cross-buying behavior.

■ TD13

Somerset West

Pricing II: Reference Effects

Chair: Tulin Erdem, Professor of Business Administration and Marketing, Hass School of Business, University of California-Berkeley, Walter A. Haas School of Business, University of California at Berkeley, Berkeley, CA, 94720-1900, United States, erdem@hass.berkeley.edu

1 - Fairness and Uniform Pricing

Tony Cui, Assistant Professor of Marketing, University of Minnesota, 3-150 CSOM, 321 - 19th Avenue South, Minneapolis, MN, 55455, United States, tcui@csom.umn.edu, Yuxin Chen

The extensive adoption of uniform pricing in retailing industry is puzzling given the fact that retailers may improve their profitability through the use of variable pricing to exploit the difference in differentiated products' demand characteristics. In the paper, we incorporate consumers' fairness concerns about firms' price fairness into a Bertrand model to investigate how firms make pricing decisions when competing for fair-minded consumers. We show that in a wide range of parametric values, firms will adopt uniform pricing strategies in equilibrium. Yelling for price fairness, however, may not be a blessing for fair-minded consumers since the uniform pricing, induced by consumers' concerns of price fairness, may mitigate price competition and increase equilibrium prices, which in turn will let consumers pay for their concerns of price fairness.

2 - Online Shoppers' Price Acceptability: The Lower the Better?

Wen Yin, assistant professor, Adelphi University, 1 South Avenue, Garden City, United States, yin@adelphi.edu

An inverted U-shaped price acceptability function has proposed that price and quality have a positive relationship, however there is a minimum price point below which the quality of the product would be doubted and a maximum point of price above which consumers would deem the price to be too expensive and unacceptable. Despite the prevalence of inverted U-shaped price acceptability function, research has found that consumers may prefer price as low as possible and thus a decreasing price acceptability function without a lower price threshold. Since lowered price will lessen the etailers' profit margin, this study intends to find out what consumers' online price acceptability behavior is, or how they react to a price offering online. Two studies were conducted for the paper: (1) to test if online shoppers have a negative price acceptability function; (2) to find if service quality (as rated by bizrate.com in terms of willingness of shopping again, online delivery, customer support, product met expectation, and customer certification) and income would influence consumer price acceptability. This study limits the products to be those (1) that are low-involvement in nature to exclude its possible influence on price acceptability; (2) those that consumers has bought and used in brick-and-mortar stores before to eliminate the impact of price-quality inference on price acceptability from the study. Scaled paired comparison, which is to have subjects choose the preferred object from a pair of objects, was used to derive the shape of the price acceptability function. As expected, online shoppers were found to follow a decreasing price acceptability function. Service quality and income predicted the shape of price acceptability function quite well.

3 - Did Big Brands Die the Day the Marlboro Man Fell Off His Horse?

Tao Chen, Ph.D student, Carnegie Mellon University, Tepper School of Business, 5000 Forbes Ave, Pittsburgh, PA, 15213, United States, taoc@andrew.cmu.edu, Vishal Singh, Baohong Sun

Unlike frequent price promotions, a publicly announced permanent price cut is more likely to strategically shift consumer decision rules to adapt to the new pricing regime. Research is needed to (1) study whether permanent price cuts cause consumer preference to shift over time; (2) examine how the price cuts affect consumer choices in the short- and long-run; (3) examine the differential and dynamic effect of price cuts on different segments of consumers. We study these issues in the context of Marlboro's permanent price cut in 1993, an event often referred to as Marlboro Friday. Using consumer panel data on cigarette purchases before and after this event, we evaluate the immediate and permanent impact of Marlboro's announcement on its market share and draw implications on the brand competition between Marlboro and uprising generic brands. We develop a brand choice model with time-varying coefficient to study how a permanent shift of pricing policy affects consumer decisions. Results show that the pricing policy has an immediate promotion effect that attracts consumers to experiment premium brands. More importantly, consumers are found to adjust their preference structure to adapt to the new pricing regime. Reduced uncertainty of premium brands resulting from price-induced experimentation coupled with lower prices helped alleviate erosion of Marlboro's market share, separate quality sensitive consumers from price sensitive consumers, and increase the loyalty among consumers who prefer Marlboro. This is the first empirical study that evaluates the new pricing policy announced on Marlboro Friday, an important historical event with good representation of companies adopting new pricing policy.

4 - Decomposing the Reference Price Effects: Quality Signaling or Price Expectations?

Tulin Erdem, E.T. Grether Professor of Business Administration and Marketing, University of California, Berkeley, Haas School of Business, Berkeley, CA, 94720, United States, erdem@haas.berkeley.edu, Baohong Sun, Liang Guo

Price fluctuations due to promotions are a salient feature of most frequently purchased consumer goods markets. A substantial literature in marketing, originating with Winer (1986), has shown that the fit of demand models is substantially improved by including not just a brand's current price, but also some measure of its "reference price," typically operationalized as an average of lagged prices. There may be two distinct behavioral mechanisms that underlie this empirical regularity. First, price may signal quality under quality uncertainty. Consumers may use the history of prices to infer the mean price for a brand. It is this mean price that signals brand quality. If a brand cuts its price in week t, consumers solve a signal extraction problem to determine the extent to which this represents a transitory fluctuation around the mean vs. a more permanent decline in the brand's mean price. To the extent that consumers revise downward their estimate of the brand's mean price, they will also revise downward their estimate of its quality (Erdem, Keane and Sun 2005). Second, when there are price promotions, forward-looking consumers may attempt to time purchases to occur in periods when prices are relatively low (e.g., Erdem, Imai and Keane 2003), which would lead again to reference price effects found, when reduced-form models of reference prices were estimated. Thus, consumer learning (price signaling) and/or consumer inventory behavior (expectations about future prices) may lead to reference price effects found in the prior literature. In this paper, we attempt to distinguish the demand effects of more frequent promotions operating through changes in perceived quality (quality signaling mechanism) versus expected future prices (price expectations mechanism).

■ TD14

Somerset East

Mktg. Strategy II: Advertising

Chair: Robert Fisher, Professor, Richard Ivey School of Business, 2N50, Richard Ivey School of Bus., 1151 Richmond St. N., London, ON, N6A3K7, Canada, rfisher@ivey.uwo.ca

1 - Communication and Product Line Design for a Monopoly with Dual Channels

I-Huei Wu, Institute of Business Administration, National Taiwan University, No. 50, Lane 144, Sec. 4, Kee-Lung Rd., Taipei, Taiwan, wuifamly@ms26.hinet.net, Ning-Hsiu Su, Shan-Yu Chou

This paper analyzes communication and product line design strategies for a manufacturer with both online and offline channels. In particular, we try to understand how online advertising may provide opportunity for the firm to better communicate with its customers by providing relevant information to relevant customers, thus alleviating the cannibalization problem, which in turn enables the firm to design its product line more effectively. Online advertising is different from offline advertising. First, online advertising can only target Internet users while offline advertising potentially can reach all consumers. Second, consumers will receive messages of online advertising only if they want to. In this case, consumers self select the information of product(s) they are interested in, thus reducing the probability that a firm wastes its advertising expenditures. Based on these two features of online advertising, we find that in the presence of online advertising, the firm can better target its advertising message to consumers; as a result, it is more likely that the firm with dual channels chooses to advertise both products.

2 - Modes of Harm and Reality TV

Jashim Khan, Research Associate, Massey University,New Zealand, Palmerston North, PNTH, New Zealand, joshjo_8@yahoo.com, Emma Dresler-Hawke

We examined the modes of harm in Reality TV programming, namely Trading Spouses, by conducting a content analysis of 13 recently aired episodes. Results support the pilot study conducted among ninety undergraduate students of Massey University, New Zealand, that family situation, group living, and physical involvement format have ethical concerns. We discuss the program's portrayal of harmful images by participants in the shows.

3 - Movie Advertising and the Stock Market Valuation of Studios

Amit Joshi, Asst. Professor, University of Central Florida, Department of Marketing, CBA, P.O. Box 161400, Orlando, FL, 32816, United States, ajoshi@bus.ucf.edu, Dominique Hanssens

Major studios typically launch fewer than twenty motion pictures per year, so the financial performance of a single movie release can have a major effect on the studio's profitability. The Efficient Capital Markets hypothesis posits that the stock market would recognize such an impact. In this paper we study how single movie releases impact the investor valuation of the distributor. We analyze the change in post-launch stock price of a movie, and predict the direction and magnitude of excess returns based on the expectation built up for that movie. That expectation is set by media support, i.e. highly advertised movies are expected to draw larger audiences. By using an event study methodology, we isolate the impact of a movie launch on studio stock price, and track the determinants of that change. We examine a comprehensive dataset comprising over 300 movies released by the largest studios, including variables such as their media expenditures, production budget, MPAA ratings, opening and total gross revenues, critical ratings, number of screens at opening and beta excess stock return. Our results indicate that there exists a clear interaction between the marketing support received by a movie and the direction and magnitude of its excess stock return post launch. Movies with above-average advertising have lower post-launch stock returns than films with below-average advertising. Our findings also suggest that movies that are hits at the box office may result in a lowering of stock price if they had high media support, on account of high expectations build-up prior to launch. Thus pre-launch advertising plays a dual role of informing consumers about a movie's arrival as well as helping investors form expectations about the studio's profit performance.

4 - The Differential Impact of Advertising and Product Value on Market Share as Markets Age

Bharat Sud, PhD Candidate, Richard Ivey School of Business, Richard Ivey School of Business, 1151 Richmond St. N., London, ON, N6A3K7, Canada, bsud@ivey.ca, Kersi Antia, Robert Fisher

The proposed research examines the relative impact of advertising and product value on market share over time. Product value — the price paid for a unit of quality — and advertising represent two sources of information for consumers. We argue that advertising and product value are likely to vary in importance as sources of information as markets age. In new markets, consumers must rely on advertising to learn about products in the absence of product experiences that are either direct via purchase, use, and disposition, or indirect via the communicated experiences of others. Over time and as markets age, consumers are better able to identify and select products that offer superior value. Hence, product value should have a greater impact on market share as consumers become more knowledgeable. In addition, consumers are also able to relate the objective product value to the product benefits claimed in the advertising. Therefore, advertising claims which are supported by objective product value are more effective as the product ages through its life cycle. We test our hypotheses in the context of US minivan sales, with four data sources over a 21 year period from the inception of the minivan market: (1) monthly information on market share, price, advertising budgets, product styling and features, and distribution intensity for all brands, (2) product quality ratings obtained from Consumer Reports and Automotive News, and (3) ad content ratings for approximately 2,500 print advertisements. Our study speaks to the public policy implications of truth in advertising.

Friday, 8:30 - 10:00am (Session A)

■ FA01

Allegheny Ballroom I)

Practice Prize I (Special Time 8:15-9:45am)

Chair: John Roberts, Scientia Professor, Aust Grad Sch Mgt, Randwick, Univeristy of New South Wales, NS, 2052, Australia, johnr@agsm.edu.au

1 - The Power of CLV

V. Kumar, ING Chair Professor in Marketing, University of Connecticut, 2100 Hillside Road, Unit 1041, Storrs, CT, 06269, United States, vk@business.uconn.edu, Rajkumar Venkatesan, Tim Bohling, Denise Beckman

It is no secret that firms treat customers differentially. While one customer spends ten minutes on the phone navigating through automated menu options, only to find out that there are no seats available on that evening flight to Chicago, a "Gold" customer whose phone call gets picked up on the second ring by a friendly service representative is offered a window seat on that same flight. How do firms decide, the customers to whom they should provide preferential treatment that clearly costs more money and resources, to which customer they should interact through inexpensive channels like the Internet or the touch tone phone, and which customer to let go? How do firms decide the timing of an offering to a customer? What kind of sales and service resources should the firm allocate to conduct future business with that customer? Firms do develop a measure of what they consider to be the best indicator of the total profits that a customer is likely to provide the firm and use that indicator to base their marketing decisions. But one firm has been more successful than others in managing their customers profitably and that is due in part to a measure called Customer Lifetime Value (CLV). We present the case study here and also look at the organizational and implementation challenges that surround the adoption of customer value management by this B2B firm. The successful implementation of a CLV-based approach in this B2B firm has resulted in increased productivity from marketing investments.

2 - PIN Incentive Planning System: A Disaggregate Modeling Approach Applied to New Car Purchases

Jorge Silva-Risso, Assistant Professor, University of California, Riverside, 900 University Avenue, 201 Anderson Hall, Riverside, CA, 92521-0203, United States, jorge.silva-risso@ucr.edu, Irina Ionova

Automobile manufacturers spend more than $45 billions per year in incentive programs, which are, typically, structured through a menu of options (cash rebates, reduced APR, etc.). Even though these programs could be transformed into financially equivalent "price discounts," evidence indicates that programs with a similar "price discount" may result in significantly different levels of incremental sales. Furthermore, the structure of the program may affect the way consumers arrange the acquisition. For example, a deep reduction of interest rates for purchases could result not only in substantial incremental volume, but also in a shift from leases to financed purchases. We address these issues by modeling the consumer car acquisition as a set of multiple simultaneous choice decisions: car (e.g., Camry), transaction type (purchase or lease), program type (e.g., cash rebate, low APR, rebate-APR combination, etc.) and financing terms. The model is calibrated on sales transaction data from the Power Information Network division of J.D. Power and Associates. Unobserved heterogeneity is handled by random coefficients or hierarchical Bayes (according to the objective of the implementation). We discuss the implementation of a decision support system that was built on the basis of these econometric models. The system has scenario planning and optimization capabilities and is actively used by several automobile manufacturers. Moreover, the system allows users to map an efficiency frontier that identifies the program structure that maximizes incremental volume for each expenditure level. Substantial savings and efficiency gains (in the order of hundreds of millions) have been documented and validated by independent consulting firms and client technical groups.

■ FA02

Crawford East

Market Structure Analysis

Chair: S. Siddarth, University of Southern California, Marketing Department, Marshall School of Business, USC, Los Angeles, CA, 90089, United States, siddarth@marshall.usc.edu

1 - Antitrust Marketing Definition

Fang Wu, Ph.D student, University of Alberta, Business PhD Program, 2-24 Business Building, Edmonton, AB, T6G 2R6, Canada, fangw@ualberta.ca, Paul Messinger, Terry Elrod

In 1986, the Federal Trade Commission (FTC) obtained injunctions against Coca Cola's acquisition of the Dr Pepper Company, and during the same year, successfully deferred Pepsi's proposed acquisition of Seven-Up Co. The FTC's actions are justified by its citing Section 7 of the Clayton Act, which bars any acquisition "where in any line of commerce ... may be substantially to lessen competition, or to tend to create a monopoly." The definition of the relevant "line of commerce" is important in these cases, since it determines the market for which the FTC applies the Merger Guidelines to ascertain whether seller concentration exceeds the prescribed thresholds. However, in these two historical events, the FTC's definition of the relevant market as "the national carbonated soft drink market" was questionable, leading to an important research question concerning how to define "the line of commerce". Particularly, in the current research, we demonstrate how various market structure analysis methods can be used or developed to define whether or not the products of those brands involved in the above antitrust issues belong to the same market.We show how to apply the existing multivariate techniques to forced switching data and how grocery data sets could also be used for the antitrust analysis. Because of the existence of extreme price collinearity among products of the same brands, the classcial statistic methods cannot be easily employed on the latter data set for our research purpose. However, we develop a conceptually and technically novel market structure method to solve such problem based on advanced Bayesian modeling techniques.

2 - Cost Differentials and Quality Competition

Sergio Meza, Assistant Professor of Marketing, University of Toronto, 3359 Mississauga Road North, Kanneff Centre, Room 226, Mississauga, ON, L5L 1C6, Canada, sergio.meza@rotman.utoronto.ca, Mihkel Tombak

The starting point in much of the theory of vertical differentiation of symmetric firms is an assumption of which firm chooses the relatively higher quality level. This assumption helps to solve the problem but also leads to a multiplicity of equilibria. In reality and for a variety of reasons firms tend to be asymmetric (Röller and Desgagné, 1996). We introduce asymmetric marginal costs of production to see which of those equilibria of the quality game remain viable. In the study we examine the quality choices of two firms with different marginal costs of production in vertically differentiated product markets. Out main findings are as follows: As cost asymmetries grow we find that equilibrium quality differences decrease. When cost asymmetries grow large enough we have a unique duopoly equilibrium where the low cost firm would tend to offer high quality. With sufficiently large cost differences we have that the low cost firm monopolizes with a high quality product. Producers' surplus is greater when the low cost firm chooses high quality, however, market coverage is greater and the welfare of low valuation consumers is greater when the low cost producer produces low quality.

3 - The Strategic Complementarity of Multi-Category Market Structure Analysis and Customer Segmentation

Andrea Godfrey, The University of Texas at Austin, Marketing Department, 1 University Station, B6700, Austin, TX, 78712, United States, andrea.godfrey@phd.mccombs.utexas.edu, Maytal Saar-Tsechansky, Leigh McAlister

The marketing activities of firms that offer brands in multiple categories often require them to identify groups of brands from different categories that attract the same type of customer. Market structure analysis has been used to identify brands that have similar appeal for customers, however, these analyses have not been widely applied in contexts involving multiple product categories. Given the inherent relationship between market structure and customer segmentation (Grover and Srinivasan 1987), we extend the literature on market structure analysis by adapting the mixture model approach frequently used for customer segmentation to an analogous method for inferring market structure among large sets of brands in multiple categories. We combine latent class analysis with an Attraction Model (Chien, George and McAlister 2006) to identify brand associative sets that have similar strength of attraction for certain customers. We apply our approach in a service provider context involving a business school's offering of MBA courses in different departments. We compare our results to a model of student segmentation in two applications of the n-fold cross-validation technique; we assess which method is best for identifying a set of products to recommend to a particular customer and which method is best for recommending a set of customers for a particular brand to target. We find that the two approaches are strategically complementary. Defensively, a firm might apply our approach to identify products its customers buy so it can introduce new products to defend its customers from other firms. Offensively, a firm might apply the segmentation approach to identify customers who buy its products, so it can attract new customers who aren't currently buying the firm's products.

4 - The Role of Attitudinal Variables in Identifying Substitution Patterns in the U.S. Automobile Market

S. Siddarth, Associate Professor, University of Southern California, Marshall School of Business, ACC 306H 3660 Trousdale Parkway, Los Angeles, CA, 90089, United States, siddarth@usc.edu, Jorge Silva-Risso, Irina Ionova

The nature of substitution patterns in differentiated product markets has been the focus of extensive research in marketing and economics and is also of great interest to managers who face new product entry or product redesign decisions. An important empirical issue in this research area is to understand how different sources of consumer heterogeneity influence the competitive structure in such markets. For example, recent work by Berry, Levinsohn and Pakes (2004) shows that including unobserved sources of consumer heterogeneity and second-choice information is critical to identifying realistic substitution patterns in the automobile market. Our work is an initial attempt to examine how consumer attitudes influence the competitive structure in differentiated product markets. To this end we develop a disaggregate model of consumer vehicle choice that incorporates product attributes, marketing mix elements such as price and promotions, consumer consideration sets, and also consumer attitudinal variables, such as, attitudes toward driving ("I like driving on challenging roads") or toward shopping ("I spend very little time shopping for a vehicle") or toward different product attributes ("To me comfort is more important than performance). The model is estimated using data from a large survey of automobile buyers in the year 2005, augmented with information on the marketing environment, from transaction data on new vehicle purchases during the same period. The empirical estimation covers about 250 vehicle models and uses instrumental variables to account for price endogeneity. We estimate several sub-models in order to investigate the relative influence of different types of heterogeneity on consumer choice and competition. A product planning application is discussed.

■ FA03

Crawford West

Market Analysis and Response

Chair: Andre Bonfrer, Assistant Professor, Singapore Managment University, 50 Stamford Road, Lee Kong Chian School of Business, Singapore, SI, 178899, Singapore, andrebonfrer@smu.edu.sg

1 - Implementation Intentions, Customer Uncertainty and the Intention-Behavior Link

Murali Chandrashekaran, University of New South Wales, AGSM, Gate 11, Botany Street, Sydney, NS, 2052, Australia, muralic@agsm.edu.au, Frank Kardes, Kristin Rotte, Maria Cronley, Steve Posavac

Recognizing that goal intentions are particularly ineffective when forgetting, procrastination, or distraction from other goals or activities increase the difficulty of self-regulation, Gollwitzer and Brandstatter (1999) suggested that one way to overcome these obstacles is to form implementation intentions. Implementation intentions are goal intentions that are supplemented with detailed plans and contextual cues that serve as reminders to perform intention-relevant activities. This process involves specifying a desired end state, and linking plans to situations by taking the form, "I intend to do y whenever situation z is encountered." We refer to the process of linking plans and contextual cues to intentions as contextualization. Contextualization of intentions has been shown to be effective in increasing the intention-behavior relation in a wide variety of contexts (including remembering to take daily vitamin supplements, screening for cervical cancer, and eating healthy foods). Using data from an actual product concept test conducted by a large consumer packaged goods firm in the US, we offer and test a consumer commitment explanation for why contextualization enhances the translation of stated intentions to behavior. Building on the recognition that commitment to an act will increase the conviction or certainty with which intentions are held (Abelson 1988), the primary goal of the research is test the conjecture that contextualization influences the uncertainty with which intentions are formed. We then examine whether the uncertainty with which intentions are held influences the extent to which stated intentions translate to actual behavior.

2 - Common Challenges in Developing Marketing Models in the Retail Industry

Krishna Arangode, Lead Model Analyst, Manugistics, Inc., 9715 Key West Avenue, Rockville, MD, 20850, United States, karangode@manu.com, Suresh Acharya, Steve Haas, Helen Xu

Recently, there has been a significant increase in justifying marketing actions analytically, and the consultants and academics responsible for designing these quantitative models are seeking innovative approaches to help businesses understand the consequences of their marketing actions. Numerous mathematical formulations have been attempted, and every one of them claims to be the best solution to a common problem/issue at hand. This paper discusses certain challenges faced when working in a retail environment, and possible solutions to them. It is interesting that many of the challenges presented in the sections below will have to be given careful thought irrespective of the model formulation. It is quite feasible to develop the various model formulations and associated advantages/disadvantages. However, the data that retail clients have available, and its associated quality, often make certain model formulations very difficult to estimate, validate, and use. Many consulting companies want to take a cookie cutter approach and fit the standard solution to all clients within a vertical. In our experience, it is important to keep the model formulation simple and to understand as well as interpret the client data within the context of this simple model. In the discussion below we will refrain from using mathematical formulas as much as possible, but explain in simple English the various objectives that the model formulation has to achieve and the challenges that one might face along the way. This approach also allows the client business team to take a participatory approach and contribute to the model development process.

3 - Effectiveness of Information Marketing with Cultural Considerations

Jane Lu Hsu, Professor, National Chung Hsing University, Department of Marketing, 250 Kuo Kuang Road, Taichung, 40227, Taiwan, jlu@dragon.nchu.edu.tw, Kelsey Jing-Ru Hung

Information disseminated in market can only become valuable upon being taken into considerations in consumer decisions to reduce risk and increase satisfaction of the purchases. Marketers need to provide information consumers prefer instead of causing extra burdens or ignorance. Due to the fact that consumers cannot possibly search through all channels prior to purchases, understanding what information is influential in decisions can be essential for marketers. This study

examines influences of information regularly provided in DM of chained hypermarts in consumer decisions. The information in DM is categorized into product-, price-, brand-, and promotion-related information of four product types, food, household sanitary products, domestic appliances, and clothing. Four dimensions, Integration, Confucian work dynamism, Human-heartedness, and Moral discipline, of the Chinese Value Survey (CVS) are used to account for the cultural influences in information searching and evaluations. Stratified consumer surveys were conducted in Shanghai, China, and in Taipei, Taiwan, in 2005, following the age distributions of the population published in the latest censuses in these two cities. A total of 572 valid samples were collected. The results of this study indicate that purchasing frequencies and quantities are increased for those consumers who pay attention to information in DM. Price and promotion information in DM is more influential to the consumers in Taipei than to those in Shanghai. Consumers in Shanghai are relatively more traditional and show stronger respect to Chinese culture. In general, consumers who value information provided in DM more importantly are likely to compare DM from various hypermarts and have higher tendencies to switch retailing locations.

4 - Cross Price Asymmetries and Market Share Response Models

Andre Bonfrer, Assistant Professor, Singapore Managment University, 50 Stamford Road, Lee Kong Chian School of Business, Singapore, SI, 178899, Singapore, andrebonfrer@smu.edu.sg,
Ernst Berndt,
Alvin Silk

The presence of asymmetries in the magnitude of estimated cross-brand substitution effects is a well known and, indeed, a desired property of market response models (cf., Rossi and Allenby 1993 and Sethuraman and Srinivasan 2002). In this paper we investigate the theoretical possibility and the empirical regularity of two related phenomena often viewed as troublesome anomalies: (a) negatively signed and, (b) sign asymmetries in estimates of cross effects obtained from market response models. We study these issues in the context of the widely used MCI and MNL specifications of the fully extended attraction models (Cooper and Nakanishi, 1988), using store level scanner data obtained from 24 subcategories of fast moving consumer goods.

■ FA04

Butler West

Brand Management I: Portfolios

Chair: Larry Garber, Associate Professor, Elon University, Love School of Business, Campus Box 2075, Elon, NC, 27244, United States, garberll@appstate.edu

1 - Market Share and Product Distribution: Re-tested and Extended

Michael W. Kruger, EVP, Analytics R&D, Information Resources, Inc., 150 N. Clinton St., Chicago, IL, 60661, United States, mike.kruger@infores.com, Brian Harper

In a review of empirical generalizations in marketing, Reibstein and Farris (1995) note the relationship of market share (MS) and product distribution (D) can be modeled as $MS = b0 * D^{b1} / (1-D)^{b2}$. The relationship is generally convex, with high share brands having more share points per point of distribution. This paper tests this relationship across many categories and across six years from IRI's Infoscan Reviews database. Most, but not all, categories follow the general pattern. We present evidence on the generality of the model, show how many consumer packaged goods categories follow the general pattern, show how stable the model is when estimated for multiple cross-sections, and assess whether cross-sectional convex models are consistent with changes seen over time for brands with substantial changes in share and/or distribution. We compare alternative models incorporating both breadth and depth of distribution.

2 - Using Network Analysis to Examine Brand Portfolio Strategies

Kim Serota, Visiting Professor of Marketing, Oakland University, School of Business Administration, 238J Elliott Hall, Rochester, MI, 48309, United States, serota@oakland.edu, Mukesh Bhargava

Many large firms manage a portfolio of brands in order to meet diverse needs and serve differing customer segments and locations. Marketing managers may choose different strategies in order to maximize share for the overall portfolio, address threats from new entrants, and adapt to other competitive changes. Analysis of emergent market structure can be a source of competitive advantage. In this paper, network analysis is applied to brand usage behavior in order to identify structural characteristics. Social network analysis has been used to provide insights into a variety of topics in marketing strategy and industrial purchasing and behavior. However, adaptations for examining market structure have focused primarily on perceived brand choice (Henderson, Iacobucci and Calder, 1998 and 2002) using associative networks as an alternative to multi-dimensional scaling. The logic of using network analysis is that consumers may have multiple experiences with brands, so brand choices that vary over usage occasions and locations are likely to be linked. Specifically, we examine the network structure for nine car rental companies in five usage situations (45 "products"). Results are based on panel data for 7171 respondents making annual car rental choices. Measures of centrality and cohesion are used to identify market leadership and determine both complements and co-branding opportunities. Two specific research questions addressed are: Is there more cohesion (in the market structure) among brands across usage situations or within usage situations across brands? Are clique members more likely to be preferred over other competitors in future purchase situations?

3 - Consumer Response to Endorsed Branding: An Experimental Study

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Although endorsed branding is increasingly used by companies, surprisingly little empirical research about consumer responses to this strategy exists. The purpose of this study is to identify antecedents to an effective use of endorsed branding. We investigate how the addition of a company brand to an established product brand affects consumer attitudes towards the focal product. We propose that the acceptance of endorsed branding depends on the following factors: product category fit of the endorsing brand, strength of the endorsing brand, and strength of the product brand. A 2 (product brand strength) by 2 (company brand strength) by 2 (product category fit) between-subject experiment was carried out to examine the combined effects of these factors on consumer attitudes towards the endorsed product. Our results indicate main effects of product brand strength ($F(1, 92) = 13.35$, $P < .0001$) and product category fit ($F(1, 92) = 9.78$, $P < .002$). Consumer attitude towards endorsed products was more favorable in the weak product brand than in the strong product brand condition. The addition of an endorsing brand (independent of its strength and product category fit) therefore did not benefit strong product brands. Moreover, product category fit positively affected attitudes towards the endorsed product. Even strong endorsing brands needed a good product category fit to lead to favorable product evaluations. These results have clear implications for companies faced with endorsing decisions: product category fit seems to be a necessary condition and endorsing of strong product brands should be avoided.

4 - Simultaneous Introduction of Multiple Brands and its Impact on Consideration Sets

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The impact of new brand entry on consumers' consideration sets and brand choice is a subject of considerable interest. Most of the extant literature, however, is limited to single brand entry, whereas fast growing emerging markets such as India have been experiencing near simultaneous introduction of multitudes of products and brands, many with almost identical positioning. We hypothesize that some of the results established for single brand entry may not hold when similarly positioned new brands are introduced simultaneously. Specifically, Lehman and Pan (JMR 1994) established that entry of new brands of types they call dominating, compromise or assimilated are more likely included in consideration sets than other types, and that the entry of new brands changes consideration sets away from extreme brands. We hypothesize that when similarly positioned brands enter simultaneously, some of the above effects may invert. Inversion may happen due to a consumer tendency to dwell more greatly on positioning claims when they are reinforced by the voices of similar entrants, disproportionate to what a single new entrant is able to achieve. Hence, there is a greater reduction in the inertial tendencies of loyal consumers, and a heightened tendency for variety seekers to consider alternatives. These effects will vary depending upon the particular entry positions of new brands relative to existing market structures. We propose a test using a between subjects experimental design. The implications of support for our hypotheses would be far reaching. For one, we would show that the probability of entering a consideration set for a new brand is greater if it is introduced with a clone. The next phase of our research will examine the simultaneous entry of dissimilar brands.

■ FA05

Butler East

Consumer Behavior II

Chair: Yinlong Zhang, UTSA, 6900 North Loop 1604 West, San Antonio, 78249, United States, yzhang@utsa.edu

1 - Threshold Effects in Gambling: An Empirical Analysis

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The Friedman-Savage approach is a common approach to explain why rational agents might participate in unfair bets, with negative expected returns. The crux of this approach is the assumption of local non-concavity of utility functions of consumers. Past research has provided some empirical support for this theory. However, one aspect of this theory that has not received much attention in the empirical literature on gambling is the prediction of threshold effects. In particular, the theory predicts that consumers participate in gambles only up to a certain threshold of winnings. The trade press on gambling provides anecdotal support for this effect. However, there has been no research to test and measure these threshold effects in realistic, non-laboratory situations. A major reason for this has been the absence of panel data on gambling, without which it would be hard to distinguish threshold effects from heterogeneity across consumers. Any study that attempts to detect these threshold effects must also control for these marketing expenditures ("comps") made at the individual consumer level. An interesting corollary finding to such an analysis would be the quantification of the existence and size of the effects of comps on consumer gambling behavior — a hitherto unexplored analysis. We use a unique panel dataset from a major Casino chain to conduct an empirical analysis of consumer behavior in gambling situations. We derive marketing and welfare implications from our empirical analysis.

2 - Re-Examination of Maximization: Reliability and Validity Studies and Derivation of a Short Form

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The Maximization scale measures individual differences in desire to maximize or optimize choices. The scale consists of three dimensions: 1) having high standards both for oneself and for things in general; 2) seeking better options and alternatives; and 3) difficulty of choosing and making a decision. Maximization has become very relevant to consumer researchers in the recent years as interest in the negative effects of larger choice sets has grown, and maximizers have been found to be particularly susceptible to such effects. In this paper we develop a shorter Maximization scale that could be used by a larger number of researchers in marketing. For this purpose we conduct a psychometric analysis of the Maximization scale (Schwartz et al. 2002) and establish its factor structure, reliability and validity. In Study 1 we analyze 13 existing datasets containing the Maximization scale in order to confirm the factor structure of the scale, assess its reliability, and reduce the number of items. Based on these analyses we verify that the scale is reliable and consists of three factors, which converge on a higher-order latent construct. We then reduce the number of items in the scale to nine by keeping three items for each dimension. In Study 2 we evaluate the discriminant and nomological validity of the newly developed short scale by relating it to existing constructs, such as anticipated regret, happiness, satisfaction with life, and optimism. Finally, we plan to experimentally examine the reduced scale's predictive validity. For this purpose we will investigate the relationship between consumers' maximizing tendencies, as measured by the reduced Maximization scale, and social comparison, regret, and happiness with consumer purchasing choices.

3 - Exploring The Values of Art Film Audiences

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In the motion picture product category, depending on the type of films preferred, the audiences have different preferences and behavioral patterns. Resource allocation has been very uneven; it favors commercial films, and only a limited number of theater screens are dedicated to screening art films. The main objective of this study is to examine whether the art film market is worth targeting from a marketing perspective. Four consumer behavior aspects were investigated to demonstrate the value of the art film market. These consumer behavior aspects are art film audiences' commitment to movie attendance, attitude towards movies in general, tolerance towards movie theater conditions, and interest in movie-affiliated merchandise. This study additionally profiled art film audiences by their demographics and lifestyles, enhancing the analysis of the marketing perspective and providing an in-depth profile of the target market. The research methodology included conducting a questionnaire survey in four Vancouver movie theaters; 440 useable questionnaires were collected. The findings showed that art film audiences tend to be mature in age and have a high educational background. Also, they tend to have an active lifestyle which includes intensive cultural consumption. The findings further demonstrated that art film audiences are more committed to movie attendance, have a more favorable attitude towards movies in general, and are more tolerant towards movie theater conditions than commercial film audiences. However, there is no significant difference between these two moviegoer groups in their interest in purchasing movie-affiliated merchandise. Based on the research findings, we discussed implications.

4 - Evaluation of Qualitative and Quantitative Marketing Research Methods

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We propose that there is a systematic impact of a marketing researcher's thinking style (analytic versus holistic) on the evaluation of qualitative and quantitative research methods. We test this hypothesis by measuring the analytic versus holistic thinking style (Study 1), and by manipulating the analytic versus holistic thinking style (Study 2). Convergent results show that researchers with an analytic thinking style perceive quantitative research methods as more attractive than qualitative research methods. Conversely, researchers with a holistic thinking style perceive qualitative research methods as more attractive than quantitative research methods.

■ FA06

Cambria West

Choice Models III

Chair: Timothy Devinney, Professor, Australian Graduate School of Management, University of New South Wales, Sydney, ns, 2052, Australia, t.devinney@unsw..du.au

1 - The Competitive Implications of Consideration Sets

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Recommendations on managerial decisions made by several decision support systems (DSS) developed in the marketing literature depend upon implicit assumptions about the response of consumers to the marketing decisions of retailers and manufacturers. While these DSS model heterogeneity of choice parameters among consumers and consumer state dependence in choice, they assume that consumers respond to the marketing mix variables of all the choice alternatives in the market, i.e., that consumer response is global. The consideration set literature has shown that consumers respond to the marketing mix variables of smaller subsets of alternatives, i.e., consumer response to marketing mix variables is local, rather than global. In this paper we examine whether the assumption of globality of consumer response can substantially affect the important metrics which DSS use to make recommendations. We also calibrate the effects of modeling local response on several such metrics (including the margins of retailers and manufacturers) relative to the other aspects of consumer response such as parameter heterogeneity and state dependence which have been incorporated in DSS. We find that modeling local response can substantially change several of these metrics even when parameter heterogeneity and state dependence are accounted for. We conclude that to preserve the optimality of managerial decisions, future DSS should incorporate local consumer response into the characterization of consumer choice.

2 - Joint Consumption

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In this paper, we utilize data from pairs of golfers who played golf both separately and concurrently to estimate a demand model accounting for complementarities associated with joint consumption. We estimate the added value of playing golf when their partner is willing to play with them relative to the value of playing alone. The partnership generally leads to increase demand for the firm, but it also has marketing implications such that firms may wish to engage in pricing or promotion that takes advantage of these demand synergies. We therefore observe golf courses issuing coupons and advertisements that offer discounts if a partner is brought to the course and others in which lunch for both players is included with the purchase of golf for the pair. By encouraging a relationship which provides substantial increases in revenue, these marketing tools may lead to increases in the willingness to consume jointly if the previous joint consumption experience leads to more joint consumption experiences.

3 - Service Diffusion Augmented by Brand Choice

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Many cases of innovation diffusion feature the following two characteristics: First, apart from an initial time period in which only one alternative is available, the customer adoption process also involves a choice between product category alternatives. Second, the adoption process does not include one stage only. A potential customer might go through various stages such as awareness or consideration before finally adopting the innovation. These two characteristics are often not addressed in diffusion or choice models. In this study, we suggest a brand-level diffusion model that addresses both phenomena. The model is intended primarily for diffusion processes of continuous services, but can also be used (with some modifications) in the context of durable goods. The non-adopter population in this model is divided into two distinct segments that differ in service consideration, i.e., considering and non-considering potential customers. Accordingly, the model includes two stages. The first stage describes the flow from non-consideration to consideration. This stage is modeled within the hazard framework. The second stage describes the choice between service alternatives, as well as the option of deferring choice. This stage is modeled within the choice framework. Potential customers' heterogeneity is incorporated into the model through individual-level parameters. Aggregate- as well as individual-level model indications, combined with additional knowledge concerning the covariates that affect the flow between adoption states, enable differential handling of the two segments. In addition, the model enables the analysis of penetration patterns and prediction at the brand level. The model is estimated and validated using data on a new price package service.

4 - Identifying Segments of Ethical Consumers: A Latent Class Regression Analysis of Choice Experiments

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Ethical consumerism has become an important topic in both the popular press and academic journals. High visibility issues such as the use of child labor in developing countries or the global environmental impact of production appear to increasingly affect the purchase decisions of consumers around the world. However, the question remains, "to what extent do consumers use social issues in making their 'daily purchasing decisions'?" The evidence is, at best, contradictory. This inconclusiveness can be partly attributed to the use of surveys that ask respondents to simply rank the importance of a list of ethical issues. As Auger and Devinney (2005) show, the problem is not that socially oriented consumers do not reveal their intent but that non-socially oriented consumers muddy the results by responding as if they have a conscience. Auger et. al. (2003) is an exception to the use of attitudinal surveys to measure intent to purchase. They utilize a choice modeling approach to provide more accurate willingness-to-pay estimates for the social features of products and find that some consumers were willing to pay for more socially acceptable products, but would not sacrifice traditional features for socially acceptable ones. This study builds on the work of Auger et. al. and extends their choice modeling approach for the study of ethical consumerism to additional products and countries. More importantly, this study introduces the use of latent class finite mixture regression to examine the role of unobserved heterogeneity and estimate separate segment level models simultaneously.

■ FA07

Cambria East

New Product Development - I

Chair: Brett Gordon, Carnegie Mellon University, Tepper School of Business, Corner of Tech & Frew Sts, Rm 317A, Pittsburgh, PA, 15213, United States, brgordon@andrew.cmu.edu

1 - Innovation, New Product Introductions, and Financial Returns

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The number of new consumer packaged goods introductions continues to grow each year (e.g., according to Productscan there were over 11,000 new products introduced in North America in 2004). At the same time, only a fraction of these introductions were considered to be innovative (e.g., according to Productscan, more than 93% of these introductions were not innovative at all). And, the failure rate of new product introductions has not improved over time, continuing to exceed 80%. In light of these statistics, it is critical to understand the actual financial payoffs associated with new product introductions. Do companies obtain financial rewards from introducing new products? Are greater rewards always associated with more innovative products? Under what conditions can new products deliver higher financial rewards? To address these questions, we empirically analyze the effects of new beverage introductions over a twenty year period on the drivers of firm financial performance. As part of our analyses, we also consider the differential financial effects of more innovative introductions (e.g., due to new formulations, merchandising, customer segments, packaging benefits, positioning, technology). Further, our analyses allow us to explore the potential interactions among new product introductions and firms' other capabilities (e.g., assets and advertising).

2 - Long-term Returns to Incremental, Breakthrough, and Market-dominant Innovation

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Managing innovation to maximize long-term returns is vital to companies' growth. However, the relative performance of different innovation strategies over the long-run is not well understood. Breakthrough innovation, although considered more valuable, is risky and rare. Incremental innovation is prevalent in the marketplace, but is not seen as a driver of profits. Finally, we have no clear insight into the financial consequences of different innovation deployment strategies across product markets. To further our understanding of such issues, we assess long-term stock market returns to new product introductions depending on their innovativeness and their market placement relative to competitive introductions. We empirically test our hypotheses on a comprehensive database of over 20,000 new consumer packaged goods introduced over 19 years. We find that incremental innovation plays a significant, albeit indirect, role in creating long-term value for firms. It significantly enhances the long-term returns of firms which introduce breakthrough innovation and firms which dominate the innovation activity in any given product market.

3 - Measuring the Impact of Unexpected Innovation Success on Shareholder Value

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Movies follow a very short life cycle in cinemas. Box office sales have strong effects on the financial success in subsequent phases of revenue generation such as the selling of DVDs or licensing to TV-stations. We apply the event study methodology to analyze the impact of several potential events (e.g., box office sales of the first weekend) in the early stage of the movie life cycle that may be relevant to a firm's value. We model the expectations of the market prior to the release of the movie and compare the observed movie performance with the expected performance. We find that the day following the release day has a significant impact on stock prices if the expectations towards the movie's box office results differ from the real performance.

Furthermore, we find evidence that the announcement of box office sales of the second weekend also influences stock prices.

4 - Pricing and the Product Life Cycle in the CPU Industry: An Empirical Investigation

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This paper investigates the empirical relationship between product-level entry/exit and pricing decisions in the computer processor industry. This industry is particularly interesting because it is composed of two major players, Intel and AMD, engaged in a long competitive battle in terms of both technology and pricing. We use a unique data set covering the period from 1993 to 2005, collected from a variety of sources, containing detailed information on desktop PC processor characteristics and prices. Our analysis reveals several interesting patterns on the relationship between the rate of product introduction and price changes, and the survival rates for products at different points in the industry's evolution. We find that the rate of product introduction increased as the technology gap between the two firms shrank. Growth of AMD as a formidable competitor resulted in both firms nearly doubling the size of their product lines, with average product life cycle length reducing significantly over time. Factors determining the pricing of products over their life cycles, such as degree of competitiveness and cannibalization from next generation products, are explored.

■ FA08

Westmoreland West

Word-of-Mouth III: Game-Theoretic Models

Chair: Xinxin Li, Assistant Professor, University of Connecticut, 2100 Hillside Road U1041, Storrs, CT, 06269, United States, xli@business.uconn.edu

1 - Link to Success: How Blogs Build an Audience by Promoting Rivals

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Weblogs or blogs are typically websites maintained by a single person or group of persons on a specific topic. The key research question of this paper is - Why are blogs so popular given that blogs could be potentially biased or contain little informational content. The unregulated nature of the blogosphere raises the question of how the blogs' quality can be maintained. We seek to explain the popularity and quality content of blogs by the phenomenon which we call "monitoring through linking". Blogs typically have outgoing links to other blogs which are created by the blog's author. So, if the blogger considers some other blog to be good, he links to that particular blog. This is both interesting and intriguing since linking to another blog is an advertisement for that blog: a potential competitor. We present a model where blogs are differentiated along two dimensions: the ability to produce original content and the ability to link to other blogs with original content. Thus, by linking a site demonstrates its ability to link to original content in future periods. The downside of a link is that it is a recommendation of a competing blog: it demonstrates that the other site is more likely to deliver original content next period. We show that linking is an equilibrium strategy outcome under certain conditions. We also examine the consequences of this monitoring system in a variety of contexts.

2 - An Economic Analysis of Online Product Reviews and Ratings

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The widespread commercial use of the Internet has transformed the global economy into a digital, more transparent phase, dramatically lowering search costs and allowing consumers to easily acquire product information. Many online vendors and third-party firms provide consumers with easy-to-use systems to give product reviews and ratings. With online reviews and ratings, consumers can now make better, more informed purchasing decisions. However, better information also implies that consumers' willingness-to-pay for a product matching their preferences has become higher than otherwise; vendors may be able to charge higher prices to preference-matched consumers while foregoing some profits from other consumers who, after reading reviews and ratings, may either decide to buy competitors' product or are not as willing to pay as before. Availability of online reviews and ratings may significantly influence a vendor's strategies in terms of pricing and market segmentation. Consumers as well as vendors can potentially benefit or lose from such availability though it is unclear whether the net effect to each party is positive, or who gains or loses most. This paper provides an analytical model to study the impacts of online review and rating systems on vendor marketing strategies, consumer surplus and social welfare. We find that both consumer and vendor surplus can improve with the availability of consumer reviews and ratings, and that the vendor may have incentive to induce higher product ratings by under-charging in earlier periods. We also show that, contrary to the conventional wisdom about competition, consumer surplus and social welfare can in fact be higher in a monopolist market than in a duopolistic market when product review information is available.

3 - Information Sharing in Buyer Communities — The Case of Reverse Pricing

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Reverse pricing is a market mechanism under which a prospective buyer bids for a specific product and the sale only occurs if this bid exceeds a threshold price that has been set by the seller beforehand and that is unknown to consumers. This mechanism was first applied by Priceline.com and is also known as "Name-Your-Own-Price"-mechanism. The difference between an accepted bid and the threshold price denotes additional profit for the seller. Applying this mechanism and its associated intransparency may thus help to segment the market. Information about accepted and rejected bids from previous bidders allows prospective buyers to update their beliefs about the location parameters of the threshold price and thus may jeopardize the seller's profit. As buyers do not compete against each other, communities sharing the latest experience with bids on products which are sold using a Reverse-Pricing-mechanism have developed (e.g. BiddingForTravel.com for products sold by Priceline and Expedia). The aim of this paper is threefold: First, we model the impact of such information on the bidding behavior. Assuming rational bidding behavior, we analytically analyze the impact of information about accepted and rejected bids on consumers based on an economic model for the bidding process. Second, we test our model in a laboratory experiment with induced valuations. Third, we identify the drivers of information sharing, i.e. which characteristics of consumers as well as their bidding process influence their propensity to distribute information on such communities.

4 - Product Reviews and Competition

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Consumer risk aversion and uncertainty about the quality of unfamiliar products may deter consumers from experimenting with new products, and correspondingly enable firms to charge higher prices for repeat purchases. The emergence of online review sites, which provide customers a low-cost mechanism to share product experiences, has the potential to reduce this form of information asymmetry and therefore lead markets covered by these systems to be more competitive. However, increased price competition is not widely observed for the products that are covered by review systems, and many dominant firms in the marketplace are actively encouraging consumers to share evaluations online, inconsistent with the notion that online review systems increase competition. The objective of this study is to better understand when and how online reviews affect prices and competition. Our results suggest that while quality uncertainty can allow firms to charge high prices to returning customers, uncertainty reduction due to experience sharing among consumers does not necessarily encourage price competition when consumers have different preferences. Depending on the accuracy of reviews (how closely reported quality in consumer reviews corresponds to actual buyer experience) the market can become more or less competitive. When accuracy is high, firms are more likely to undercut prices. When accuracy is low, the market may become less competitive compared to the scenario with no reviews. For highly-differentiated products, availability of reviews may not affect pricing strategy at all. This analysis contributes to a better understanding of the role of

consumer reviews in affecting market competitiveness, and sheds light on when retailers can benefit from facilitating online reviews.

■ FA09

Westmoreland Central

Empirical Strategies for Studying Auction-Markets

Chair: Robert Zeithammer, University of Chicago, rzeitham@gsb.uchicago.edu

1 - The Impact of Customer Community Participation on Online Auction Outcomes: Evidence from a Large-scale Field Experiment

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Although interest in brand and customer communities is growing, evidence on the impact of encouraging customers to participate in firm-maintained communities is lacking in the literature. In particular, virtually all of the prior research has solely studied customers that have already chosen to participate in communities. In this research, we investigate the impact of encouraging participation in online consumer communities (chat rooms, bulletin boards) on subsequent online auction outcomes (sales volume, service fees, number of bids, auctions won, bidding intensity, and profitability) of customers. We conducted a large-scale field experiment involving approximately 130,000 current users --- buyers and sellers --- of a large online auction site. Users were randomly assigned to either receive a series of invitations to participate in the firm's online communities, or were withheld from such invitations. We then tracked their behaviors over a period of one year, and surveyed them to gauge their perceptions of the auction firm after approximately six months. Our results consistently reveal that customers who were encouraged to participate in the firm-managed customer communities engaged in significantly higher levels of behaviors (more bids, more purchases, more listings and sales, and greater sales revenue), and had more positive perceptions (e.g., attachment to the auction site brand, identification with the brand, and satisfaction with the firm) when compared to customers who were not encouraged to participate. Furthermore, we examined differences between customers to determine which segments were affected most positively by encouragement to participate. The theoretical and managerial implications of the research will also be discussed.

2 - The Role of Quality Indicators in Internet Auctions: An Empirical Study

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Internet auction companies have developed innovative tools that allow sellers to reveal more information about their products and avoid "lemon's problem." Based on signaling theory, the authors use eBay as an example to examine how quality indicators help alleviate the quality uncertainty. It is the first empirical study evaluating the signaling role of e-Bay's institutional features in mitigating the adverse selection and winner's curse problems. The findings provide empirical evidence for better understanding of the economic foundation behind the innovative
eBay design.

3 - Charitable Intent and Bidding in Charity Auctions

Peter T. L. Popkowski Leszczyc, University of Alberta, Michael H. Rothkopf

While charitable auctions are an important fundraising tool, very little research has been conducted about their effectiveness, and little is known about the bidding behavior and the charitable intent of the participants in these auctions. This research looks at bidding behavior of bidders and the effectiveness of auctions as a way to raise money for charities. We focus on the charitable intent of bidders and on how to create more efficient charity auctions. We provide results of three empirical studies consisting of real-life auctions comparing the revenue of charity versus non-charity auctions, while studying charitable intent by bidders, the impact of shill bidding and the type of product auctioned. Results show that auctions with proceeds donated to charity lead to significantly higher selling prices. This increase is due to charitable intent by bidders rather than increased bidder entry. We observed a significant effect of shill bidding and more importantly, a positive interaction between shill bidding and charity, consistent with the notion that bidders in charity auctions act as volunteer shills increasing the selling price of the auctioned item. The results of our third study find that auctions where 25% of the selling price was donated to charity lead to higher net revenue (selling price less the 25% donated) than non-charity auctions. We provide some insights on how companies can successfully implement charity auctions as a Corporate Social Responsibility (CSR) strategy.

4 - When is Auctioning Preferred to Posting a Fixed Selling Price?

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While auctioning and selling by a fixed posted price have both been analyzed extensively in isolation, existing literature provides little guidance about how to choose between these two popular selling formats. This paper identifies several factors that may drive the choice, and empirically examines their correlation with actual format-choice in a dataset from eBay — a unique marketplace where both formats compete for sellers' favor on a level playing field. Three classes of factors are considered: properties of market demand and supply, properties of the items sold, and characteristics of the sellers themselves. The theory of seller-specific factors like experience and inventory-homogeneity contributes to the theoretical literature on optimal selling by analyzing a fundamental difference between the format-specific seller costs: finding the optimal unit price given an inventory of several identical units involves a fixed cost, while auctioning the same set unit-by-unit involves a variable cost for each unit sold. Therefore, under mild assumptions, the more homogeneous the seller's inventory, the more likely it is that the seller uses posted prices, with homogeneity being even more important in larger inventories. Both the direction and the magnitude of the correlations between all three classes of factors and the format-choice of eBay sellers are measured using a choice-model. The empirical analysis finds that eBay sellers behave consistently with the predicted effects of seller-specific factors, and that the product-specific factors, like bundling or depreciation, also seem important. On the other hand, the observable characteristics of market demand and supply do not seem to influence the choice among formats significantly. Furthermore, it does not seem that individual eBay sellers are each using the multiple formats to discriminate among buyers with heterogeneous risk-aversion or heterogeneous patience.

■ FA10

Westmoreland East

Channels III: Retailing

Chair: Tansev Geylani, Assistant Professor, University of Pittsburgh, Katz Grad School of Business, 320 Mervis Hall, Pittsburgh, PA, 15260, United States, tgeylani@katz.pitt.edu

1 - The Double Whammy: Restrictive Returns Policies and Limited Information in a Competitive Environment

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Product returns cost U.S. companies over $100 billion annually. To defray this cost, many firms adopt a restrictive returns policy by charging consumers a restocking fee when an item is brought back. This policy affects consumers most when they are uncertain of how well the available products match preferences. Previous research in the area has shown that in a monopolistic environment, high restocking fees can be optimal in order to both recoup costs on returned products and discourage many consumers from making returns. However, in a competitive environment, one would naturally expect the firms to charge low or no restocking fees to attract consumers who are uncertain about the fit of the products to their preferences. Also, one would conjecture that firms would prefer to avoid the cost of returns by ensuring that consumers are better informed about product offerings. Yet, in practice, we observe high return rates and a variety of restocking fees up to 25%, even at popular stores such as Best Buy. We develop a location model of competing sellers serving a heterogeneous buyer population. Unlike a standard location model with fixed consumer locations, in our setting, a consumer is uncertain about the match between her ideal product and the actual products offered in the market. Surprisingly, we find that restocking fees above the firm's cost of a return can be sustained in a competitive environment. Moreover, we find that competing firms may prefer to serve consumers who lack knowledge about product fit, some of whom therefore do return the product.

2 - In Pursuit of Retailing Dominance: Market Dominance, Channel Dominance, or Both?

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The emergence of power retailers, such as Wal-mart, Best Buy, and Home Depot, has significantly changed the competitive landscape in the retailing industry in the past two decades. These power retailers frequently dominate other small, independent retailers by charging lower prices (market dominance). Some also pursue the strategy of dominating the distribution channel by dictating low wholesale prices to suppliers (channel dominance). Indeed, in the Wal-mart case, it exercises both market and channel dominance. At the same time, suppliers are entering into close partnerships with power retailers. For instance, the close cooperation between Procter and Gamble and Wal-mart is well known. In this paper, we investigate, using a game-theoretic model, how a strategy of dominance pursued by a power retailer, whether it is market dominance or channel dominance or dual dominance, may affect channel relationships. We show that market dominance tends to benefit the power and weak retailers alike at the expense of the supplier. Channel dominance benefits both the supplier and the power retailer at the expense of the weak retailer. Interestingly, dual dominance is not always the best strategy for a self-interested power retailer to pursue. We further show that even when the power retailer chooses to pursue the strategy of dual dominance, the weak retailer, as well as the supplier, can all become better off relative to the case where the channel is free of any dominance. We also investigate consumer and social welfare under various types of dominance.

3 - Profit Impacts of Optimal Retail Pricing and Merchandising Decisions

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It is recognized that the retailers play a significant role in setting these prices and merchandising strategies. The profit of the retailers is the margin between what they pay the manufacturers and spend on merchandising, and the price paid by the consumers. This implies that the retailers set retail prices and merchandising strategies so as to derive as much profit as possible. This requires that the retailers synchronize their pricing and merchandising strategies to maximize profit. Using weekly market data on sales, price and merchandising for all major brands in a food category, we estimate the price and merchandising elasticities, and compute the optimal profits for each brand. We empirically demonstrate that the overall profit of the retailer is more when price and merchandising levels are simultaneously optimized than when only price level is optimized.

4 - Information Transmission in a Channel with Partially Informed Retailers

Tansev Geylani, Assistant Professor, University of Pittsburgh, Katz Grad School of Business, 320 Mervis Hall, Pittsburgh, PA, 15260, United States, tgeylani@katz.pitt.edu, Esther Gal-Or, Anthony Dukes

While retailers have sales data that help them get informed about demand, manufacturers have a broad understanding of the market and its trends and know the demographics of their consumers. In this paper, we investigate a channel structure where a manufacturer and two retailers have private signals of the state of the demand. One retailer has a higher quality signal than the other, reflecting the observation that some retailers are better informed about the market than others. In such an asymmetric channel structure, we examine the incentives of the manufacturer to share information with the retailers. Our model suggests that when the manufacturer chooses to transmit his private information to only one of the retailers, he will transmit it to the less informed one. When the manufacturer does not share his information with a given retailer, the retailer draws inferences about the state of the demand from the wholesale price. Specifically, higher wholesale prices are interpreted as an improved state of demand, thus inducing the retailer to hike her retail price. The inferences tend, therefore, to aggravate the problem of double marginalization, and increasingly so for the less informed retailer. Our analysis further reveals that when there is no head to head competition between the retailers and there is sufficient quality differential between their signals, there are diminishing returns to revealing information to the second retailer given that one retailer has already been informed by the manufacturer. This result implies that when there is a cost associated with transmitting information, the manufacturer may choose to share it with only the less informed retailer and not with both.

■ FA12

Fayette

Satisfaction I

Chair: Peter C. Verhoef, Professor of Marketing, University of Groningen, P.O. Box 800, Groningen, NL, 9700 AV, Netherlands, p.c.verhoef@rug.nl

1 - A Typology of Consumer Dissatisfaction Responses: Exit, Voice, Loyalty, and 'More'

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Dissatisfied consumers respond to service failures in various ways such as voice, exit, and negative word-of-mouth. When dissatisfied consumers take some behavioristic actions, these responses are identified. However, if consumers take nonbehavioristic responses such as 'no-action' defined as do nothing (Day & Landon, 1977), it becomes highly elusive. Despite the large number of studies, understanding of these responses remains very little. We argue that 'no-action' may not simply mean 'do nothing' but can take two forms of responses: loyalty and neglect. Although both responses are passive in nature, the former is constructive while the latter is destructive to the company. Hirschman's (1970) framework suggests that people have three response options to deteriorating relationships: exit, voice, and loyalty. Later, Rusbult et al. (1982) identified another category-neglect. This exit, voice, loyalty, and neglect (EVLN) framework has been proven useful in understanding people's reactions to dissatisfying experience in other fields. Yet, consumer researchers have failed to fully capitalize the framework to understand consumer dissatisfaction responses. The primary purpose of this study is to apply the EVLN framework to a consumer context and to plot distinct dissatisfaction responses into a two-dimensional perceptual map. Specifically, we attempt to delineate two types of complaint (friendly complaint and redress seeking complaint) and two distinct types of no-action (loyalty and neglect). We also include other idiosyncratic consumer dissatisfaction responses (e.g. word-of-mouth) into the framework. Based on literature, seven dissatisfaction response categories are identified. A factor analysis of collected data will provide empirical supports for the EVLN model.

2 - Disconfirmation Effect at Aggregate Market Levels: A Cross-industry Investigation

Yan-qun He, Department of Management Sciences, City University of Hong Kong, 83 Tat Chee Ave, Kowloon, Hong Kong, msheya@cityu.edu.hk, Siu-Keung Tse, Vicky M H Chan

The expectancy disconfirmation model has been the dominant theory of consumer satisfaction in the study of individual consumer behavior. However, it is suggested that the expectancy disconfirmation model may not work in the context of aggregate market satisfaction because expectations are adaptive and relatively consistent with performance for an entire market, thus disconfirmation is unlikely to occur. The purpose of this study is to explore the applicability of expectancy disconfirmation model in aggregate market contexts. We test the expectancy disconfirmation model across several categories, including services and durable/nondurable products. Our study shows that the differences in aggregate consumer satisfaction across various categories can be well explained by the expectancy disconfirmation model, which gives strong evidence that disconfirmation effect occurs at aggregate market levels. This study contributes to the literature in several ways. First, it provides some evidence that expectancy disconfirmation effect exists at aggregate market levels, which supplement our previous knowledge that it explains individual consumer behaviors only. Second, it shows that failure to identify disconfirmation effect at aggregate levels may due to some potential moderators such as consumer knowledge as investigated in this study. Lastly, one unique contribution of this study lies in its cross-culture perspective. Previous studies in investigating aggregated consumer satisfaction concentrated mainly in those relatively competitive and developed western countries. Our study, based on an established regional HKCSI survey, comes to provide some new insights for the cited similarities and differences in satisfaction across western and eastern countries.

3 - A Useful Model of Customer Satisfaction

Michael Preis, Visiting Assistant Professor, University of Illinois at Urbana-Champaign, 350 Wohlers Hall, 1206 South 6th Street, Champaign, IL, 61820, United States, mpreis@uiuc.edu,
Gregory Kellar

Customer surveys generally show high levels of satisfaction, skewed satisfaction levels (Peterson and Wilson 1992) and lack of standard satisfaction scales (Altany, 1993; Mehta, 1990). Reichheld (1996) points out that customers are tiring of being surveyed. The major purpose of this paper is to increase the effectiveness of satisfaction research as an analytical tool for managers and researchers by providing shortened survey instruments for collecting customer satisfaction data. This study shows that overall satisfaction for buyers from diverse industries appears to be a composite measure that is greatly explained by four components: satisfaction with the product, satisfaction with the vendor, satisfaction with the salesperson, and satisfaction with the price. In particular, if all results are translated so that they are centered about zero, then the mean of the four translated components of satisfaction cannot be statistically distinguished from the mean of a customer's reported overall satisfaction (after translation). In fact, the p-value of a paired, two tailed t-test comparing the translated mean of the four components and the translated measure of overall satisfaction is 0.9999. These results are strengthened by regression analysis and normal probability plots that suggest the equality of the mean of the translated components and the translated measure of overall satisfaction. This model is appealing as it is significantly simpler and more parsimonious than previous models suggested in the literature. Further, it achieves these results using single-item measures. This is significant because it will allow managers to identify areas of concern to customers with fewer questions than previously, resulting in less aggravation and tiring of respondents.

4 - Dynamic Effects in Service Satisfaction and Customer Retention — The Role of Critical Incidents

Jenny van Doorn, post doc, University of Groningen, P.O. Box 800, Groningen, NL, 9700 AV, Netherlands, j.van.doorn@rug.nl,
Peter C. Verhoef

In service settings, critical incidents are of great importance, as they constitute a "reactional trigger" (Gustafsson, Johnson and Roos 2005) that can affect the satisfaction-retention link. Empirical evidence on the impact of critical incidents on the interrelationship between attribute satisfaction, payment equity, relationship satisfaction and share of business is however limited. Against this background, the goal of our paper is to clarify the influence of critical incidents on the interrelationship between these constructs, also taking into account dynamic effects. Based on a panel study among customers of a professional logistic service provider, we find that the determinants of the share of business differ for customers experiencing critical incidents compared to customers who did not. For customers not experiencing critical incidents, current share of business is only influenced by its lag, while current evaluations of relationship satisfaction and payment equity do not have a significant effect. For customers experiencing critical incidents, relationship satisfaction and payment equity do, however, influence the share of business, with lagged share of business also impacting the current share of business. With respect to relationship satisfaction, differences in satisfaction formation between customers experiencing and customers not experiencing critical incidents can be identified as well. For customers not experiencing critical incidents, relationship satisfaction is formed in a more cumulative fashion, with past relationship satisfaction being the most important determinant of current relationship satisfaction. For customers experiencing critical incidents, evaluations depend more heavily on current experience than on past relationship satisfaction.

■ FA13

Somerset West

Pricing III: Bundling

Chair: Bing Jing, Assistant Professor, Stern School of Business, New York University, 44 West 4th Street, KMC 8-79, New York, NY, 10012, United States, bjing@stern.nyu.edu

1 - Product Bundles under Three-Part Tariff Schemes

Ping Xiao, John M.Olin School of Business,Washington University,in Saint Louis, Campus Box 1133, Washington Universi in Saint Louis, Saint Louis, MO, 63110, United States, pxiao@wustl.edu, Tat Y. Chan, Chakravarthi Narasimhan

Product bundling and non-linear pricing are popular marketing strategies in industries such as wireless and internet. While each has been extensively studied separately in the economics and marketing literature there are few empirical studies that consider both simultaneously. The purpose of this paper is to study consumers' preferences for product bundles under three part tariffs commonly used by providers of wireless services. We develop a structural model to study consumers' product bundle choice and usage decisions using a dataset from a wireless service provider. We consider consumers' switching costs, learning, and information diffusion as possible explanations for the observed patterns of switching behaviors in the data. Based on the estimated results, we conduct policy experiments to examine firm's optimal pricing and product design choices. We also compare the revenue implications from offering product bundling vs. selling different services separately under various pricing schemes.

2 - Why Consumers Buy Multiple Products from a Single Retailer: A Household Production Explanation

Feng Liu, University of Wisconsin-Milwaukee, P.O. Box 742, 3202 N. Maryland Ave., Milwaukee, WI, 53211, United States, fengliu@uwm.edu, Purushottam Papatla

Marketers are increasingly turning to product bundling as a means of increasing market share and profits by selling more products to current customers rather than spending on attracting new customers. This is the rationale, for instance, behind the "Consumers who bought this product also bought" prompts by online retailer Amazon.com to consumers who purchase a book or any other item on its site. It is also the explanation given to the increasing practice of retailers encouraging customers to open store-branded credit card accounts. The assumption is that, the data on customers purchases can be used to target them with additional products that they might be interested in thereby increasing the sales of the retailer's products to existing customers. The issue of product bundling has been examined extensively in the marketing and economics literatures. The focus, however, has mostly been on the incentives that businesses have to bundle products. In this research, we examine the rationale for consumers to buy product bundles from a retailer. We use the household production framework and define the consumer's rationale in terms of multiple benefits of purchasing different products from a single retailer. In particular, we assume that consumers realize three types of benefits: monetary, time and psychological. We examine whether these benefits can explain the purchase of product bundles by consumers from a publisher whose product mix includes books, subscription-based magazines as well as household utility and gift items related to the books that it publishes. We discuss these findings and examine their implications for the design of product bundles by manufacturers and retailers.

3 - Bundling and Unbundling of Electronic Content

Nevena Koukova, Assistant Professor of Marketing, Lehigh University, College of Business & Economics, 621 Taylor Street, Bethlehem, PA, 18015, United States, nkoukova@lehigh.edu,
Brian Ratchford,
PK Kannan

Content providers such as publishers of books, newspapers and magazines have started to offer products in electronic form, and even individual electronic sections, in addition to their print products. For example, consumers can now subscribe to the online Wall Street Journal besides the print WSJ, plus they get a discounted subscription to the online WSJ if they are current print subscribers. Hypothetically, WSJ can add subscription to separate sections of the online WSJ (e.g. Money & Investment) to its current product line, as well as bundle this option with its current print offer. This paper investigates the attractiveness of product lines of items such as books and newspapers available in conventional and electronic media. We employ a choice experiment to develop a profit-maximizing configuration of products and prices. Similar approaches to the product line pricing problem have been employed for conventional products, but not when bundling of different forms of a product is an option, and not when the different products may be complements rather than substitutes. Further, the issues that our specific application raises can not be answered satisfactory using the findings of the bundling literature so far because of the unique cost structure, the possibility of various bundles (combinations of forms) and consumer expectations on what a fair price for the digital content would be. Our study provides important insights to marketers on how to profitably market digital content, and has interesting implications in the area of personalization of product offering and customization in the digital goods domain.

4 - Bundling Complementary Goods

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The present paper extends the models of Adams and Yellen (1976) and Venkatesh and Kamakura (2003) to study bundling of complementary goods with relatively low marginal costs. We show that the dynamics of bundling complementary goods can be strikingly different than that for independent goods. Three key results are derived. First, pure bundling may dominate mixed bundling when the synergy between the goods exceeds the marginal cost of each good. Intuitively, this high synergy entails aggravated cannibalization between the bundle and the individual goods, which dominates the sales-expansion effect of mixed bundling. Second, if the optimal price of either good under unbundled selling is below the synergy between the two goods, then bundling dominates unbundled selling. This is more likely to happen when the marginal costs are low and the standalone value of either good is relatively low for sufficiently many consumers. Third, when selling a base good and its supplement (the supplement has zero value if consumed without the base good), we show that unbundled selling and mixed bundling are equivalent and both dominate pure bundling. Since the first two key results hold for complementary goods with low marginal costs, they are most relevant for selling software, Internet-based services, and online contents. While the third result does not require any restrictions over the marginal costs, it sheds light on the optimal strategies of selling a software program and its add-ons, a software program and its upgrades, Internet access and other online services, among others.

■ FA14

Somerset East

Mktg. Strategy III: Social Welfare

Chair: Luc Wathieu, Harvard Business School, Soldiers Field Road, Boston, 02163, United States, lwathieu@hbs.edu

1 - Channel Configuration and Market Outcomes in Real Estate Transactions

Kristin Rotte, University of New South Wales, AGSM, Gate 11, Botany Street, Sydney, NS, 2034, Australia, kristinr@agsm.edu.au, Murali Chandrashekaran

The single largest investment that consumers make is typically a home purchase. Consumers often employ the help of real estate agents to navigate this process. The expectation, of course, is that the agent will help secure the best possible outcome (e.g., getting the house that the consumer wants, securing the best deal possible, and completing the transaction quickly). Sellers, in turn, are working with separate agents along with obvious expectations. In this research, we explore market outcomes under dual agency channel configuration, i.e., when either the same real estate agent represents both the buyer and seller, or when the buyer- and seller-agent belong to the same real estate company (same location or cross-town locations). Such dual agency configurations are not uncommon (28% of sales co-brokered within same firm and 17% of sales are listed and sold by same agent; Turnbull and Dombrow 2005). Responding to the potential for conflict of interests in dual agency situations, many states in the US have mandated that agents disclose to their clients when they are in a dual agent situation and require acknowledgment of the situation (if either party has an issue, an independent agent is often appointed to one party of the transaction, often the buyer). And a few states have even outlawed dual agency altogether. In this project, we employ real estate sales data to determine the simultaneous impact of dual agency on three key market outcomes: days on market, sale price and list price/sale price ratio. Controlling for sources of unobserved heterogeneity, we also test whether the impact of dual agency on market outcomes varies as a function of the transaction value itself (e.g., low-priced versus high-priced housing).

2 - Assessing the Value Consumers Ascribe to Corporate Social Involvement in Product Choice

Andre Menck, Visiting Professor, University of Alberta, 3-40J Business Building, University of Alberta, Edmonton, AB, T5K 1T6, Canada, amenck@ualberta.ca

Research on Corporate Social Responsibility has received much less attention in marketing than in management, even though considerable effort is spent in making it public. Moreover, a good portion of the marketing attention to CSR resides on the firm's perspective or charitable giving. Few studies look at the value consumers ascribe to socially concerned brands and firms. However they present two kinds of limitations. First, their results are category or industry-specific, generating divergent results across studies. Second—and perhaps most important—they are attitudinal studies and assess only consumer intention, not choice. This research faces the quest by using choice conjoint tasks, thus avoiding attitudinal measures, which are prone to self-desirability bias in CSR studies. Moreover, four different categories of goods and services are investigated in surveys. The analysis assumes a two-phased consumer decision process—alternative consideration followed by choice conditioned to the inclusion of the alternative in the consideration set. Results reveal substantial cross-elasticity between the level of social involvement and each of four functional attributes, for seemly comparable attribute level changes, in both consideration and choice phases. In particular, a 20%-price difference across scenarios provides a rough estimate of the dollar value of being socially responsible. Remarkably, similar results were consistently observed across the four good and service categories. The outcomes indicate that the magnitude of the effect of being socially responsible is similar to excel in important functional attributes and have on consumers half of effect of a 20%-price change.

3 - Opinions of Organic: Attitudes and Purchase Intentions of Packaged Frozen Meals

Robin Sherk, Boston University, 12 Sparhawk St., Brighton, MA, 02135, United States, rsherk@bu.edu

Organic foods have expanded into the mainstream market, and the products now vary anywhere from jelly beans to pasta sauces. Research regarding attitudes and purchase motives of organic food has concentrated on within-subject comparisons of fresh produce and dairy products. This study sought to assess the public response to pitching products as organic by measuring their attitudes of prepared frozen dinners in a more naturalistic setting. Participants from a national sample (n=523) completed a survey distributed over the internet about their impressions of a novel frozen meal package in November, 2005. Using a between subject design, half saw a label with the term organic and half saw the term original. Attitudes about taste, nutrition, availability, price and willingness to purchase were assessed. Results from a linear regression analysis indicated that labeling the package organic lowered respondent's willingness to purchase the product. Implications of this indirect assessment of perceptions to reliably assess trends in packaged food and directions for further research are discussed.

4 - Marketing and Privacy Concerns: Theory and Evidence

Luc Wathieu, Harvard Business School, Soldiers Field Road, Boston, MA, 02163, United States, rfoss@hbs.edu

Thanks to advances in information and communication technologies, firms can rely on increasingly detailed consumer information. This should be good news, as finer segmentations allow firms to target consumer needs effectively and efficiently. This trend, however, has coincided with the emergence of privacy concerns, causing governments and firms to limit the dissemination and use of consumer information. The aim of this paper is to show that privacy concerns can reflect legitimate problems of overall economic efficiency. The core argument is that firms in a competitive environment will sometimes segment consumers too finely, overlooking the efficient use of economies of scale associated with mass marketing. Mass marketing has two interconnected benefits: low prices and the indiscriminate inclusion of a broad range of consumer types. I show how free competition will sometimes cause these benefits to dissolve prematurely, when finer consumer information becomes available. Obviously, consumers in the real world do not explicitly derive their privacy concern from such analyses of market inefficiencies, but this paper generates many plausible predictions about privacy sentiments and their correspondence with social concerns. Additionally, this privacy theory suggests new ways to address privacy concerns, with an emphasis on the necessary role of "communities," broadly defined as any mechanism or institution that allows diverse consumers to consistently aggregate themselves and formulate homogenous, large-scale, demands. In the experimental part of the talk, I present evidence from a large-scale experiment evoking a realistic (car insurance) context, that privacy concerns are indeed sensitive to indirect consequences of information transmission.

Friday, 10:30 - noon (Session B)

■ FB01

Allegheny Ballroom I)

Practice Prize II (Special Time 10:00-11:30am)

Chair: John Roberts, Scientia Professor, Aust Grad Sch Mgt, Randwick, Univeristy of New South Wales, NS, 2052, Australia, johnr@agsm.edu.au

1 - BRAN*EQT: A Model and Simulator for Estimating, Tracking, and Managing Multicategory Brand Equity

Venkatesh Shankar, Professor and Coleman Chair in Marketing, Mays Business School, Texas A&M University, Department of Marketing, Wehner Bldg, 4112 TAMU, College Station, TX, 77843-4112, United States, vshankar@mays.tamu.edu, Matthew Fuller, Pablo Azar

There is a growing recognition that brands are valuable intangible assets toward improving shareholder value. In recent times, many models have been proposed for measuring brand equity. Existing brand equity models are either developed for firms with a single brand in a single product category or in cases where a firm has the same brand in multiple categories, existing models implicitly assume that the equity of a brand is the same in each category. Because most firms have the same brand in multiple categories and the same brand has different performance outcomes in different categories, existing models can provide wrong estimates of brand equity. In this paper, we develop a model for estimating, tracking, and managing brand equity for multicategory brands based on a combination of customer based survey and firm based financial measures for each product category. This model has two components, (1) relative brand importance (computed from brand choice models such as multinomial logit, heteroscedastic extreme value, and mixed logit models using survey measures on multiple product attributes and brand perceptions) and (2) offering value (computed from discounted cash flow analysis of earnings estimated using financial measures such as expected revenues, EBITDA margin ratio, long-term inflation rate, weighted average cost of capital, marginal tax rate, and investment rate). We apply this model to measure the equity of the flagship brand of a leading insurance company and its leading competitor with the same brand name in multiple product categories. The model allows for spillover effects of the brand from one category to another. We use a combination of hard financial data and survey data to estimate the model. We validate this model by comparing relative brand importance estimates obtained from a brand choice model to those computed from a brand perception score method. Furthermore, we examine the relationship between advertising and brand equity using longitudinal data on advertising and brand equity, and build a decision support simulator. Our model provides reliable estimates of brand equity for the focal brand and a leading competitor brand, and our results show that advertising has a strong long-term positive influence on brand equity. They also show that our brand equity estimator is fairly robust. The model, the brand equity estimates, and the decision support simulator are used by key executives in the organization across multiple functional areas such as marketing, strategy, accounting, and finance. Using this brand equity model and simulator, the organization has substantially gained by significantly reallocating its advertising resources to improve brand equity and shareholder value. We discuss the implications for tracking, building, and managing brand equity based on these results.

2 - Planning New Tariffs at Tele.Ring — An Integrated STP Tool Designed for Managerial Applicability

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Information needs to be transferred efficiently across the organization beyond those who acquire it, and an effective format that facilitates rapid interpretation and communication is needed (DeSarbo et al. 2001). Graphical representations provide such a format and often serve to communicate the very essence of marketing research results. Marketing researchers have developed and applied a large number of mapping, segmentation and conjoint techniques and algorithms for the analysis of marketing data. However, the usefulness of these techniques, in terms of managerial applicability and economic effectiveness, has not been treated very frequently in literature. In this paper, we will describe a new decision support tool that integrates several market research methodologies in a visual and interactive tool in order to bridge the gap between academic research and marketing practice. The tool was applied at tele.ring, an Austrian telecom provider for planning a new tariff. The tariff design by STP methodology resulted in the most successful new tariff introduced in the competitive Austrian market. Managers of tele.ring found that the advantage of this STP tool as compared to other positioning tools lie in its interactive and intuitive nature. As compared to similar new tariff introductions, an increased profit of 23.700.000 euros was achieved. According to tele.ring CEO, Michael Krammer, '... a telecom provider's chances for surviving are mainly guaranteed by a clear positioning. Tele.ring has shown that this works and how this works (webstandard 2006).' References DeSarbo, W. S., Degeratu, A. M., Wedel, M., and Saxton, M. K., 2001, *The Spatial Representation of Market Information, Marketing Science*, 2001, 20 (4), pp. 426-441.

■ FB02

Crawford East

Marketing Dashboards: Which Metrics Should we Track?

Chair: Koen Pauwels, Associate Professor, Tuck at Dartmouth, 100 Tuck Drive, Hanover, 03755, United States, koen.h.pauwels@dartmouth.edu

1 - The Problem isn't "Dashboards," it's "Marketing"!

Tim Ambler, Senior Fellow at the London Business School, tambler@london.edu, Bruce Clark

The term "marketing" has lead to endless confusion. Is it what marketers do or what they spend [promotional] budgets on or is it what the whole firm does to source and harvest cash flow? Marketing and the marketing department are regarded with suspicion by other professionals and we have witnessed growing demands for marketing to be accountable after they have spent their budgets and preferably before--better still in strictly financial terms such as ROI. This presentation challenges this received wisdom and draws the following conclusions. First, the best dashboard is the panel of indicators used to drive the entity as a whole in creating and delivering attractive, profitable offerings to customers. This is the job of the firm, not the marketing department alone; having a dashboard only for marketing is like having a separate dashboard for the front wheels of the car. Market metrics should form a part of the complete panel. Second, tracking the results of marketing activities is not as useful as determining future direction; a dashboard needs metrics to both track and predict performance. DCF or NPV techniques are useful for the latter but not the former. Return on Customer is a metric that only measures the accuracy of short-term, and consistency of long-term, forecasts. And ROI is not a useful market metric at all.

2 - Marketing Dashboards and Managerial Intuition

Berend Wierenga, RSM Erasmus University, Burgemeester Oudlaan 50, Rotterdam, Netherlands, bwierenga@rsm.nl

There are two fundamentally different modes of how people think and reason, which are based on two different cognitive systems: (i) the intuitive, experiential, or tacit system; and (ii) the analytical, rational or deliberate system. Often these two systems are simply referred to as System 1 and System 2, respectively (Stanovich and West 2000; Kahneman 2003; Hogarth 2001; 2005). Also in the decision making of company executives and marketing managers these two systems play a role. Each system has strong points and weak points. The intuitive system is known to suffer from framing effects and biases, whereas in the deliberate system people often pay too much attention to the available information at the cost of overlooking the real problem. The analytical approach is seen as more scientific, and has higher academic standing. However, recent research in decision making has demonstrated that sometimes decision makers can better follow their intuitions than engage in analytical decision making. For most marketing decisions, a combination of System 1 and System 2 thinking gives the best results. In marketing dashboards, the information is typically in the form of a small set of quantitative indicators that are deemed important. This strongly favors the System 2 (analytical) thinking mode, and creates the danger of locally rational decision making without the proper holistic perspective. In System 1 thinking, analogies are important, and decision makers signal problems by means of pattern recognition. To be able to do this, people need to have relatively rich information about situations and events. This will help decision makers discover in an early state when something is wrong, even if they are not to immediately able articulate why. Ideally, marketing dashboards should be rich enough, to feed also the intuitive system. If this is not possible, we should be aware of their one-sidedness, and look for other means to serve System1. Otherwise, decision makers might miss subtle, but very critical signals.

3 - Decomposition of Changes in Customer Equity Over Time

Thorsten Wiesel, School of Business and Economics, Johann Wolfgang Goethe-University, Frankfurt/Main, Mertonstr 17, Frankfurt/Main, 60054, Germany, wiesel@wiwi.uni-frankfurt.de, Bernd Skiera, Julián Villanueva

If a firm aims to increase its long-run value, marketing's role should be to manage the firm's customer assets and to increase the value of the customer base (Customer Equity). This requires (i) to monitor the Customer Equity over time (Customer Equity Statement) and (ii) to decompose changes in Customer Equity over time (Customer Equity Flow Statement). The Customer Equity Flow Statement provides managers additional insights with respect to changes in customer metrics (such as customer retention rate or cash flows generated by customers). For instance, an increase in Customer Equity could be due to an increase in cash flows generated by customers while customer retention rate remains constant. But this increase could be also due to an increase in customer retention rate while cash flows generated by the customers do not change. Furthermore, it could be possible that changes in customer retention rate and customer cash flows change simultaneously. Thus, decomposing the changes in Customer Equity allows managers to derive more detailed implications regarding their marketing activities than just monitoring the Customer Equity over time. It can provide valuable feedback about what went wrong in the past and can be improved in the future. Hence, it can assist to improve future decision making. The objective of this paper is to develop an approach to decompose changes in Customer Equity over time into the effects of the variation in customer metrics. We apply our approach to the customer base of a major European retail bank. We contribute to the existing research (i) by investigating changes in Customer Equity over time and (ii) by considering different customer metrics simultaneously to decompose changes in Customer Equity over time.

4 - Counting what Counts: Designing Marketing Dashboards for Long-term Marketing Productivity

Koen Pauwels, Associate Professor, Tuck School of Business, Dartmouth College, Hanover, NH, 03755, United States, koen.pauwels@dartmouth.edu, Marije Teerling

Faced with information overload, managers look to marketing dashboards to concisely convey market information and provide direction for marketing decision making. Unfortunately, even 'key performance indicators' offered by consultants represent too long a list: e.g. 32 weekly measures per brand in our empirical analysis. How should managers and researchers determine which metrics to track? We argue that marketing dashboard metrics should represent leading indicators of company performance. In other words, changes to such metrics imply a change to future performance; otherwise the company may as well simply track performance itself. Based on modern time-series analysis, we first demonstrate which metrics are important leading indicators of sales. Next, we calculate the long-term impact of each metric on sales, and juxtapose this measure with the wear-in time; i.e. the number of periods until the peak sales effect is obtained. We apply our approach to a fast moving consumer good category, with a leading national brand and a private label. Potential marketing dashboard metrics include market variables (sales and price for both competitors), a brand equity score, usage occasions and multiple measures of awareness, trial/usage, purchase intent, and liking/satisfaction. Our method reduces this list to a handful of variables that lead national brand sales. Plotting impact size and wear-in time reveals that different kinds of variables predict sales at distinct leads, implying specific marketing actions to turn the metric around before sales performance itself declines.

5 - Challenging the "Effectiveness" of the Marketing Dashboard as a Tool for Measuring the Impact of Marketing Investments

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Academicians can (and do) debate the relative merit of various metrics and structures in the development of marketing dashboards. But as more and more companies actually employ them, one thing is becoming increasing clear ... effectiveness varies highly. Few such efforts have proven to be truly transformational in terms of generating new insights or marshalling wayward resource allocations. Why? At the heart, marketing dashboards are representations of knowledge. Knowledge, it has been said, is power. In practice, it's more often the perception of knowledge that equates to organizational power than knowledge itself. So when faced with the prospect of the relative lack of knowledge on marketing effectiveness being quantified in graphical form for all to see, the power broker's appetite for transparency wanes. So how can organizations push past their fears of exposure and make real progress in measuring marketing's impact? And how can the academic community help accelerate the cultural and political acceptance process? This presentation will examine some of organizational dynamics that inhibit effective dashboard implementation and attempt to answer some of the questions by drawing on case studies derived from actual implementation projects.

■ FB03

Crawford West

Competition: Game-Theoretic Models

Chair: Preyas Desai, The Fuqua School of Business, Duke University, Durhan, NC, 27708, desai@duke.edu

1 - CEO Succession and the Impact on Competitive Behavior

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How CEO characteristics affect organizational effectiveness and eventually stock market performance has been studied extensively (Hannan and Freeman 1977, Pfeffer and Davis-Blake 1986, Lubatkin et al 1989, Beatty and Zajac 1987, Reinganum 1985, Godfrey et al 2003). Our focus in this study is to examine the impact of CEO changes on competitive conduct, an aspect that has not been studied as much in previous research. More specifically, we study how competitive conduct changed in the facial tissue category after Al Dunlap took over as CEO of Scott Paper Products in April of 1994. We focus on the three leading competing national brands: Scotties by Scott Paper Products; Puffs by Procter & Gamble; and Kleenex by Kimberly-Clark. We use a flexible demand modeling approach, adopting the Almost Ideal Demand System (AIDS, see Deaton and Muellbauer 1980a). Using the NEIO paradigm, we estimate and identify Conjectural Variations (CV) parameters using a set of supply-side equations where demand parameters are based on the AIDS model. An intervention analysis structure allows us to test for the differences in parameters of interest across different regimes (before and after Al Dunlap's becoming the CEO). Our findings suggest that CEO changes can have a significant impact on how competing brands interact with one another. An important finding from our study is that the demand side (elasticities and cross-elasticities) does not tell the complete story about changes in competition.

2 - Renting of Software Services Under Competition

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Software is a prominent example of a durable good that does not exhibit significant secondary markets. This is largely attributed to the strict nature of current licensing agreements. In recent times, the delivery of software as a service over a high-speed network has offered firms the potential of new revenue streams and segmentation mechanisms. Particularly, the length of a software license has significantly decreased. In fact, many application service providers (ASPs) offer a monthly subscription service. We model the equilibrium outcome of a duopoly in which two differentiated software vendors make a decision on selling or renting their product and then compete in a market that has consumers with heterogeneous reservation prices. This two-stage game is modeled such that the market competition stage is a two-period model. We characterize the equilibrium based on the level of product differentiation between the two firms and the discount factor attached to future time periods. We generalize the second stage of the game to a finite horizon of n-periods and also an infinite horizon for the case when the higher value product firm sells the product while the lower value product firm offers a rental service. The nature of the equilibrium provides insight into the transition of the delivery model from a product to a service in the case of durable products, particularly in the context of competitors who differ in their mode of product / service delivery.

3 - Word of Mouth Communication in Business Markets

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An important difference between word-of-mouth communication in consumer markets and business markets is that in the latter it is very common for the firms of interest to compete with each other. For example, consumers are often happy to discuss with each other the benefits of, say, a certain HDTV format. On the other hand, it less likely that a CTO at one firm will share his experiences associated with a recent technology purchase with his competitor. However, this firm-to-firm transfer of information plays an important role for many manufacturers, particularly manufacturers of technology products about which there often exists significant uncertainty. In this paper, we model a manufacturer with a new product of uncertain value and two potential customers. We identify conditions under which "reference account" programs — which foster the transfer of information from customer to prospect -- outperform other mechanisms that do not yield inter-firm communication. The results of this model provide several important contributions. First, they extend our understanding of word-of-mouth communication to include the important idiosyncrasies of business markets. Second, they provide prescriptive guidance to managers with respect to their decisions regarding the leverage of their network of existing customers.

4 - Open v. Closed Used Markets: The Strategic Role of Creating Your Own Competition

Preyas Desai, The Fuqua School of Business, Duke University, Durhan, NC, 27708, desai@duke.edu, Debu Purohit

In many product categories, consumers have the ability to buy or sell items in a used market. There are active secondhand markets for cars, pianos, and industrial goods such as MRI scanners and earth moving equipment. For many other product categories, used markets tend to be thin and localized, e.g., selling used furniture through a classified advertisement. Over the last several years, the staggering growth of eBay has opened up the possibility of active used markets for a large variety of goods. This growth is important because not only does it increase the number of buyers and sellers in any product category but it also increases the total product categories for which there is a viable secondary market. In this paper, we explore the impact of opening up used markets for durable goods. This raises questions both from the consumers' as well as the firm's perspectives: Will consumers be more likely to purchase products if they know that they can sell them in a used market at a later period? Will a greater willingness of consumers to turnover products at the consumer level lead to greater sales and profits for the firm? Counter to the prevailing wisdom on used markets, we find that it is not always optimal for a durable goods firm to operate in an environment of smoothly functioning used markets.

■ FB04

Butler West

Brand Management II

Chair: Raj Sethuraman, Southern Methodist University, 6212 Bishop Boulevard, Dallas, TX, 75205, United States, rsethura@mail.cox.smu.edu

1 - The Financial Consequences of Brand Management Capabilities

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Brands can signal quality, status and prestige, thus reducing perceived psychological and monetary risk associated with purchases and reduce search costs. From the seller's perspective a brand can provide product differentiation, while brand identification and familiarity can facilitate repurchase, loyalty and new product introductions. Additionally, brands can simplify campaign management. Therefore, a strong brand is an intangible asset that generates revenue, differentiates the firm's offerings from those of competitors, adding value for customers, collaborators and the firm. However, while there is growing evidence of the value of brand assets to consumers and to the firms that own them, we know almost nothing about the brand management capabilities that allow firms to build and leverage their brand assets. Considerable anecdotal evidence exists suggesting that brand management capabilities impact on business performance. However no solid empirical evidence exists to confirm these anecdotal findings and we have very sparse empirical knowledge linking brand management capabilities with firms' financial performance. In this study we examine the association between brand management capabilities —the firm's ability to translate the money it spends on advertising and marketing-related activities into brand awareness among target consumers, and strong, positive, and unique brand associations in the minds of those target consumers — and a firm's shareholder value financial performance, measured via multiple indicators (e.g., price to book, total shareholder returns and Tobin's Q). We use multiple data sources (American Customer Satisfaction Index, COMPUSTAT and Equitrend) to estimate a multi period, multi firm model that addresses these questions.

2 - Developing Corporate Brands for Competitiveness

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Intangible assets of companies are becoming more and more strategical factors for the creation of value and competitiveness. While that during many years the largeness of a company was essentially evaluated in function of its material assets, currently this evaluation incorporates each time more intangible values, as human resources, the brand and services that add value and guarantees to corporate competitiveness. In competitive terms corporate brand can be presented as one of the main and more interesting intangible goods of a company. During many years restricted to an identification role the strategical, financial and commercial potential of brands is currently recognized what contributes for them to gain new dimensions. Branding is more and more being applied to the organization itself contributing for that the relation consumer/product extends to consumer/company. The corporative brand can be defined as a brand that represents an entire company and gives expectations of the company identity and culture and its integration in the corporate agenda becomes each time more pertinentmainly because of the increasing challenges of new paradigms of competitiveness and relations with stakeholders. In this context the present communication presents a model of construction and management of competitive corporate brands based on communicational engineering and reflects about capital factors on the construction of competitive corporate brands such as the reverence for the corporate mission, the definition of the unique value proposition, the development of benchmarking, the involvement of administration and employees and the promotion of a sustainable communication.

3 - Seeking Empirical Generalizations on Factors Influencing Private Label Penetration

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Private labels or store brands are said to be growing at more than twice the rate of national brands. What factors influence private label success? Answers to this question would be of interest to both national brand manufacturers and retailers. Academic and managerial literature published in the last 30 years has provided over 70 studies that offer insights into the direction and strength of the relationships between the influencing factors and private label success. These studies provide both an opportunity and a challenge for researchers trying to obtain collective insights and generalizations. The existence of many and varied empirical studies provide the potential for obtaining some generalizations. However, the divergence of these studies in terms of the variables investigated, the method used for arriving at the relationships, and the reporting of the findings make the task of aggregating such findings more challenging. This research represents an attempt to obtain empirical generalizations from disparate studies. First, it provides an organizing framework for integrating those studies. Second, it documents all studies that provide empirical information on each of the links in the organizing framework. Third, it uses available information to create simulated data on variables on which information is scant and thus augments the existing database. Fourth, it combines the actual and augmented data to arrive at some generalizations that can be treated as "deemed" or "simulated" generalizations on factors influencing private label success.

■ FB05

Butler East

BDT II

Chair: Raghunath Rao, University of Minnesota, 3-150 CSOM, 321-19th AVE S, Minneapolis, MN, United States, rrao@csom.umn.edu

1 - Confidence in Evaluating: Roles of Uncertainty Detection and Resolution on Discounting

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The evaluation discounting effects often observed in missing information (MI) studies may be applicable to situations beyond those involving MI. Research shows that MI often leads to discounting of affected alternatives. However, consumers' confidence in inferences formed to fill-in MI often reduces uncertainty of the MI resulting in reductions in discounting. Further, if undetected, MI does not affect evaluations at all. This paper suggests that discounting/evaluation is ALSO affected by consumer's overall "confidence in evaluating" a given task. Consequently, similar discounting/evaluation effects could be observed in non-MI situations that involve other types of uncertainty detection and resolution that also result in varying levels of confidence in evaluating. A model proposes interactive effects of sources of uncertainty, consumer's uncertainty detection, and uncertainty resolution on overall confidence in evaluating and subsequent evaluation discounting. Uncertainty/discounting can vary in 'full information' situations due to many variables such as attribute inconsistency/ambiguity, attribute type (concrete versus abstract), brand equity, information source, and attribute value variance. In addition, consumer's likelihood to detect MI or other uncertainty is a function of contextual variables such as consumer's choice goal, personal characteristics and environment. Finally, consumer's ability to resolve uncertainty with mechanisms such as inference formations varies as a function of detection, context and type of uncertainty. The model implications are substantial in that it extends the observed discounting/evaluation effects of MI to far broader situations involving other sources of uncertainty and ambiguity resolution.

2 - Do Promotion-Focused Individuals Have Higher Discount Rates? It Depends on the Valence

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The existing behavioral research on time discounting has focused primarily on documenting violations of the normative exponential discounting model. Increasingly, attention is being directed towards understanding the exorbitant heterogeneity in the observed discount rates, both between and within individuals, and its underlying cognitive factors. In this research we extend the extant research by examining the motivational influence of regulatory focus on revealed time preference. Drawing on the regulatory focus literature, we hypothesize an interaction effect between regulatory focus and valence such that promotion focus is associated with lower discount rate in the gain domain than in the loss domain whereas prevention focus has the opposite effect. This pattern of results arises from the fact that promotion focus highlights the anticipatory utility from a positive future reward (the so-called savoring effect) whereas prevention focus enhances the anticipatory disutility of a negative event (the so-called dread effect). The differential impact of anticipation may also be reflected in the different shape (i.e., curvature) of the value function associated with each regulatory focus. This prediction was tested in three laboratory experiments where participants revealed their preference for intertemporal tradeoffs among hypothetical monetary rewards or payments. Preferences were measured through matching (studies 1 and 2) and choice (study 3) procedures. The data provide strong empirical support for the predicted effect. These results highlight the importance of incorporating motivational influences in any theoretical treatment of time discounting. They also have clear implications for the marketing of certain financial products.

3 - Choice Representation and Comparibility Variance: A Generalized Approach

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Johnson (1984) has addressed the issue of choice from noncomparable alternatives which has also been referred to by Kotler (1984) as generic competition. In today's technology diffused marketplace, with increasing number of innovations, consumers often choose among alternatives from different product categories, using attribute based processing at abstract levels and alternative based processing at concrete levels. However, with increasing cognitive burden, they also use hierarchical processing to eliminate alternatives and simplify the decision process. The cognitive burden, as suggested by Johnson (1988) grows with increasing comparability variance, which defines the degree of variation between various possible choice pairs in a given consideration set. The original study (1988) shows a set of two mixers and one toaster to have greater variance than a set of one mixer and one toaster. We set up a more generalized framework with the two most dissimilar products as X & Y. We also consider m products more similar to X and n products more similar to Y, so that total number of products is the sum of m and n. Our findings indicate that increasing number of products in the consideration set may or may not increase the total cognitive burden, depending on the total variance added relative to the sum total number of product pairs. Comparability variance of the choice set is seen to be dependent on 1) The sum and the ratios of m and n, 2) The perceptual distance between the most similar products, and the most dissimilar products. The findings help us manipulate the representations of heterogeneous choice sets to encourage or discourage hierarchical processing with strong implications for choice of products showcased in restricted retail space, and shelf space design.

4 - A Reference Dependent Model of Durable Good Markets

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This paper develops a reference dependent model of durable goods markets incorporating many real world features of such markets, including stochastic deterioration, adverse selection in the purchase of used goods, consumer heterogeneity, and the co-existence of both new and used goods markets. We model consumer utility as the sum of a reference dependent 'gain-loss' utility and the standard 'consumption utility'. This formulation of utility is especially relevant in durable goods markets where a new good deteriorates stochastically, leading to a used-good of possibly lower or higher than expected quality, resulting in a sensation of unexpected loss or gain. We solve for a profit maximizing producer's pricing problem in this set-up and compare it to the standard case where consumer preferences do not have a notion of reference dependence. The incorporation of reference dependence leads to interesting results on the impact of adverse selection on used goods markets, the volume of trade, and the quality supplied in the used goods market, among other things. These results help explain real world practices that have hitherto not been explained by existing models.

■ FB06

Cambria West

Decision Research I

Chair: Theodoros Evgeniou, INSEAD, bd de constance, Fontainebleau, 77300, France, theodoros.evgeniou@insead.edu

1 - Modeling Consumer Choice of Brand and Shape in the Automobile Market

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It has been proven by many researchers, that a brand's size and shape plays an important role in consumer choices in packaged goods industry. While the notion of different sizes and shapes of the same brand does not strictly apply to automobiles, one can see the analogy in different cabin types (extended, crew) for pickup trucks, or convertible/coupe body styles for sports cars. Not surprisingly, manufacturers exploit this phenomenon and frequently offer incentives, such as rebate, subsidized financing, etc, that depend on body style or truck cabin, and can vary dramatically for the same brand. Thus, it becomes increasingly important to capture substitution patterns for automobile brands and their respective body types, and to model cannibalization effects within a brand. We develop a nested logit approach combined with finite mixture model to address the interaction between brand choice and body type in the automobile market using sales transaction data collected by Power Information Network, an affiliate of J.D. Power and Associates. We contrast profit optimizing marketing programs based on this approach with those derived from models that treat different body styles of the same brand as independent vehicles, or include competitors at the brand level only. We also gain insight on substitution patters across brands and different variants of "shape/size" such as cabin type in light-duty pickups and convertible/coup specialty cars. Key words: Nested logit, choice models, promotions, automobiles.

2 - Strategic Marketing Decisions: A Theoretical Framework to Predict and Explain Channel Choice

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Market actors' (e.g., producers) strategic decision-making behavior may affect the type of competences, strategies, and assets that a firm owns, creates, and develops. The strategic choices of Small Medium Enterprises (SMEs) involved in agro-food sector (e.g., switching from a marketing cooperative channel to an investor-owned one) are confronted with large uncertainties regarding SMEs' costs and revenues. Such a transition implies that a SME must develop a new strategy to achieve its market goals. In turbulent market networks with uncertain pay-offs, such as the agro-food supply chain, there is a need to better understand the SMEs strategic decision-making processes to explain and predict whether or not SMEs will consider a change in their channel choice. In the current paper we argue that SMEs channel behavior is a strategic decision taken under risk. We review the marketing-management literature on decision-making under risk for strategic decisions. Subsequently, we discuss the various elicitation techniques to measure decision-maker's utility function. That review indicates that one is able to measure the global utility function in a reliable and valid way. Particularly the measures rooted in expected utility framework seem to perform well. Furthermore, we develop various research propositions that deal with the factors influence SMEs strategic decision-making. Finally, we suggest an experimental plan to examine the global shape of the utility function of SMEs as it drives strategic decisions, which allow us to segment SMEs and to identify the characteristics of the decision maker, firm structure, and the firm's environment that may drive a particular shape.

3 - Factors Influencing Expectations of Medical: Traditional Chinese versus Western Medicine

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Tradition Chinese Medicine (TCM) has been an integral part of prevailing practice and belief system throughout Chinese history. Originally not included in Taiwan's national insurance program, public outcry forced its inclusion as consumers demanded a choice between medical paradigms. Rather than fading, TCM is experiencing increasing demand in Taiwan after years of modernization in the medical sector and widespread Western high-technology medical availability. Assumptions that traditional and religious-related medical beliefs would fade in the face of modernity and Western medical marketing practices have been challenged in Taiwan. There is noticeable lack of research on how consumers consider choice factors toward TCM and Western medicine hospitals/clinics. This research explored consumer expectations of the treatment experiences and how those expectations were influenced by actual experience and question framing. Survey data collected over the Web from 469 respondents in Taiwan. Multivariate analysis of variance (MANOVA) was used to test the relationship between experience and question framing across TCM and Western medicine choice factors. An interaction of question framing and past medical experience revealed consumers with experience in both medical domains, actually reported lower expectations of reservations systems, medical staff service quality, clinic reputation, and servicescapes in the TCM setting. Survey results combined with field observations show that Chinese cultural values play an important role in the ability of consumers to change their expectations, compared with Western values of standardized expectations.

4 - An Empirical Comparison of Hierarchical Bayes and Optimization Based Conjoint Methods

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Recently novel optimization cojoint estimation methods have been proposed, based on machine learning principles or polyhedral optimization. Unlike widely used Bayesian methods such as hierarchical Bayes, these methods provide point estimates of partworths which are fast to compute as they can be given in closed form. The methods are also shown to be robust to response error due to the use of complexity control, widely used in machine learning methods such as Support Vector Machines. In this work we present experiments with a number of real datasets comparing the optimization based methods to hierarchical Bayes conjoint estimation. We compare the accuracy of these methods under varying conditions (i.e. number of questions per respondent, number of respondents, number of product attributes, estimation of interactions among product attributes), as well as their computational efficiency. We finally discuss possible future research based on the experimental results.

■ FB07

Cambria East

New Product Development - II

Chair: Ashutosh Prasad, Assoc. Professor, The University of Texas at Dallas, School of Management, SM 32, Richardson, TX, 75083-0688, United States, aprasad@utdallas.edu

1 - How Far Can You Rely on a Concept Test: The Generalizability of Testing Over Occasions

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A time delay between concept testing and potential market introduction is an inherent feature of concept testing. Researchers and practitioners have to assume that consumer evaluations of products or concepts generalize over occasions, but no evidence on the issue has been reported in the concept testing literature. This paper used a three-wave web-based study to investigate the importance of occasion as a hidden source of error variance in estimates of the generalizability of concept scores for minor and major innovations. The results showed that the three-way interaction among subjects, concepts and occasions is a substantial contributor to variation in concept testing of both major and minor innovations, with the contribution for major innovations even more substantial than minor innovations. Moreover, including occasions as an explicit source of variance in the univariate generalizability analyses lowers the estimates of the generalizability of concept tests. However, the impact of neglecting occasions may vary by purpose of measurement and associated objects of measurement. This paper adds to our understanding of how well concept testing predicts new product success. We suggest managers should conduct at least small scale generalizability studies that sample occasions as a facet of measurement in order to determine the extent to which scores obtained on a single occasion are as generalizable as expected to scores that might be obtained on different, but similar occasions.

2 - Firm-Offered and Interpersonal Incentives in Customer Referrals

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Marketing scholars and practitioners recognize word-of-mouth as an important factor in the success of new products. In this work, we examine the role of one driver of these customer conversations, incentives that the firm can offer to either the person making the recommendation or the person accepting the recommendation. We build a model of the interaction between current adopters of a product and potential adopters and examine how that interaction is affected by who receives the referral bonuses. Central to our analysis is the motivation of the recommender. Biyalogorky, Gerstner, and Libai (Marketing Science, 2001) focus on the delight of the recommender as motivation to make a recommendation to an acquaintance. We focus on the recommender's interest in helping the other person and how he must balance that interest with the potential liability for a recommendation that turns out to be a disappointment. We find that if the recommender is very sensitive to the outcome of his recommendation, then traditional (recommender-received) referral bonuses are problematic. Compared to a bonus given to the "recommendee," a bonus given to a recommender does not increase the number of recommendations as efficiently. In addition, the traditional referral bonus encourages adopters to exaggerate the benefits of the product, which leads to more disappointments and fewer referrals in the future. However, if the recommender is sufficiently insensitive to the outcome of his recommendation or the product is sufficiently valuable compared to its price, then the traditional referral bonus is a useful tool.

3 - New Product Portfolio Optimization

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A major challenge faced by large firms in innovation-driven industries (e.g., the ethical drug industry) is how to allocate a tremendous amount of research budget among many competing new product projects. Wyeth pharmaceutical, for example, allocates about $2 billion each year across hundreds of projects (called the portfolio of projects); each differs in many aspects (target market, risk, cost, stage of development, competition, etc). An inefficient allocation will likely lead to less promising new products in the future and can significantly impact the firm's market value (e.g., Merck's stock price dropped nearly 30% at one point because two promising late stage new drug candidates failed). Portfolio planning, as a result, has become a key strategic issue. While there exists a wide variety of portfolio planning tools, there is no portfolio optimization theory that integrates the key drivers of new product performance in a rigorous framework, and generates optimal portfolios based on the firm's unique new product development process and objectives. Building on previous research on new product pipeline optimization (Ding and Eliashberg 2002), this paper proposes a portfolio evaluation procedure as well as an optimization model in the context of ethical drug industry. We apply our approach in evaluating actual portfolios and suggesting how they can be improved.

4 - The Ratio of Internal and External Marketing Communications in New Product introduction

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This paper reports an analysis of two types of market signaling activities often undertaken during the development and introduction of new product offerings. The first is internal marketing, which is defined here as advertising and communication spending directed at a firm's employees to convince them to exert substantial effort when converting a new product concept into a high-quality product offering. The second is external marketing, which is defined here as advertising and communication spending directed at potential buyers of the product offering to convince them of its quality and encourage them to purchase it. An integrated model of these two activities is developed and a game-theoretical approach is used to determine their optimal ratio in a successful new product introduction.

■ FB08

Westmoreland West

Word-of-Mouth IV: Diffusion

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1 - The NPV of Bad News

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While both the business press and academic literature have drawn attention to the possible destructive nature of negative word of mouth on the individual level, little is known about the way individual-level factors aggregate to market-level results. This study explores the effect of individual- and network-level negative word of mouth on the firm's profits using a complex system approach and specifically, an extended model of small world analysis. We simulate a would be market in which information spreads when consumers interact with each other using both permanent strong ties within their own social system, and changing, often random, weak ties with other networks. Using a full factorial design, we tie individual-level parameters to aggregate results using regressions as well as structural equations modeling. The effect of negative word of mouth on the Net Present Value of the firm is found to be substantial, even when the initial number of dissatisfied customers is relatively small. Also, the effect of advertising on negative word of mouth and on profits is non-linear. In particular, in the presence of dissatisfied customers, too much advertising may actually decrease profits. Lastly, among all the parameters of the network structure, weak ties play an important, and in some cases deceptively large role. In contrast to what is known about the strength of weak ties, when negative word of mouth exist weak ties act to shut down networks and promote failures.

2 - The Sales Effect of Word of Mouth: A Model for Creative Goods and Estimates for Novels

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Weekly sales of creative goods — like music records, movies or books — often follow a hump-shaped pattern, with sales peaking some weeks after release. In addition, Christmas sales can represent an important share of a title's overall sales. A popular explanation for hump-shaped sales patterns is word of mouth (WOM) among a population of heterogeneous buyers, but previous studies typically assume buyer homogeneity or neglect WOM altogether. In this paper, I propose a model of new-product diffusion with heterogeneous buyers that allows for a quantification of the sales effect of word of mouth. It features two distinct types of buyers: independent buyers and buyers influenced by WOM. As a result, the model has the realistic property that lacking word of mouth leads to unambiguously lower sales. I also propose a parsimonious way to include Christmas sales as a special case of WOM. All model parameters have an intuitive interpretation. Like most diffusion models, the one proposed is highly nonlinear in its parameters. I therefore assess its estimation properties by a set of simulations. Results suggest that the parameters are estimable if the data are not too volatile and if they cover a sufficiently large part of a title's life cycle. Finally, I present estimates using scanner data on four exemplary novels. Corresponding results appear both informative and intuitively reasonable, especially when potential autocorrelation is accounted for. Publishers can follow this approach to evaluate different marketing strategies by comparing estimates across titles. Applied to a single title, it provides an estimate of consumer segmentation for a particular hardcover edition of a title, which can be informative regarding the marketing strategy for future paperback editions.

3 - The Different Roles of Product Originality and Usefulness in Generating Word-of-Mouth

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The marketing literature recognizes that the diffusion of innovation is primarily affected by interactions among consumers. Consequently, many studies have focused on the importance of word-of-mouth communications (w-o-m) to new product success, however, not many studies have investigated the antecedents of w-o-m, or why consumers talk about new products. This paper explores how the characteristics of the product itself, specifically originality and usefulness, influence the w-o-m spread about the product and therefore its ultimate adoption and market size. In three studies we show that originality and usefulness have different roles in the adoption process of a new product. We show that originality of a product, which was previously assumed to be positively correlated with product success, does increase w-o-m activity, but can not determine the size of the market: The valence of this w-o-m is not always positive and under certain situations originality might increase negative w-o-m, causing product failure. What determines the valence of w-o-m (positive or negative), and can increase the market size, is the usefulness of the product. In addition, we show that perceived originality declines over time, leading to a decline in the w-o-m it generates.

4 - The Role of Word of Mouth in New Product Adoption: A Disaggregate Level Model

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Marketing research has long been interested in the area of diffusion of a new product or an innovation. Before adopting an innovation, consumers seek credible information about the quality of the product, from various sources. Two such sources are marketing communication undertaken by the firm and the information from individuals who have already adopted the product i.e., "word of mouth" (WOM). In order to understand how other individuals who have already adopted the new product affect a potential adopter's choice or decision to adopt, it is imperative to develop an individual level model of adoption. Those who have already adopted the innovation can influence three different choices of potential adopters: whether to adopt, the timing of adoption and how much to adopt. While recent studies, based on individual level models have shed light on the first aspect of whether to adopt, there is a lack of research to help understand how adopters influence the potential adopters' decision of when and how much to adopt. Capitalizing on a rich dataset of physicians' adoption of a medical innovation (testing service), we develop an individual level model and jointly estimate how WOM between physicians affects the time taken to adopt and the quantity of new product adopted. Moreover, unlike previous studies, we are able to disentangle the WOM due to geographical proximity from WOM due to social ties between physicians. We argue that the concepts and the model developed are generalizable to other settings of new products adoption. Based on our results, we derive implications as to how marketing managers can facilitate WOM or peer influence programs, thereby better manage their promotion efforts.

■ FB09

Westmoreland Central

eCommerce IV: eTailing

Chair: Ramesh V. Arjunji, CENTOCOR, 125 Chatsworth Court, Blue Bell, PA, 19422, rarjunji@cntus.jnj.com

1 - An Integrated Model of Retail Competition

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This research extends previous work on competition between direct marketer and brick-click store. Focus is on competition between brick-click stores with presence of direct marketer. We are interested in how brick-click stores compete in a dual market contact condition brought up by Internet. Internet allows brick-mortar stores serve beyond physical limit of location. Dual market contact redefines retailers' business scope as well as demand. Offline and online are components of strategy of brick-click stores set to optimize. A relationship between offline contact and online competition is revealed. We provide the rationale behind this relationship and discuss its implications in understanding brick-click market performance. Introduction Emergence of electronic market as a virtual marketplace is changing the way business is conduct. Among many industries facing reconstruction in eCommerce era, retailing industry's shift is of great interest to academics. The new configuration of retailing market includes digital divided customer: online versus offline shopper as well as direct market entrant: etailer. Accordingly, new retailing sector has been completed transformed. In this research, we strive to sort out the new balance of supply and demand in the retailing market and provide benchmark comparison with previous market.

2 - Competing with Free: Impact of Movie Broadcasts on DVD Sales and Internet Piracy

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New technologies have provided copyright holders with new sales and distribution channels for their content, while also providing consumers with new opportunities to obtain high quality free copies of this content. These issues are particularly important in the context of new digital television standards and the marketing of DVDs and other video content. Movie studios have argued that unless copy protection is included in digital TV standards, it will no longer be profitable for them to broadcast their movies on TV. In essence, they believe that digital transmission channels and personal video recorders will allow consumers and pirates to make perfect digital copies of movie broadcasts, resulting in increased piracy and reduced demand for DVDs. In this paper we empirically analyze these concerns and find exactly the opposite effect. Specifically, DVD sales increase by an average of 300% immediately after a movie is shown on TV. Moreover these are net gains, rather than just demand shifting. We also find no evidence that DVD sales are affected by the strength of copy protection provided in cable and satellite broadcasts (versus over-the-air). Furthermore, these TV broadcasts are not associated with a statistically significant increase in either the supply of or demand for pirated movies on popular Internet file-sharing networks. These findings should be should be encouraging to movie studios exploring new ways to market their content. These findings should also provide much needed empirical evidence in the Congressional debate over the broadcast flag and other copy protection technologies in over-the-air TV broadcasts.

3 - Measuring Menu Costs of Online Retailers

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We use product-level price and demand data to measure menu costs of a large online retailer. We define menu cost broadly as the total cost of changing the price of a product, which includes the physical cost of making the change as well as the managerial cost in making the price change decision. The online retailer makes a trade-off between the menu cost and the value of price change, which is in turn determined by changes to profit margin, demand elasticity, demand level and the expected time until the next price change. We construct a model that explicitly considers the trade-off made by the online store. Using price and demand data, we are able to identify all parameters of the model including the menu costs. We find that, contrary to common wisdom, online retailers face substantial menu costs. The menu costs take two forms — the opportunity costs due to delays in decision making, and the physical costs of making the decisions and implementing them. To measure the two effects separately, we resort to a new empirical strategy that explores the timing of price changes instead of focusing on changes in price magnitude. Our result suggests that a substantial portion of the search costs is due to managerial costs.

4 - Competitive Strategies of a Conventional Retailer Faced with an Internet Entrant : Go Head-To-Head Or Move Away

Ramesh V. Arjunji, CENTOCOR, 125 Chatsworth Court, Blue Bell, PA, 19422, rarjunji@cntus.jnj.com, Arbind Prasad, Subrata K. Sen

In this research we model competition between an incumbent, traditional retailer and an Internet entrant using price, retail assortment size, and the Internet store option of the incumbent retailer as strategic variables. The incumbent transfers his brand equity, assumed to be heterogeneous across consumers, to his Internet store and differentiates his Internet offering from that of the Internet entrant. If the consumers' transaction utility from shopping the Internet channel is low and the range of the incumbent retailer's brand equity heterogeneity is sufficiently large, then the incumbent retailer exercises his Internet store option and competes head-to-head with the Internet entrant by offering identical assortments. On the other hand, if consumers' transaction disutility from shopping the Internet channel is not low, then the incumbent retailer does not exercise the Internet store option and reduces his retail assortment size to accommodate the Internet entrant, i.e., the incumbent moves away from head-to-head competition. Using survey data, we offer empirical support for some of our model predictions.

■ FB10

Westmoreland East

Channels IV: Retailing

Chair: Hai Che, Assistant Professor, University of California at Berkeley, 545 Student Services Building, #1900, Haas School of Business, University of C, Berkeley, CA, 94720-1900, United States, cheh@haas.berkeley.edu

1 - Structural Estimation of Retail Demand Under Unobserved Out of Stocks

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In the field of Marketing, much research recent has been concerned with the resultant biased estimates from demand models when ancillary information is ignored (e.g. endogenously chosen prices on the part of the retailer). In this research, we focus on a problem that when ignored may also lead to wrong inferences: the occurrence of unobserved out of stocks. In fact, every time there is a stockout, the set of alternatives that are available to a consumer changes, and consequently the assumption that each consumer may consider all of the alternatives in her decision process is no longer valid. The estimation approach requires us to start by formulating assumptions about how consumers choose among a subset of alternatives and the process that describes the arrival of consumers to the store. These assumptions combined with aggregate data on demand and periodic inventory information enable us to i) simulate the underlying evolution of the inventory on the shelf via MCMC and data augmentation methods and ii) accurately estimate the distribution of the preferences of consumers visiting the store. The proposed methodology is tested using simulated data and it is illustrated using a data set from a retailer in Spain for which periodic inventory information is available.

2 - Marketing Actions and Firm Growth: Insights from Growth Models for Multi-Outlet Retailers

Rajdeep Grewal, Dean's Faculty fellow and Associate Professor, Penn State University, 407, BAB, University Park, PA, 16802, United States, rug2@psu.edu, Raji Srinivasan

A firm's growth rate is an important performance metric, serving as a key indicator of its viability and future prospects. Yet, there are few insights relating a firm's marketing actions to its growth rate, an issue we focus on in this research. Using the empirical context of retailing, we examine the relationship between a retailer's marketing effort and the growth of its system (i.e. the total number of units). Extending developments in mathematical biology and psychology, we propose a model of franchise firm growth that accommodates both exponential and logistic growth (or decline patterns). The proposed model also accounts for firm-specific heterogeneity as well as functional form (structural) heterogeneity. We incorporate the effect of observed firm and industry characteristics by linking the parameters of the exponential/logistic growth model with the firm's marketing action variables using the appropriate link function. We incorporate unobserved firm heterogeneity by allowing the effect of the explanatory variables to be firm specific. We use data from 250 franchise firms across 6 industries for a period of 10 years to estimate the proposed growth model using a Markov Chain Monte Carlo (MCMC) sampling procedure. The proposed model which fits better than baseline models that do not accommodate heterogeneity suggests an important role for both industry-specific and firm-specific heterogeneity. The paper's results have important implications for both marketing theory and managerial practice, which we discuss.

3 - Category Captains: Manufacturers, Retailers or Both?

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Ram Bezawada

Recently, there has been a trend towards the concept of category management on part of retailers. Through category management, retailers typically seek to maximizing profits from the entire category rather than just from a few brands through better coordination of pricing, promotions and merchandising in the category. In order to accomplish the above task effectively, retailers nominate category captains who undertake the role of managing the category. These captains are usually chosen from among the manufacturers operating in the category. Retailers might have different criteria for choosing category captains in different categories and may not always choose the manufacturer having the highest share in the category. They may strategically choose even smaller manufacturers to manage the category. Moreover, retailers sometimes designate more than one manufacturer to manage the category. This process whereby retailers nominate category co-captains might help retailers to delegate the management of the category and at the same time to strategically manage the manufacturers. Lately, private label or store brands have been gaining increasing prominence as a result of retailer's efforts. Thus, retailer controlled brands might also play an important role in the category management decision and private label manufacturers might also assume the role of category captains. In this paper, we analyze the above problem and find answers to issues such as: When should a retailer designate category captain versus category co-captains? And how these captains should be selected? What is the role of private labels in the above decision? We first examine the problem using an analytical framework and then also validate it empirically.

4 - The Effects of Retail Stockouts on Consumer Choice

Hai Che, Assistant Professor, University of California at Berkeley, 545 Student Services Building, #1900, Haas School of Business, University of C, Berkeley, CA, 94720-1900, United States, cheh@haas.berkeley.edu

This study investigates the effects of stockouts on consumer choice in the retail business. Using the stockout data provided by a large national retailer, we investigate the effects of stockout on consumer choices in different product categories. More specifically, we ask and answer these several questions: 1). what are the effects of stockout on consumer choice? do consumers walk away from the retailer, or purchase another brand in the same product category? 2). If consumers substitute the stockout brand with another brand, do they purchase another similar brand or another dis-similar brand? Under what conditions? 3). Do consumers' substitution or no-purchase behavior under stockout category-specific? With the answers to these questions, we also intend to assess the cost of stockouts to retailers and different types of manufacturers.

■ FB12

Fayette

Loyalty Programs

Chair: K Sudhir, Yale School of Management, 135 Prospect St, P.O. Box 208200, New Haven, CT, 06520-8200, United States, k.sudhir@yale.edu

1 - Brand Loyalty Programs: Are they Shams?

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Brand loyalty and the more modern topics of computing customer lifetime value and structuring loyalty programs remain the focal point for a remarkable number of research articles. At first, this research appears consistent with firm practices. However, close scrutiny reveals disaffirming evidence. Many modern loyalty programs resemble old-fashioned trading stamps or deferred rebates that promise future benefits for current patronage. A true loyalty program invests in the customer (e.g., provides free up-front training, allows familiarization or customization) with the expectation of greater future revenue. Alternative motives for extant programs are discussed.

2 - Loyalty Cards : Success or Failure ?

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Relationship marketing programs like loyalty cards, company credit cards and e-mail promotions have become an integral part of marketing strategies. Of those currently used, loyalty card schemes have gathered greater importance as a tool which, in addition to providing data, should, logically speaking, also generate loyalty and thus retain existing customers - a less expensive strategy than acquiring consumers from the competition. However, given that a consumer holds an average of 7 loyalty cards, are such card holders really "loyal" to any one store? Do they purchase primarily for the promotional value of the card, and use the others to cherry pick at other chains as well? In that case, are loyalty cards now simply the price of staying in business? Citing statistics such as increases in loyalty card consumers or profits to analyze the outcome of loyalty card programs, current research in this area has focused mainly on the promotional benefits derived from the usage of the cards and their profitability to retailers relative to non card holders (Wright and Sparks 1999,Bellizi and Bristol 2004,Heerde and Bijmolt 2005). In this paper we develop a model to assess the long term success or failure of loyalty card programs for two distinct chains. By incorporating defection rates, market trends, and loyalty card program characteristics, we can study their impact on the success of a program, as well as on customer lifetime evaluations. We expect to find defection rate, changes in customer life time value and loyalty card program characteristics to be important drivers in determining the promotional revenues attained from card and non card holders, thereby dictating the success or failure of loyalty cards.

3 - The Effect of Retail Credit Cards on Consumer Purchase Behavior

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Many large, durable good retailers offer retail credit cards that can be used at any of their stores. The goal of this research is to understand how these retail credit cards affects consumer purchase behavior. Are they an effective marketing tool? Is there a persistent effect? Are they profitable for the retailer? We obtain a unique data set from a retailer that summarizes the entire sales history and retail credit usage of all customers. We use a non-parametric approach that provides bounds on the impact of offering a retail credit card. Because we have a census rather than a sample of data, these bounds are estimated without error and prove to be informative. The bounds show that offering retail credit affects customer purchase rates and expenditure. We also use the non-parametric model to inform our specification of a parametric model. This parametric model allows us to obtain point estimates but requires additional assumptions about the underlying data generating process. The estimates confirm that retail credit increases short-run purchase rates and short-run consumption. We also find that retail credit appears to have a long-run impact on consumer purchase rates but has no long-run effect on consumer expenditure.

4 - Punish or Reward Loyals? Effects of 80/20 Rule and Information Asymmetry on Loyalty Program Design

K Sudhir, Yale School of Management, 135 Prospect St, P.O. Box 208200, New Haven, CT, 06520-8200, United States, k.sudhir@yale.edu, Jiwoong Shin

Loyalty programs have been widely adopted in many industries and have been the subject of much academic analysis in recent years. In this paper, we introduce two key features of real markets that are typically assumed away in the existing analytical literature on loyalty programs. First, not all customers contribute equally to a firm's bottom line (the 80/20 rule). Second, a firm has more information on its own customers than its competitors (information asymmetry). Incorporating these realistic features of the market enables us to resolve a key puzzle in the existing literature on loyalty programs. Most marketers believe that a loyalty program should reward loyal customers. Yet, extant analytical research consistently finds that loyal customers should pay higher prices relative to disloyal customers, implying that loyal customers be punished for their loyalty. By accommodating the fact the highest demand customers are potentially the most valuable and the firm has more information about their demand than the competitors, we find that in equilibrium, firms find it optimal to reward their loyal customers. We also draw a number of implications relating to the design of loyalty programs based on the model.

■ FB13

Somerset West

Pricing IV: Structural Models

Chair: Jean-Pierre Dube, Professor of Marketing, University of Chicago GSB, 5807 South Woodlawn Ave, Chicago, IL, 60637, United States, jdube@gsb.uchicago.edu

1 - Estimating Multimarket Contact Effect in a Business to Business Market

Donglei Qiu, Purdue University, 403 W. State St., 544 Krannert Building, West Lafayette, IN, 47907, United States, dqiu@purdue.edu, Xin Wang, Teck-Hua Ho

This paper studies the multimarket contact effect in a B2B automobile parts market. In this market the buyer submits an RFP for a list of auto parts, and the supplier with the most complete quote and the lowest price wins the order. We estimate a structural model to analyze the effects of multimarket contact on suppliers' participation and pricing decisions.

2 - Optimal Pricing with Implied Informative Priors

Alan Montgomery, Carnegie Mellon University, 5000 Forbes Ave., 255A Posner Hall, Pittsburgh, PA, 15213, United States, alanmontgomery@cmu.edu

Information is the key to the successful implementation of demand models that are used for price optimization. However, transaction information may not be sufficient due to the high dimensional space of many demand models—even in transaction rich environments like supermarkets with high turnover and large customer bases. A natural source for additional information are managers, who can be viewed as experts who have well developed opinions about how prices should be set. Frequently price optimization systems use managerial input in ad hoc manner where the manager may place bounds upon the optimal price (Montgomery 1997). Logically there is a problem if a Bayesian approach is followed. The optimal price is a function of the price elasticity and any prior on the optimal price implicitly defines a prior on the price elasticity. This could be viewed as a uniform prior on optimal price, which would induce a non-uniform prior on the price elasticity. We show why constraints should not be applied after the analysis during the optimization phase but should be considered prior information. The general approach that we advocate is to translate simple, direct statements that managers have about their problem into informative prior distributions. This contrasts with traditional approaches in which analysts directly assess priors upon the parameters. Our method asks users to make assessments about marginal properties of the model. This approach allows managers to assess meaningful statements to populate prior beliefs and integrate these priors in a consistent Bayesian framework.

3 - Retail Category Pricing with Consumer Traffic Effects

Edward Fox, Assistant Professor, Cox School of Business, Southern Methodist University, Dallas, TX, 75275, United States, efox@mail.cox.smu.edu, John Semple, Steve Postrel

Retail pricing of grocery products is of considerable interest to both marketing academics and practitioners. Little and Shapiro (1980) argued that the retailer must consider whether customers will return to the store when setting prices. They showed that normative price levels are generally below those that maximize contemporaneous profits. Empirical evidence at the category level supports their contention. Price elasticities for grocery store categories have been found to be below unity, suggesting that category profits could be increased by raising prices. We investigate a dynamic pricing model that allows category prices to have spillover effects both across categories and over time. Previous retail pricing studies have focused on either contemporaneous cross-category effects like complementarity and substitutability, or (rarely) inter-temporal effects, but not both. By incorporating cross-sectional and temporal spillover along with own-price effects in a dynamic framework, our model more accurately reflects the relationship between category prices and retailer profits than do existing models. The analysis of our dynamic model yields a surprisingly clean result that is easily interpreted. In the infinite horizon case, our model converges to a simple ratio, and long-run optimal prices can be obtained by solving a single optimization problem. Though many dynamic models are difficult to solve, the specification of our model with a single state variable—store traffic—makes it easily solvable. Specifying a single state variable also allows us to optimize prices for any number of product categories, each of which is allowed to affect store traffic differently. We also develop a general expression relating optimal prices across categories.

4 - Category Pricing with State Dependent Utility

Jean-Pierre Dube, Professor of Marketing, University of Chicago GSB, 5807 South Woodlawn Ave, Chicago, IL, 60637, United States, jdube@gsb.uchicago.edu, Guenter Histch, Peter Rossi, Maria Ann Vitorino

There is a substantial literature that documents the presence of state dependent utility with packaged goods data. Typically, a form of brand loyalty is detected whereby there is a higher probability of purchasing the same brand as has been purchased in the recent past. The economic significance of the measured loyalty remains an open question. We consider the category pricing problem in the presence of loyalty and demonstrate that a retailer has an incentive to invest in building brand loyalty to maximize the present value of category profits and that this materially affects optimal pricing. Given the well-known problems with the confounding of state dependence and consumer heterogeneity, loyalty must be measured in a model which allows for an unknown and possibly highly non-normal distribution of heterogeneity. We implement a highly flexible model of heterogeneity using multivariate mixtures of normals in a hierarchical choice model. We find important deviations from the standard one component normal mixture.

■ FB14

Somerset East

Mktg. Strategy IV: Frameworks

Chair: Mark Bergen, Carolyn I Anderson Professor of Business Education Excellence, Carlson School of Management, University of Minnesota, 321 19th Avenue South, Minneapolis, MN, 55455, United States, mbergen@csom.umn.edu

1 - A Multi-Market Perspective to Incumbent Survival in New Markets

Sungwook Min, Professor of Marketing, California State University Long Beach, 1250 Bellflower Blvd., Long Beach, CA, 90840, United States, smin2@csulb.edu, Jonathan Bohlmann

Order-of-entry advantage and product-market survival receive intense research attention, with some recent studies focusing anew on whether incumbent firms have any advantage in new markets. Empirically, most studies are either very narrow or rather broad in their analyses, giving attention to a single product category (with several technological generations) or to several categories at the broad industry or SBU level. Within a given industry, however, most firms make new market entry decisions in multiple product markets over time. For example, in 2004 the U.S. camera product category was comprised of 200 firms participating in 60 separate camera product markets. To illustrate the case of one company, it manufactured cameras in 49 of the 60 markets, and decided to enter 27 of the 34 camera product markets that did not exist in 1994. Does the company's broad product line make it more likely to survive when entering new product markets? How do market and technological similarities with existing products impact survival and entry timing of the incumbent firm in new markets? These are only some of the important questions that must be addressed by taking a multi-market perspective on new market entry and survival. We study incumbent entry timing and survival with a dataset representing several hundred firms and over 100 product markets. Our survival analyses demonstrate when incumbents participating in multiple product markets may have an advantage in new markets, and highlight the effects of innovativeness, market and technological similarity, and other relevant factors. Managerial implications are also discussed.

2 - Towards a Framework for Channel Evolution: Structure and Institutions of the Motion Picture Channel

Paul Messinger, Associate Professor, School of Business, University of Alberta, 3-20E Business Building, Edmonton, AB, T6G 2R6, Canada, Paul.Messinger@UAlberta.ca, Keri Kettle

We propose a framework for considering channel formation and evolution. A production and distribution channel is defined as consisting of (i) a community or network of communities of established organizations and entrepreneurs that interact to create related products and services and (ii) commonly shared supporting institutions. This structure and institutional setting efficiently economizes on transaction costs. The supporting institutions perform critical functions to enhance the efficiency of the inter-organizational networks. In this context, the formation and evolution of channels can be analyzed in two parts: the process and the outcome of the process. First, entrepreneurial activity progresses in successive cycles, with the following phases: (1) catalyst, (2) experimental period, (3) network emergence, (4) consolidation of network structure and institutions, and (5) channel stability. Second, each cycle leaves a progressive legacy, updating the network and the supporting institutions. To succeed, any entrepreneurial activity must be developed within the context of the structure and supporting institutions. We demonstrate our ideas in the context of a historical study of the motion picture channel. We accordingly describe how the motion picture channel has proceeded through (1) a nascent period, (2) a formative period, (3) the studio era, (4) the television era, and (5) the brand management era. In the process, the channel network evolved through different forms, including (a) independent stages of production, distribution, and exhibition; (b) vertically-integrated companies (the "studios"); (c) a flexible production hub system; and (d) a flexible production and marketing hub system. This dynamic channel possesses many characteristics of high tech industries.

3 - A Study of Strategy in Marketing: A Longitudinal Perspective of the Content and Impact

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Bob Rietveld

Marketing strategy has been distinguished as a distinct domain of research within the field by several authors (e.g., Kamakura 2001; Varadarajan and Jayachandran 1999). Although topics that are of key importance for marketing strategy have been identified and discussed previously (Varadarajan and Jayachandran 1999), a rigorous study of the issues addressed within this domain has not yet been executed in extant literature. Such a study would help to provide in-depth insight into the importance and development of marketing strategy. We assess whether marketing strategy can indeed be distinguished as a distinct domain in the field, like modeling and consumer behavior. More importantly, we investigate the topics studied within this domain and assess their impact in the field. We collected all papers (4286) from the top 6 (JM, JMR, MS, IJRM, JAMS, JCR) marketing journals within the period 1984 to 2004. Expert judges classified a sample of 400 papers into the consumer behavior, modeling or strategy domain. Subsequently content analysis is employed on the 400 selected papers to construct keywords reflecting the domain of each paper (strategy, modeling or consumer behavior). We then develop a multinomial logit model to classify papers into one of the three domains and apply this model to the entire database. Keywords are used to assess the topics discussed in the marketing strategy papers and by means of the Social Sciences Citation Index the impact of marketing strategy papers is evaluated. Combining these insights, a longitudinal perspective on the development of the marketing strategy subfield is obtained and discussed.

4 - Pricing Structure and Structuring Price

Mark Bergen, Carolyn I Anderson Professor of Business Education Excellence, Carlson School of Management, University of Minnesota, 321 19th Avenue South, Minneapolis, MN, 55455, United States, mbergen@csom.umn.edu, Mark Zbaracki

In this paper we explore a simple question - how do firms adjust prices? In economics, marketing and sociology, the classic response to this question is that firms adjust prices in response to market forces. We analyze field data from a 2 year ethnographic study of price adjustment practices at a large industrial manufacturer. We use economic and marketing models of pricing to define ostensive routines and study how firm members use those models to develop

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From Pittsburgh International Airport:
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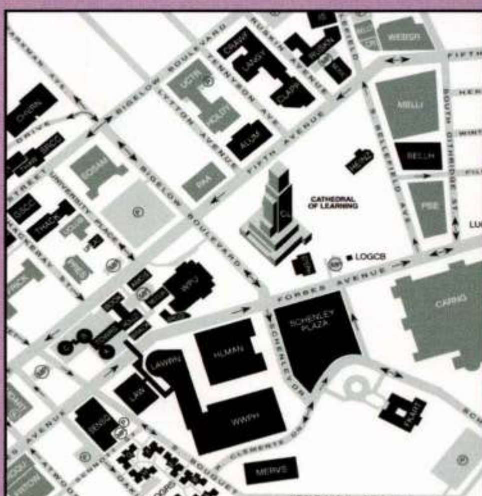

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Nationality Rooms

CLASSROOMS THAT TEACH

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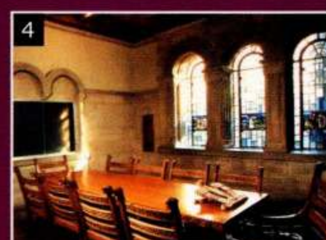

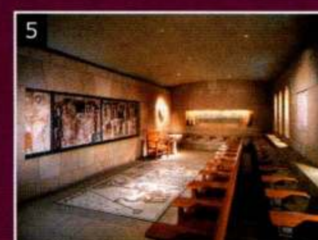

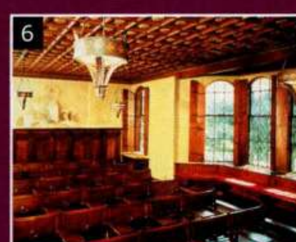

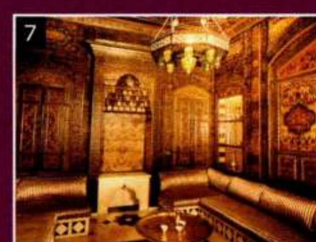

NATIONALITY ROOMS

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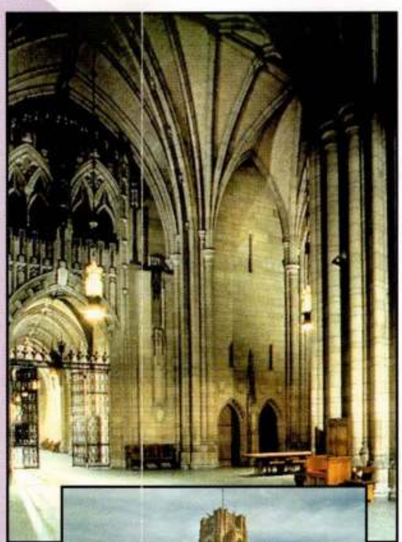
Trained guides are familiar with the historical figures, myths, art, religions, and events depicted in the rooms and can adapt their tours to children, the handicapped, and special interest groups. The rooms are decorated in traditional holiday styles from mid-November through mid-January. An open house occurs on a Sunday in early December.

NATIONALITY ROOMS • African Heritage • Armenian • Austrian (1) • Chinese (2) • Czechoslovak • English • French • German • Greek (3) • Hungarian • Indian • Irish (4) • Israel Heritage (5) • Italian (6) • Japanese • Lithuanian • Norwegian • Polish • Romanian • Russian • Scottish • Swedish • Syria-Lebanon (7) • Ukrainian • Yugoslav • Early American

FUTURE NATIONALITY ROOMS • Danish • Finnish • Latin American/Carribbean • Philippine • Swiss • Thai • Turkish • Welsh



A Gothic Place

The 42-story Cathedral of Learning, long known as the "world's tallest schoolhouse," is located in the heart of Oakland. Its dramatic height invites visitors to explore the great Commons Room where soaring Gothic arches provide the hub for the Nationality Rooms on the first and third floors.

The Tours

Tours are dispatched from the Information and Gift Center near the Fifth Avenue entrance. The center sells international handcrafted items, as well as videos, postcards, and publications.

Narrated Tape Tours
Cassette tapes of the tour are available on weekends throughout the year and every day from May through late August.

Guided Tours
Guided tours are offered without reservations the day after Thanksgiving and December 27–31. On those days only, the center opens at 10 a.m., and tours depart from 10:30 a.m. to 2:30 p.m. To schedule a guided tour for a group of 10 or more people, call 412-624-6000 as early as possible but at least two weeks in advance.

Self-Conducted Tours
As most of the rooms are functioning classrooms, their availability varies. If some rooms are in use, guests are given a map and may buy a *Brief Descriptions* booklet for $1.25 to enhance the self-conducted tour.

Operating Hours

Monday-Saturday: 9 a.m.–2:30 p.m. The rooms close at 4 p.m.
Sunday and holidays: 11 a.m.–2:30 p.m. The rooms close at 4 p.m.
Visitors are encouraged to visit the rooms any day except Thanksgiving, December 24–26, and January 1.

Admission Fees

Adults: $3 • Youths (ages 8-18): $1
Fees are subject to change without notice.
The building is handicap accessible with convenient parking, restrooms, and a food court that is open Monday–Friday.

More information is available by calling 412-624-6000 or by visiting www.pitt.edu/~natrooms.

performative routines through which they interpert the market. We go on to study price adjustment in a situation where economic theory would predict that a firm should reduce prices, but the situation also introduces a moment of interpretive flexibility where the pricing process itself is renegotiated. As such, we find that the abstract concepts of economics and marketing are used by firm members to interpret the market, define instrumental action and structure the organization. At the level of price alone, market forces work, prices are lowered. These findings also suggest, however, that to look at prices alone is to miss how prices adjust- and so how economics and marketing works. Perhaps more fundamentally, this provides a promising interdisciplinary perspective on the question of how firms adjust prices, treating market forces as social forces that managers construct, which may create a common ground for dialogue between economics, marketing and sociology.

Friday, 1:30 - 3:00pm (Session C)

■ FC02

Crawford East

Strategy Marketing I

Chair: Dr. Mark E. Hill, Associate Professor, Montclair State University, Department of Marketing, School of Business, Upper Montclair, NJ, 07043, United States, stratagem1@earthlink.net

1 - Emergent Heterogeneity and the Marketing of Skill Goods

Chun Qiu, PhD Candidate, School of Business, University of Alberta, Edmonton, AB, T6G2R6, Canada, cqiu@ualberta.ca, Paul Messinger

A marketing problem for experience goods is that consumers may not know, before purchase, the utility that they will ultimately derive. A particular form of this issue holds for skill goods, such as sporting equipment and musical instruments, where the uncertainty is not about the quality of the product but about the potential of the consumer to develop the skill to fully realize benefits from the product. In such a case, if the potential skill level is unknown to the individual consumer prior to purchase (and the distribution of possible skill levels is known), the initial market demand is effectively homogeneous. Later, once consumers try the product and realize different levels of skill, heterogeneity emerges in consumer valuations. We refer to this situation as emergent heterogeneity. The dynamic information asymmetry associated with emergent heterogeneity poses an obstacle for sellers of skill goods. In particular, a seller may not be able to capture the surplus potentially generated from product use by consumers who turn out to have high skill levels. In the extreme case, emergent heterogeneity may be a barrier to the successful introduction. One solution that has been considered is to provide a money-back guarantee for return of the product within a predetermined time interval. Another solution that we consider is to initially provide a low quality entry-level product followed by a high quality product upgrade in the second period. This paper explores the advantages and disadvantages of these two mechanisms. We then suggest future avenues of research wherein emergent heterogeneity is not only a problem, but also can present an opportunity for a company to develop an ongoing relationship with a consumer.

2 - When Do Firms and Industries Matter? Cross-Disciplinary Approach to Firm Vs. Industry Debate

Ekaterina Karniouchina, University of Utah, 1645 E. Campus Center Dr. #101, Salt Lake City, UT, United States, pmktkk@business.utah.edu

This study relies on advances in marketing, strategy, and economics to elaborate on a long-standing strategy debate on the relative importance of firm and industry effects when determining firm's profitability. We conduct a longitudinal study covering over 50 years of data and present empirical evidence that helps explain the emergence of two conflicting theories on firm profitability, namely traditional structure-conduct-performance view and the "revisionist" view, which argues for firm-level explanation of performance heterogeneity. The paper contributes to the existing literature by incorporating marketing concepts of product/industry lifecycle into the debate, which proves to play a mediating role in determining the relative strengths of the firm and industry effects. Evidence suggests that industry membership is important during the growth stage of industrial lifecycle while being irrelevant in maturity and decline stages. Another set of findings is related to the decline stage. Not only do we have the highest predictive power during this stage, this predictive power is linked primarily to the firm effects. During the decline stage firm-level heterogeneity explains the largest amount of variation in all five decades under investigation (over 80% based on R-squared statistic). In terms of methodology, the paper provides a scheme for industry lifecycle classification that relies on the Markov-based regime switching technique popular in finance and economics but not yet applied in strategy or marketing research.

3 - Managing Customers' Product Returns

J. Andrew Petersen, Ph.D. Candidate, University of Connecticut, 2100 Hillside Road, Unit 1041, Storrs, CT, 06268, United States, apetersen@business.uconn.edu, V. Kumar

Product returns are an inevitable part of the exchange process between a company and its customers. And, recent research has found product returns, up to a certain threshold, to be a positive driver of customer value. So, it is not necessarily optimal for a company to offer disincentives for customers to stop them from returning products. However, at the same time, companies do not want to have their customers return more products for obvious reasons. Therefore, this issue of product returns is addressed in two separate studies. In the first study, we analyze what customer behaviors drive three different operationalizations of product returns (including number of returns, dollar value of returns, and the ratio of the dollar value of returns to total dollars spent). In the second study, we determine the relationship between each of those operationalizations of product returns and customer value. Then, by using the drivers of product returns and the relationship between each of the product returns variables and customer value, we offer marketers strategies to manage product returns in order to optimize the profitability and customer equity of the company.

4 - The Marketing Paradox

Dr. Mark E. Hill, Associate Professor, Montclair State University, Department of Marketing, School of Business, Upper Montclair, NJ, 07043, United States, stratagem1@earthlink.net, Dr. John Mcginnis, Dr. Jane Cromartie

This research examines the paradoxical situation marketing as a discipline finds itself in and offers ways to participate more effectively within the paradox. In its disciplinary pursuit, marketing's focus has been on contributing a body of knowledge. As a result, marketing's culmination of established and entrenched concepts, theories and models has become a hindrance in that the structuring characteristic of the content of marketing, its body of knowledge, is restricting, demarcating, and value-laden. Against a backdrop of a rapidly advancing marketplace current marketing practices are becoming less useful and relevant to the practitioners it strives to help. This predicament can be referred to as the "Contributing & Hindering" (C&H) paradox. At issue for marketing is to re-think what its role should be and move away from marketing-as-content, toward, perhaps, marketing as a way of thinking, with its own questioning advance. This would not alleviate the paradox, but would better accommodate it. In increasing our understanding of the Hindering aspects of the C&H paradox, we become sensitive to the role of marketing thinking in providing opportunities for a new responsiveness to challenges regarding the relevancy of marketing knowledge, its changing nature, authority, significance, and use by those practicing marketing. The research offers ways to participate in marketing's questioning advance. One approach might involve stepping away from the familiar by looking towards the present day marketing questions and asking what they say about the current practice of marketing in its various forms. Stepping away, through questioning, provides for different vantage points from which new and different paths or avenues might be realized.

■ FC03

Crawford West

Latent Variable Models

Chair: Adam Finn, Professor, University of Alberta School of Business, 3-23, University of Alberta School of Bu, Edmonton, AB, T6G 2R6, Canada, adam.finn@ualberta.ca

1 - Prospecting for Customers in Geographic and Latent Space

Wagner Kamakura, Duke University, One Towerview Rd, Durham, NC, 27514, United States, kamakura@duke.edu, Stephen Samaha

Despite its widespread use in geo-demographic segmentation, geographic information is seldom used in Customer Relationship Management. In this study we first show that "birds of a feather flock together," demonstrating the value of customer location in predicting customer behavior. We then propose a semi-parametric response model that takes advantage of geography, as well as other data typically available in a customer database, to improve the manager's ability to predict customer response. Our proposed model takes advantage of recent developments in latent-variable and non-parametric modeling, benefiting from the flaxibility of generalized additive models while avoiding the "curse of dimensionality," through the use of latent variables.

2 - Specification and Identification of Structural Equation Models Including Formative Constructs

Dirk Temme, Assitant Professor, Humboldt University Berlin, Institute of Marketing, Spandauer Str. 1, Berlin, 10178, Germany, temme@wiwi.hu-berlin.de, Lutz Hildebrandt

Recently, several articles (e.g., Albers/Hildebrandt 2006; Diamantopoulos/Winklhofer 2001; Jarvis et al. 2003) have advised empirical researchers to think carefully about the correct specification of their measurement models. Whereas the long-time dominant Churchill paradigm in scale development assumes reflective indicators, many constructs in management/organizational research are formative in nature. Since such constructs pose specific identification problems in covariance structure analysis (CSA), an increasing number of studies uses partial least squares (PLS) to model the effects and causes of formative constructs. While PLS has some advantages over CSA (e.g., no identification problems), it suffers from several shortcomings (e.g., biased estimates, no goodness-of-fit indices). Thus, there are good arguments in favor of CSA. Model identification in this case is, however, still a big hurdle. Although two additional reflective indicators per formative construct (MIMIC model) would in principle solve that problem, this further increases the amount of information requested from the respondents. Since formative measurement models can also be identified solely by structural relations with other variables, it would be helpful for applied researchers to have tools at hand which make it relatively easy to assess the identification status of models including formative latent variables. The aim of this study is to provide a graph-based approach for model identification in the case of correlated disturbances or structural relations between those variables directly influenced by the formative constructs. Furthermore, it is shown that the common approach of specifying exogenous indicators for endogenous formative constructs produces misleading results.

3 - Nonparametric Latent Instruments with an Application to Modeling Consumer Heterogeneity

Peter Ebbes, Penn State University, 434 Business Buidling, University Park, PA, 16802, United States, pebbes@psu.edu, Michel Wedel, Peter Lenk

In this paper we propose a new method based on nonparametric Bayesian techniques to solve for endogeneity in general multilevel regression models. This method is a generalization of the discrete latent instrumental variables (LIV) model recently proposed by Ebbes et al. (2005) in two important ways: (1) it does not impose restrictions (discreteness) on the distribution of the latent instruments, and (2) we extend it to more general multilevel models that account for heterogeneity in consumer preferences. We use Dirichlet process priors to let the data determine the best distribution for the latent instrument. Because we take fully advantage of Bayesian estimation methods, the proposed model can be extended to more general models. Furthermore, inference does not rely on asymptotic results as a Bayesian approach yields insight in small sample properties. We illustrate this method on simulated data and one conjoint data set about personal computers (Lenk et al. 1996). Here we conjecture that one of the subject-level covariates that is used to explain the heterogeneity variance of the part-worths is correlated with the error term. Our results show that this self-reported measure for knowledge about the microcomputer market is endogenous. Ignoring this results in biased estimates for the heterogeneity distribution.

4 - The Generalizability of Marketing Theory Testing: The Case of Customer Delight

Adam Finn, Professor, University of Alberta School of Business, 3-23, University of Alberta School of Bu, Edmonton, AB, T6G 2R6, Canada, adam.finn@ualberta.ca, Ujwal Kayande

Marketing theories apply to elements that can be broadly classified into (i) individual market participants, such as consumers, managers, or employees, (ii) marketing entities, such as firms, organizational units, and market offerings, or (iii) the interaction between individuals, between entities, or between individuals and entities. A theory typically accounts for relationships between constructs for some elements. For example, a theory about the returns firms obtain on quality investments (e.g., Rust, Moorman & Dickson 2002) is a theory about marketing entities (firms), not a theory about individuals. Accordingly, Rust et al. (2002) selected a sample of 76 SBUs to test their theory. However, we show here that their appropriate research approach is atypical of marketing papers that develop and test theories. Researchers commonly test marketing theories, even if about marketing entities (not individuals), by assessing fit to sample surveys of individual respondents or secondary data, without necessarily sampling across the marketing entities. An unfortunate consequence of using only specific marketing entities is that the test of the theory does not generalize across the entities about which the theory is proposed. In this paper, we propose methods for testing the generalizability of theories in marketing. We illustrate our method by testing the generalizability of the foundations of customer delight (Oliver, Rust and Varki 1997).

■ FC04

Butler West

Brand Management III: Brand Equity

Chair: Douglas Bowman, Associate Professor of Marketing, Emory University, Goizueta Business School, Atlanta, GA, 30319, United States, doug_bowman@bus.emory.edu

1 - How Do Marketing Investments Benefit Brand Equity?

Shuba Srinivasan, Associate Professor, University of California, Riverside, A. Gary Anderson School of Management, Anderson Hall, Riverside, CA, 92521, United States, shuba.srinivasan@ucr.edu

In recent years, brand managers and senior management have been under ever-increasing pressure to justify marketing expenditures (Srivastava and Reibstein 2004, Marketing Science Institute 2004). In particular, which marketing investments (such as price promotions, new product introductions and advertising) contribute to a brand's equity? Moreover, how do brand and category characteristics moderate the impact of the marketing investments on brand equity? This paper examines conceptually and empirically how price promotions, new product introductions and advertising spending enhance demand and volume premiums, and hence brand equity. We address these questions with a large-scale econometric analysis of marketing investments and associated brand equity in the automobile industry. While investments in advertising and product innovations are successful in generating building long-run brand equity, investments in sales promotions are not. Moreover, there are significant brand and market characteristics that are moderators of brand equity effectiveness of marketing investments, as identified in this study.

2 - Assessing Individual-Level Brand Personality: Applying Q-Methodology to Brand Personality

Annie P. Cui, PhD Candidate, Kent State University, Marketing Department Room 518, College of Business Administration, Kent, OH, 44242, United States, pcui@kent.edu, Paul Albanese, Robert Jewell

Although brand personality has been studied by researchers for the last two decades (e.g., Plummer 1985), Aaker's (1997) work marked a major development in dimensionalizing the theoretical framework of the brand personality construct. The focus of Aaker's, and much of the research that has followed, was and has been on assessing, via trait descriptors (stimuli) and factor analysis (analytical procedure), the aggregate structure of brand personality across brands and industries. Few studies, however, have been conducted in order to analyze the personality of individual brands; and those extant studies evaluating individual brand personalities have been encumbered by the expectation that a five-factor model should be uncovered. The purpose of the present study is to suggest and apply a different framework for evaluating the brand personality of an individual brand using Q-methodology. Q-methodology has been demonstrated to be a systematic and rigorous means for evaluating human subjectivity (McKeown and Thomas 1988). Subjectivity can be well studied when the respondents are seeking self-reference actively rather than an external frame constructed by the investigators. Among many other merits, Q-methodology can help researchers to get a holistic view of the respondents' perceptions, evaluations and points of view, with a relatively smaller number of participants, and permits the assessment of shared perspectives of the brand's personality. This study examines the brand personality of two fast food brands, McDonald's and Subway. The present study represents a unique approach to the study of brands in general and to the study of individual brand personality specifically.

3 - Understanding the Effects of Customer Heterogeneity on Brand Equity

John Roberts, Scientia Professor, Aust Grad Sch Mgt, Randwick, Univeristy of New South Wales, NS, 2052, Australia, johnr@agsm.edu.au, Pamela Morrison

It is becoming increasingly popular to summarize the strength of a brand by its brand equity index. While such measures are undoubtedly useful, a single measure of a multidimensional construct must lose some information. In this paper we formulate a model for two underlying dimensions; the breadth and depth of brand equity, using a hierarchy of effects model. Using data from multiple countries and categories we examine the increase in explanation gained from such an extension and its associated managerial implications. Finally, we compare results from this two dimensional model with those obtained using a single measure of brand equity and multidimensional ones. We see how this varies as a function of consumer heterogeneity across different behavioral constructs. Our model allows managers to better understand the clout and vulnerability of their product, given the brand breadth and depth.

4 - Consumer Mindset as a Mediator of the Effect of Marketing Mix on Brand Performance Financial Metrics

Douglas Bowman, Associate Professor of Marketing, Emory University, Goizueta Business School, Atlanta, GA, 30319, United States, doug_bowman@bus.emory.edu, Raj Srivastava

The brand value chain implies a sequential process whereby investments in product and communications to name a few, develop and affect consumers' brand awareness, associations, and attitudes, which in turn affect consumer buying behavior, the brand's product-market performance, and ultimately the brand's value as an asset. Research to date has focused on examining a subset or select pieces of the brand value chain. For example, traditional marketing mix models, especially those calibrated using scanner data, assume a direct effect for investments in marketing effort (e.g., advertising, promotions, new product features) on a brand's market performance (e.g., sales or market share); consumer mindset is largely ignored. Consumer mindset with respect to brands is often studied in isolation of brand investments and product-market performance. Using data from 10 frequently purchased consumer goods categories, this research extends traditional marketing mix models to test for a mediating effect for consumer mindset in the linkage between brand's marketing mix effort and its product-market performance. Results help to provide a better understanding of the brand value chain, with an eye towards reconciling alternative measures of brand health and their drivers.

■ FC05

Butler East

Consumer Behavior III

Chair: Dipankar Chakravarti, Professor of Marketing, The Ortloff Professor of Business, Leeds School of Business, University of Colorado at Boulder, 419 UCB, Boulder, CO, 80309-0419, United States, Dipankar.Chakravarti@Colorado.edu

1 - The Joint Effects of Moral Identity and Gender on Charitable Donations

Karen Page, PhD Candidate, University of Pittsburgh, 351 Mervis Hall, Pittsburgh, PA, 15260, United States, klpage@katz.pitt.edu, William Ross, Vikas Mittal

In-group favoritism suggests that individuals are more likely to make donations to groups to which they are associated than to those which they are not. However, both gender and internal moral identity are expected to influence charitable donations. Moral identity regards the expandedness of one's psychological boundary toward outgroups (Aquino and Reed 2002). Thus, individuals with high internal moral identity should have greater global connectedness. Furthermore, women have a chronically relational focus or interdependent self-construal in contrast to men (Cross and Madson 1997). This chronic relational focus of females is expected to interact with the impact of internal moral identity and group on charitable donations via feelings of global connectedness and self-group connectedness. In a series of studies, the effect of gender, internal moral identity, and group on monetary donations, volunteer hours, and perceptions of relief efforts is examined. Results indicate that gender and internal moral identity jointly impact charitable donations. Mediation analysis suggests that this effect is caused by the chronic relational focus of females such that the number of global connectedness thoughts mediates the relationship. These results indicate that one's moral identity has an impact on individual's charitable donations along with gender. Because individuals donate billions of dollars and volunteer just as many hours to charitable organizations each year, these findings recognize the significant impact that one's social identity and self-construal have on thoughts and behaviors. In particular, gender and moral identity interact to impact one's self-group connectedness and their feelings of global connectedness, which ultimately impact behavior.

2 - To Upgrade, Downgrade or Maintain? A Model for Consumer Decisions in Not-for Profit Contexts

Detelina Marinova, Assistant Professor of Marketing, Case Western Reserve University, Weatherhead School of Management, 10900 Euclid Ave, Cleveland, OH, 44106-7235, United States, detelina.marinova@case.edu, Jagdip Singh

Consumer decisions to upgrade, downgrade or maintain service levels in membership contracts are not well understood but are critical for managing profitability. While prior research acknowledges the importance of this gap, no work to our knowledge develops a comprehensive model that (a) conceptually or empirically captures the process by which customers change or maintain service levels—that is, model the drivers of the decision to upgrade and downgrade contingent on the drivers and decision to renew the service contract, (b) simultaneously investigates both upgrading and downgrading behaviors, (c) addresses this problem in the context of not-for-profit services where this issue assumes critical importance due to heavy reliance on membership revenues. The proposed model includes psychological, sociological and economic drivers of each stage in the process as well as specific marketing tactics that determine consumer decisions to change service levels. The model is empirically tested based on multiple source data, including a survey of 1329 consumers who are members of a not-for-profit organization, and actual behavioral data on upgrading and downgrading actions from the company's database. Overall, the results provide a strong support for the proposed model and contribute to the growing field of customer relationship management.

3 - Truth in Lending Disclosures: Realities of Consumer Impact and Implications for Public Policy

Sharmila Chatterjee, Visiting Professor, MIT, Sloan School of Mgmt, 38 Memorial Drive, E56-390A, Cambridge, MA, 02142, United States, schatterjee@mit.edu, Rachel Kaitz

The Truth in Lending Act (TILA) was established in 1968 to help consumers comparison shop for credit and requires lenders to disclose six principle terms in tabular form: annual percentage rate, annual fee, minimum finance charge, transaction fee, grace period and balance calculation method. This legislation hinges on two crucial assumptions: that consumers search for information and that they can understand the information once they find it. However, thirty-five years of research confirms that lenders are complying with the TILA in solicitations and contracts and yet consumers do not comprehend the terms of their borrowing agreements. This study a) Examines the determinants of consumers' comprehension of credit terms within the context of the TILA, and b) Attempts to understand which factors (after controlling for risk) lead to favorable credit terms in today's lending environment. The conceptual models for comprehension of credit terms and favorableness of credit terms are drawn from the theoretical frameworks of information processing and behavioral decision theory. The models were tested by administering a survey to 1200 subjects who were randomly selected from the database of a San Francisco-based financial education company with approximately 40,000 clients nationwide. The response rate was 23% for a final sample size of 277 respondents. The study provides a conceptual model of the factors that influence borrower comprehension and favorability of credit terms and provides an empirical test of key assumptions underlying the TILA. By determining what factors contribute to comprehension and informed credit use, this study helps policymakers and creditors negotiate an appropriate balance between the burdens and benefits of disclosure.

4 - If You Smile Does the World Smile With You? How Facial Expressions Influence the Interpretation of Concession Cues in Marketing Negotiations

Rajesh Bagchi, Doctoral Candidate, Leeds School of Business, University of Colorado at Boulder, 419 UCB, Boulder, CO, 80309-0419, United States, Rajesh.Bagchi@Colorado.edu, Dipankar Chakravarti

Marketing negotiations typically involve concession patterns that are often used strategically by the negotiating parties. However, concession patterns are inherently ambiguous cues and hence their impact may depend on how bargaining opponents interpret them. Large initial concessions followed by more moderate concessions may signal a good deal. Alternately this may simply reflect a ruse designed to convey that no further concessions are likely. Prior research suggests that facial features often influence interpretation of ambiguous communications. Facial features may provide one set of cues to trustworthiness. Such interpretations then influence bargaining. Also, the recent literature in social neuroscience suggests that people are often influenced by facial expressions. These inferences may then influence the future course of the bargaining and the eventual outcomes. The present research examines how the interpretation of concession patterns in marketing negotiations is affected by facial features that convey (un)trustworthiness and whether they express emotion via a smile. The studies are set in a common automobile purchase negotiation context. Trustworthiness cues are manipulated using unsmiling (expressionless) pictures of the purported salesperson, calibrated for perception as trustworthy or untrustworthy. Using a computer-based face morphing program, we add smiles to each picture and manipulate facial characteristics in a 2 (trustworthy/untrustworthy) X 2 (smiling/expressionless) design. The concession patterns are manipulated at three levels (convex, linear and concave). We examine how subjects interpret the concession pattern as a function of the facial manipulation and explore its effects on bargaining processes and outcomes.

■ FC06

Cambria West

Choice Models IV

Chair: Bill Moore, University of Utah, 1645 E Campus Center Dr, Salt Lake City, UT, 84112, United States, mktbm@business.utah.edu

1 - With No-Choice Options, Which Decision Mode is Preferred?

Thanh Tran, Doctoral Student, University of Central Florida, College of Business Administration, P.O. Box 161400, Orlando, FL, 32816, United States, ttran@bus.ucf.edu, Kanghyun Yoon

There are several occasions when the utility of not choosing any alternative is much higher than that of choosing an alternative in the consideration set (Greenleaf and Lehmann 1995; Dhar 1997). Despite informational values from no-purchase observations, marketing scholars in the past have paid little attention on incorporating no-purchase options as an alternative in the discrete choice models (Chib, Seetharaman, and Strijnev 2004). Instead, they have followed one of the two approaches: 1) Incorporating purchase-only observations in a brand-choice logit/probit model or 2) Using purchase as well as no-choice observations in a nested logit modeling context. Following these lines of past studies, this research has two objectives. First, we are interested in investigating the choice decision mode that individual consumers use with either two-stage (e.g., represented by the nested logit model) or one-stage decision model (e.g., represented by the discrete choice model with no-choice option). Second, for the purpose of model comparison, we propose a utility specification, with appropriate operationalization of marketing variables, for no-choice option to capture the impacts of those covariates on choice/no-choice decisions. To this end, we prepare the scanner panel data with no-choice occasions to calibrate our proposed model on it. In addition, we compare the calibration performance of our proposed model with that of traditional brand choice models.

2 - The Invariant Proportion of Substitution (IPS) Property

Tom Steenburgh, Assistant Professor, Harvard Business School, Soldiers Field, Boston, MA, 02163, United States, tsteenburgh@hbs.edu

This article introduces the Invariant Proportion of Substitution (IPS) property, an individual-level property of many common discrete-choice models. The IPS property holds when the proportion of demand that is created by substitution away from a competing alternative is the same regardless of which of the enhanced good's attributes is improved. Since this property arises from assumptions about the individual consumer's representative utility rather than the assumptions about individual's unobserved component of utility, models that break the independence of irrelevant alternatives (IIA) property, such as the nested logit and probit models, do not necessarily also break the IPS property. Some models that do break the IPS property are discussed.

3 - Throwing Cold Water On Order: Accounting for Variance

Paul Burke, Lecturer, School of Marketing, University of Technology, Sydney, P.O. BOX 123, Broadway, NS, 2007, Australia, paul.burke@uts.edu.au, Ian Bateman, Paul Wang, Jordan Louviere

Many practitioners argue that if one presents multiple choice sets in a certain order relative to another order, it may change the way in which respondents evaluate options. Such effects could arise due to respondents appearing to place more/less emphasis on certain attributes due to "learning effects" and/or strategies that use an initial reference point. Although such effects may exist, it is important to ask whether other factors can account for them. For example, one needs to account for differences in response variability across orders before concluding that there are order effects. We show how to take such effects into account in MNL models by parameterising scale (inversely related to the error variance) as a function of choice set order. We use a choice experiment involving public water supply options to show that once one takes error variability into account in this way, the order effects largely disappear. That is, we can reject the hypothesis that attribute effects differ systematically with presentation order once error variability effects are modelled and taken into account. The only effect of order in this case, is on the propensity to choose one of the options relative to the status quo.

4 - Screening Rules and Consumer Choice: A Comparison of Compensatory vs. Non-Compensatory Models

Bill Moore, University of Utah, 1645 E Campus Center Dr, Salt Lake City, UT, 84112, United States, mktbm@business.utah.edu, Ekaterina Karniouchina

Traditional choice models assume that consumers rely on compensatory thinking. Even though these models have been successful in producing good fits and validation rates, previous behavioral research suggests that many choice are based non-compensatory processes. In our study of laptop computers we found that almost 80% of respondents made decisions that were consistent with a non-compensatory process as there was at least one attribute level (e.g. highest price, lowest amount of RAM) that was never chosen. Additionally, a number of the respondents who chose "none" on several choice sets tended to choose only certain attribute combinations. We estimate an independent probit model, a probit model with conjunctive screening rules (Gilbride and Allenby 2004), and a Greedoid model (Yee, Dahan, Hauser, and Orlin 2005) on 18 choice sets. We validate each model on eight choice sets involving four alternatives, as well as the "no choice" option. In addition, we investigate a possible impact of decision difficulty on relative effectiveness of different methods by utilizing two alternative choice set designs. We discuss parameter estimates, validation results, managerial implications, and compare our findings to prior research.

■ FC07

Cambria East

New Product Development - III

Chair: Juanjuan Zhang, University of California, Berkeley, 545 Student Services Building, #1900, Haas School of Business, Berkeley, CA, 94720-1900, United States, jzhang@haas.berkeley.edu

1 - Competence Acquisition in Co-Creation Relations: The Dual Role of Knowledge Stocks

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Academics and practitioners alike have begun to acknowledge co-creation relations between suppliers and industrial customers as a key to develop competitively superior products. No wonder as for instance 34% of all Dutch innovations are developed jointly with a partner of which 55% together with suppliers and 51% together with customers (CIS, 2002). Co-creation relations foster new competence acquisition with customers (e.g. joint knowledge development on specific marketing processes) involving tacit knowledge that is hard for competitors to copy in contrast to traditional marketing competence acquisition from customers (e.g. market surveys). In this article, the authors examine the interaction between internal and external sources of new competence acquisition in co-creation relations between buyers and suppliers. Drawing from research on capability development, the authors suggest that knowledge stocks are necessary ingredients for the development of new competencies. At the same time, however, this existing knowledge results in inertia hampering firms' creativity and product development capabilities. This study investigates the key hypothesis that when functional knowledge stocks are detrimental to the development of new competencies, knowledge overlap with a supply chain partner (i.e. supplier or industrial customer) can overcome this barrier because it creates a greater common ground for joint new knowledge between partners. The authors test this hypothesis using a sample of 247 firms that recently participated in a co-creation relationship and find support for the proposed interaction. Thus, the study contributes to literatures on capabilities, buyer-supplier relations, and relational ties, and addresses a key managerial priority.

2 - Selling New Products to the Sales Force

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Launching new products successfully is a critical aspect of marketing effectiveness, but failure rates run very high. Because vigorous sales support of new products is critical to their success, managers on both sides of the marketing/sales interface stand to benefit from understanding the key drivers of sales force buy-in to new product launches. We propose and test an empirical framework to identify these key drivers and develop best practice recommendations regarding how best to "sell new products to the sales force." We use longitudinal data from 439 salespeople and 64 sales managers in the United States and Canada to assess the types of persuasive appeals, incentives, and inducements that are most effective in enlisting sales force effort behind new products. We also examine the gate-keeping role of the front-line sales manager. We find that the types of persuasive appeals that work best in eliciting sales force effort behind new products differ between marketing managers and sales managers. In particular, informational influence has the greatest positive impact for marketing managers, whereas normative and promotional influence work best for sales managers. And while sales managers mediate the impact of marketing managers' use of promotional and normative influence, they do not mediate the effects of marketing managers' use of informational influence. We discuss the implications of these findings for improving sales force support of new product launches and promoting better coordination between the marketing and sales functions.

3 - Regulatory Focus Theory and New Product Team Decisions

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New product development (NPD) is generally a team effort within firms. Decisions concerning new product launch, investments in new product projects, etc., involve multiple functional inputs and the joint decision of multiple team members. Given the uncertainties surrounding NPD activities, the attitudes of individual team members towards the prospects of success or failure are likely to impact team decisions and new product outcomes. Regulatory focus theory (RFT) suggests that individuals regulate their behavior to achieve desired goals. Under a "promotion" focus, individuals are oriented more towards advancement or achieving a positive outcome. Under a "prevention" focus, individuals are more concerned with avoiding a negative outcome, preferring a safe approach. These individual traits may influence not only team member preferences, but also the dynamic process of team interaction and decision-making. Our research empirically studies RFT effects on NPD decisions within a team, addressing important issues and perspectives largely absent from prior research. Specifically, we examine how RFT traits and various team characteristics (e.g., collectivism, team justice, team performance) influence team investment decisions in new products and the post-launch new product performance. The experimental setting involves simulated product competition over multiple decision periods. The results reveal the importance of RFT mechanisms for team-based NPD. Managerial implications are also discussed.

4 - Dynamic Segmentation and Product Design

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The development of consumer tracking technologies has enabled firms to segment consumers based on their purchase history. This paper examines competing firms' product design strategies given this segmentation ability. I consider a setting where duopolist sellers of a nondurable good compete for a group of consumers with heterogeneous product preferences. In the early period, each firm offers one product and learns its clientele. In the late period, firms may offer either uniform design to all consumers, or different custom designs to their old and new customer segments separately. In the latter case, a consumer's present product choice not only determines her current consumption utilities, but also affects her future choice set. Interestingly, with the segmentation ability, both firms would want to offer custom designs, although simultaneous customization only localizes and intensifies competition. That is, segmentation hurts firms while it benefits consumers. Forward-looking firms therefore prefer to have a market leader in the early period occupy the entire market so that consumers are not segmented. However, both firms would compete to be the market leader. Furthermore, forward-looking consumers prefer segmentation in order to get a tailored design at a lower price in future. Consequently, when firms are patient enough and consumers myopic enough, a market leader emerges in the early period. Otherwise firms split the early period market where, counterintuitively, firm patience and consumer myopia intensifies competition.

■ FC08

Westmoreland West

Diffusion I: Agent-Based Modeling

Chair: Rosanna Garcia, Asst. Professor, Northeastern University, 202 Hayden Hall, Boston, MA, 02115, United States, r.garcia@neu.edu

1 - A Closed-Form Multiproduct Adoption Model with Correlated Awareness Diffusion Marginals

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As a consequence of liberalization and technology convergence today's technology markets are characterized by growing competitive and substitutive interdependencies. A model aiming at diffusion forecasting has to allow for such multiproduct interaction effects. Previous diffusion models usually focus on one certain phenomenon like intergenerational substitution, pure competition or new-entrant scenarios. Recently, some exceptions have emerged explaining both competitive as well as substitutive effects. However, they lack a sound behavioral foundation, have no closed-form solution or do not include marketing covariates. This research article presents an aggregate-level adoption model in closed form for industries with complex multiproduct-interactions. The model has a clear behavioral foundation by separating awareness diffusion and choice. This serves to retain compatibility and comparability with classic model frameworks from the diffusion and discrete choice literatures (e.g. the Bass model and the logit model). Methodologically, we propose copulas as well as mixtures of extreme-correlation probability mass functions as means of joining multiple diffusion curves and thus retaining a closed form. Copulas are mathematical functions which allow to separate marginal distribution functions from their joint dependence structure. The second approach is based on convex combinations of joint probability mass functions with extreme correlation patterns. We show that our model is able to explain a wide range of market phenomena and offer corresponding modeling guidelines. In an empirical study we successfully compare our model with established models serving a similar purpose. We use an already validated and tested dataset from a top forecasting-journal article.

2 - Modeling Purchase Timing Decisions in Group Buying Mechanism

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One of the major criticisms to the Bass model (Bass 1969) or the Generalized Bass model (GBM, Bass, Krishnan and Jain 1994) is that they do not incorporate the disaggregate-level information of individual buyers into the model specification. To resolve this problem, two past studies (Bass, Jain, and Krishnan 2000; Yoon 2004) among the many others have attempted to combine the Bass specification with the individual-level purchase timing models such as the Proportional Hazard Model (PHM, Cox 1972). However, Seetharaman (2004) demonstrates recently that the Additive Risk Model (ARM), which was originally proposed by Aarlen (1980), outperforms the Proportional Hazard Model and the Accelerated Failure Time (AFT) model using scanner panel data on laundry detergents, paper towels, and toilet tissue. Given these findings, we propose a new disaggregate-level diffusion model, e.g., the Additive Risk Bass Model (ARBM), which is designed to describe the diffusion process of a product as well as to investigate the determinants of purchase timing decisions of individual buyers in group buying mechanism.

3 - Diffusion of Multiple Generations of an Innovation: An Agent-Based Modeling Approach

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The use of agent based modeling to examine complex adaptive systems has increased in popularity, and can be employed to study a numbeı of marketing applications. Utilizing the agent-based modeling technique, we investigate the behavior of successive generations of an innovation in segmented and non-segmented markets. Extending upon the model developed by Norton and Bass (1987) , we construct an agent-based model to examine the diffusion of successive generations of an innovation. Beyond its ability to capture emergent phenomena effectively, a particular benefit of our model is that one can modify the number of generations of a product introduced to fit any case or product category. Hence, the model is quite robust and can be amended to represent a variety of different situations. The diffusion patterns observed from the present model are comparable to the Norton and Bass model. Our model suggests that in a particular industry, different market segments will adopt an innovation differently. Moreover, when adopting firms interact with other firms by disseminating information about the innovation, the adoption rate of the innovation increases. However, we find that the adoption rate is additionally influenced by firm-specific characteristics.

4 - Modeling Diffusion Using An Agent-based Model Instantiated By Conjoint Analysis

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Recent advances in computational methodologies have made possible the means to model both demand-side and supply-side diffusion within the context of a conjoint simulation. The methodology is known as agent-based modeling (ABM). In an ABM simulation, each respondent and each firm is modeled as a utility-maximizing (consumers) or profit-maximizing (firms) agent. Both consumers and firms are modeled as interacting, sharing information, and/or reacting to decisions by other agents. Interactions can be simple or complex. In particular, the rational actions of consumers can be based on conjoint-analysis partworths and the rational actions of firms can be based on reaction (or anticipation) of consumer actions and reactions. ABM methods enable both a fusion and an expansion in capabilities for both conjoint analysis and diffusion modeling. In this study, we instantiate an ABM simulation based on a case study in the wine industry. The underlying data consist of international surveys of over 2,800 consumers, including conjoint analyses, in Australia, New Zealand, and the US coupled with over 20 in-depth interviews of wine producers in the US. (Consumer surveys and conjoint methods are described in Toubia, Hauser, Garcia 2005, IGIM working paper). We attempt to use diffusion/adoption experiences in Australia and New Zealand to model future diffusion in the US. ABMs provide a new means to explore consumer and firm interactions that reinforce (or not) leading to rapid diffusion (or not). ABMs are relatively new to marketing science; we explore their applications providing a balanced discussion of their strengths and weaknesses.

■ FC09

Westmoreland Central

eCommerce V: Clickstream Analysis

Chair: Glen Urban, Professor, MIT, 20 Pinebrook Road, Carlisle, Ma, 01741, United States, glurban@mit.edu

1 - Online Purchase Behavior Across Multiple Shopping Sessions

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Shopping cart abandonment is the bane of many e-commerce websites. Industry estimates for shopping cart abandonment rates are very high in general. Other than the apparent reasons such as poor site design, high shipping charges, comparison shopping and etc., online retailers know little about the underlying reasons of shopping cart abandonment, let alone what to do with the abandoned shopping carts. While this issue has drawn attention among marketing academics recently, previous research on the topic has mainly focused on studying the outcome at the end of a single shopping session. In this study, we investigate consumers' online purchase behavior across multiple shopping sessions with an emphasis on the shopping cart abandonment phenomenon as well as purchase quantity decisions. Utilizing click-stream data provided by an online grocery retailer, we study consumers' shopping cart, order, and purchase quantity decisions across multiple shopping sessions by developing a joint model of these decisions within and across shopping sessions. We estimate the model in a Bayesian framework. Our study shows that there is a strong interdependence across multiple sessions and indicates that customers frequently break a shopping trip into multiple shopping sessions. In addition, their shopping cart and order decisions are influenced by marketing mix offerings, which implies that marketers can encourage consumers to transform an "abandoned" shopping cart into an order in the next shopping session.

2 - Reducing Shopping Cart Abandonment at Retail Websites

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The emphasis in the online retail sector has shifted from building the infrastructure to making it profitable. One of the major hurdles to profitability is online shopping cart abandonment. Commercial reports suggest that technical failures at websites may lead to online shoppers abandoning their carts and they can be identified through usability studies. However, even at well-executed retail web sites, consumers abandon shopping carts due to lack of purchase intent, in response to stimuli encountered during website navigation, or their desire to comparison shop. These are more difficult to address and an under-researched topic of online shopping experience. In this research we model the impact of navigational activities on the number of items placed in the shopping cart and whether the customer continues shopping or abandons the shopping cart at each webpage while shopping at a retail website. Additionally, our model captures the impact of unobserved purchase intent that may change during the shopping process in response to promotional stimuli encountered during the visit. We incorporate purchase intent as a mixture process whose multiple states are governed by a hidden Markov switching chain, to capture time varying, within user heterogeneity. Consumer heterogeneity is accounted within a hierarchical Bayesian framework. Our results show that web page stimuli and consumer's desire to comparison shop have differential impacts on consumer's propensity to purchase based on number of items in the cart. Managerial implications for customized web pages to reduce dropout or shopping cart abandonment at each stage of the shopping process are discussed.

3 - Understanding Information Search Behavior of Online Travel Purchases

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Online purchases are increasingly becoming a significant portion of total purchases in most product categories. Prior research in marketing has looked at information search and purchase decisions separately and there are no known empirical studies that model them jointly. In this paper we study consumers' online information search and purchase decisions in the travel category by using a unified framework and a unique dataset of dynamic click stream panel data from individual households. In particular, we focus on the impact of expected value of purchase, previous browsing and purchase experience on online search behavior. We model the (i) the choice of the first website visited, (ii) the pages viewed by consumers on travel selling websites before making a purchase and (iii) the choice of the final site where consumers will make the purchase. These three models are then simultaneously estimated using the simulated maximum likelihood approach. We find significant effects of expected price, browsing experience and past experience in determining how much consumers search as well as in how it affects the choice of the first website and the choice of the final website where they make a purchase. We also find that the choice of the first site visited and search duration has a significant impact on choice of the purchase site indicating the importance of modeling simultaneously. Finally we show how our model can be used to predict purchases and conduct some policy experiments using simulation techniques. Our results are useful for managers since they help in identifying the major determinants of consumer information search and online purchase behavior, which can be substantially different from a brick-and-mortar environment.

4 - Morphing Site Designs for Individual Search and Decision Styles

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John Hauser

As Internet commerce grows, good website design becomes increasingly important. First efforts in website design were a "one size fits all" approach. The second level of design was to give all users the same set of tools to customize the website, so their navigation experience would be adapted to individual preferences. However this option requires users to be willing to put effort and time into the customization process and often requires some form of identification. Our research investigates customizing websites to fit individual decision styles (e.g. deliberative versus impulsive, quantitative versus qualitative, and holistic versus analytical) by morphing the site based on revealed clicks. We address two research challenges. First, we must identify a visitor's decision style based on a relatively few clicks — prior attempts based on pre-questions discourage visitors. Second, we must identify and update the morphing strategy automatically to assign the most-profitable morph to a visitor based on his or her estimated decision style. For the first challenge we use population priors (from hierarchical Bayes estimation), combined with Gibbs sampling, to update our estimates of a visitor's decision style. For the second challenge we begin with managerial priors that are them improved with optimization methods that balance exploration and exploitation. We are applying our model to buying home broadband services in Europe.

■ FC10

Westmoreland East

Channels V: Pricing

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1 - Effects of Used Goods on Profits of Rental Stores, Retailers, and Manufacturers: The DVD Case

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This paper investigates how used goods change competition among rental stores, retailers, and manufacturers and affect profits of these players in the DVD market. As consumers have adopted the DVD format, the DVD market has become crucial to profitability of movie studios, video rental stores, and DVD retailers. This paper also provides managerial implications regarding how these players can increase its share of the pie in the DVD market. This paper uses Stackelberg models to analyze the DVD market. In Case 1, used (pre-rented or pre-owned) DVDs are not available to consumers. But, in Case 2, used DVDs are available to consumers for purchase at the rental store. In both cases, the movie studio is the leader, and the rental store and the retailer are the followers. First, equilibrium prices and profits were derived, then numerical analysis was conducted to gauge the effects of used DVDs. The findings are as follows. Availability of used DVDs increases profits for the rental store and the retailer and decreases profits for the movie studio. The rental store is the biggest beneficiary of used DVDs. The overall industry profits also increase with availability of used DVDs. Price changes, along with market share changes, play a crucial role in explaining these findings. One of the contributions of this paper is that it examines the used DVD market, which is different from the traditional used car market in some aspects. Thus, this paper contributes to enhancing overall understanding of used goods markets.

2 - Pricing by Car Dealers: The Effect of a No-Haggle Internet Option on Optimal Pricing Strategies

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While the internet has been widely used for product distribution in numerous industries, only recently has its role in the automobile industry gone beyond that of an information channel. Many dealerships now have an internet department that offers a haggle-free price so that consumers have the option to buy a car without negotiating with the salesperson. We investigate the implications for dealership strategies of introducing the no-haggling option. We are particularly interested in dealer pricing when the dealer receives a discount (dealer cash) from the manufacturer and compare the pass-through rates in the two channels. The results suggest that consumer bargaining power and aversion/tolerance for haggling have an impact on pass-through not only in the traditional negotiation channel but also in the no-haggling internet channel. Our model also explicitly considers the role of the salesperson, where the salesperson's effort level and consumer bargaining cost together determine the bargaining price. Two types of incentive mechanisms, one based on sales and the other on profit, are discussed in the dual channel context. Our model is further extended to the case when consumers are uncertain about the dealer's actual cost such as the availability of dealer cash. Preliminary results indicate that as the information asymmetry decreases, the no-

haggling channel becomes more appealing from the dealer's perspective. The profitability of providing the no-haggling price option and the consequences for consumer welfare are addressed. Empirical tests of the model's predictions are in progress.

3 - The Economics of Demonstrations: The Effect of Competition on Demonstration, Price and Rebate Policies

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Extended test drive policies were adopted recently as a non price competitive tool. In the highly competitive automobile industry 24 hours demonstrations became the alternative to rebates. And demonstrations are profitable. However not all the car manufacturers adopted the extended demonstration policy and some, such as Mercury allow customers to admire the finish but not to test drive the car. This paper studies demonstrations policies in a monopolistic and duopolistic market setting and explores the conditions for symmetric and asymmetric demonstration policies. Given demonstration policies the manufacturer determines his pricing and rebate policies

4 - Channel Coordination via Nonlinear Pricing under Price Expectation

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Coordinating activities among members of a distribution channel has been a subject of great attention in the past two decades. A number of studies have suggested quantity discount as a mechanism to achieve incentive-compatible coordination between a manufacturer and his retailer. The rationale behind this coordination mechanism is that a nonlinear pricing can be designed to align the channel members' interests for the maximum channel gain. Using an incentive compatible pricing strategy, an upstream channel member can influence its downstream partner's inventory level and pricing behavior to reach Pareto optimality without resorting to coercion. One basic assumption of these studies is that the price level is stable throughout the planning horizon. However, in some industries such as the pharmaceutical and oil, the channel members expect both the wholesale and retail prices to go up in the future. In this case, the value of inventory increases over time. In other industries such as the electronics and computer, the prices are generally expected to fall within a foreseeable future. Here, any excess inventories lose value and frequently become obsolete. In the former case, there is an incentive for the downstream channel members to carry more inventories; in the latter case, less. The existing literature does not cover channel coordinating pricing schedules when the members expect changes in the final price internally or externally. In this paper, we derive a generalized nonlinear pricing schedule for channel coordination that captures expectations of retail price changes.

■ FC11

Washington

Promotions III

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1 - Double Couponing as Commitment to Gain Bargaining Power within a Distribution Channel

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This paper develops a theory of double couponing based on the observation that a retailer that would incur a large reputation loss when it must renege its promises to consumers can use this vulnerability to gain bargaining power against an upstream channel member. We consider a monopolistic distribution channel lá· Gerstner and Hess (1991, 1995) where a manufacturer wants to induce a retailer to optimally serve two segments of consumers (the highs and the lows) by offering trade deals to the retailer (push promotion) and issuing a coupon to consumers (pull promotion). We show that if it is sufficiently costly for the retailer to renege its promises to consumers, then the retailer can benefit from pre-committing to a multiple-coupon policy that forces the manufacturer to push more and pull less. Although the marketing literature has mostly identified multiple-couponing with retail coupons, we show that multiple couponing is equivalent to a retail coupon commitment only when demand uncertainty is absent, and when the risk of demand takes a multiplicative form, multiple couponing dominates a simple retail coupon commitment. Our theory generates several testable implications: (i) multiple couponing tends to be accompanied by deep trade promotions; (ii) multiple couponing enhances retailers' profits; and (iii) it is more likely for retail chains than independent retailers to adopt a multiple-coupon policy. Predictions (ii) and (iii) are shown to be consistent with empirical evidence.

2 - The Effects of Promotions on Profitability – The Intermediate Role of the Type of Shopping Trip

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The evidence on the effects of price promotions on retailers' revenues is mixed. The intention of this study is to gain a better understanding of the effects of promotions on retailer's profits through the incorporation of the type of shopping trip in our analysis. We differentiate between consumers on a major visit, i.e. customers purchasing a large number of items to provide the household with supplies for a longer period, customers on a fill-in visit, i.e. customers buying products to satisfy short-term needs, and customers on a special visit, whose principal reason to visit the store is the existence of promoted products. Starting point of our analysis is the relation between the proportion of discount products in a customer's shopping basket and shopping basket profitability. We demonstrate that a pooled model does not adequately represent the structure of the data, and that one should accommodate for different parameters for customers on the different types of shopping trips. For customers on a major and fill-in visit, the proportion of purchased discount products has a negative influence on shopping basket profitability, with promotions being most harmful for the profitability of fill-in shoppers. For customers shopping for price specials, no significant influence from the proportion of purchased discount products on the profit margin can be detected. We also perform scenario analysis to determine the sensitivity of retailers' revenues to promotions, using the type of shopping trip to infer assumptions on customer behavior in the absence of promotions.

3 - How Competition and Market Area Characteristics Affect Retail Promotion Sensitivity

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Prior research shows that the effect of retail promotions on sales varies across brands. For example, a temporary price cut by a market leader increases its sales more than would a comparable reduction in the price of a follower brand. One limitation of this stream of research is its focus on results from a single market or even a single store. Recently, Boatwright, Dhar and Rossi (2004) used sales data aggregated to the market (i.e. city) and account (i.e. store chain) level to examine how variations in demographics and the levels of competition across markets influence the effectiveness of various retail promotions. Our study fills the gap between these two extremes by focusing on store-week level measures of retail promotions. Using data from a large chain of grocery stores in a Midwestern state, we model the determinants of promotion sensitivity for the two leading CPG brands. The promotions of interest are temporary price reductions, feature advertising and store displays. For each store, we have a detailed demographic profile of the local market area and measures of competition from other grocery stores and mass merchandisers. Using a hierarchical linear Bayesian sales model, we examine how the effectiveness of retail promotions are shaped by market area characteristics, the degree of competition and the presence of promotions by competing brands or differing product forms. This study has important implications for promotion planning at the chain level as well as category management decisions.

4 - Revisiting the Role of Promotions on Store Performance

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The objective of any retailer is to attract customers to its store and improve the performance of the store. Temporary price cuts, feature advertising, loss leader promotions and in-store displays are the few important types of promotions run by most retailers. For example, the objective of "Loss Leader" pricing is to generate traffic in the store in the expectation that the people coming to the store will purchase other products also. At the same time, the effect of promotions on store performance can be judged on multiple criteria like traffic, sales and profit. Past research has found mixed evidence for the effect of various types of promotions on store performance when researchers have investigated the various aspects in a non-integrated manner. In this research we do what we believe to be the most comprehensive empirical analysis of the role of promotions on store performance. In the context of grocery supermarkets, we analyze the relative effects of various types of promotions (e.g., loss leader, feature, price cuts) on the different dimensions (traffic, sales and profit) of performance measures at both aggregate (store) and disaggregate (category) levels. Based on this research, we are able to: (1) Identify the relative effectiveness of different types of promotion on various measures of performance at both aggregate and disaggregate levels. (2) Estimate the cross-category relationship between promotions and performance. The scope of our analysis is unique both in terms of the types of promotions and the breadth of categories covered.

■ FC12

Fayette

Customer Loyalty I

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1 - Success of Service Firms: In the Context of Relationship Management

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In the business environment building relationships with customers and excellence in customer service are core business activities for success. For example, a cellular customer, if satisfied by their service provider, is more likely to have a better attitude, greater affect, and increased intention to build a relationship with the service firm. These elements will enhance the customer's level of trust for the service provider, thereby increasing the firms overall success. Even though customer service is given emphasis both by scholars and managers, and businesses are investing capital in it, scholarly research appears to be scant in the services marketing literature. In an attempt to fill this gap, our study seeks to understand the factors that enhance the success of service firms. This research was conducted by means of a questionnaire with multi-item scales. The survey was administered to 234 subjects, out of which, 215 surveys were used for actual Structural Equation analysis. Results of the analysis indicated that affect had an impact on customer's attitude and their trust for the service providing firms. On the other hand, customer's attitude was found to have a strong positive impact both on customer's intention and their trust for the service firm. Results also indicated that customer's intention toward the service provider had a strong impact on their trust level. These results indicate that, in order to enhance the success of service firms, managers should give more emphasis on customer's emotion because it has a significant impact on their overall attitude.

2 - Exploring Spatial Variation in the Customer Satisfaction-Customer Loyalty Relationship

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The association between customer satisfaction and customer loyalty is one of the most important for a firm's future performance and shareholder value creation, with the extant literature identifying a strong positive association between the two constructs. However, these findings have also uncovered significant variability in this association, hindering manager's ability to use investments in satisfaction and/or loyalty to influence firm future performance. Understanding the boundary conditions ruling this association is a very important topic for research in Marketing. We develop a model that addresses these issues, by examining the moderating role of unobservables on the strength of the association between satisfaction and loyalty. Previous research suggests that the two major sources of unobserved variance are (1) customer heterogeneity (Oliver, 1999) and competitive differences (Godfrey and Hill, 1995). Additionally, recent studies have explored the possibility that unobservables vary spatially (Mitall, Kamakura and Goving, 2004). We explore the role of unobserved variance by developing a theoretical and analytical framework to sequentially analyze the impact of customer heterogeneity, competitive differences and spatial variation of the strength of the association between customer satisfaction and loyalty. Using American Customer Satisfaction Index (ACSI) data, plus demographic, competitive and geographical information, we estimate a set of geographical weighted models to test these hypotheses. Preliminary results indicate that (1) unobservables account for a significant percentage of the variance in the association between satisfaction and loyalty; (2) inclusion of demographics and competition information enhances model predictability; (3) inclusion of spatial information further improves predictive power.

3 - Combining Exploratory with Predictive Methodology for Analyzing Shopping Basket Data

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There are two main research traditions for analyzing market basket data that exist more or less independently from each other, namely exploratory and predictive model types. Exploratory approaches are restricted to the task of discovering cross-category interrelationships and provide marketing managers with only very limited recommendations regarding decision making. The latter type of models mainly focuses on estimating the effects of category-level marketing mix variables on purchase incidences assuming cross-category dependencies. Due to analytical restrictions, however, consideration of a comparatively small number of categories turns out to be mandatory in real-world applications of predictive models. This entails the crucial issue of a suitable selection of relevant categories for shopping basket composition, which so far is typically accomplished on a rather ad hoc or intuitive basis only. Along with emerging managerial information requirements of modern retail marketing concepts these methodological limitations have motivated our proposition of a novel two-stage procedure for analyzing cross-category effects based on shopping basket data: In a data compression step we first derive a set of market basket prototypes and generate segments of households with internally more distinctive (complementary) cross-category interdependencies. Utilizing the information on categories that are most responsible for prototype construction, segment-specific multivariate logistic models are estimated in a second step. Based on the data-driven way of basket construction, we can show significant differences in cross-effects and related price elasticities both across segments and compared to the global (segment-unspecific) model.

4 - Should Firms Prevent Service Delays? The Role of Customer Experience

Paulo Oliveira, Assistant Professor of Marketing, University of Miami, Department of Marketing, P.O. Box 248147, Coral Gables, FL, 33124, United States, paulo@miami.edu, A. Parasuraman, Juan Carlos Ferrer, Miguel Angel Arancibia

This paper examines the moderating effect that the role of customer experience has on the impact of service delays on behavioral intentions and proposes managerial guidelines for the prevention of service delays. The main finding is that the impact is larger on customers with low experience than it is on customers with high experience. This finding is supported by an examination of related literature and two empirical studies. The first empirical study was a quasi-experiment conducted in collaboration with a major international airline. The second study was a controlled lab experiment simulating an Internet-based service provider. These studies are followed by the analysis of a mathematical model that shows the optimal level of resource allocation towards the prevention of service delays. The paper concludes with a discussion of the managerial implications of the results and recommendations of directions for further research.

■ FC13

Somerset West

Pricing V

Chair: Mark Parry, Professor, University of MIssouri-Kansas City, 5110 Cherry Street, Kansas City, mo, 64110, United States, parryma@umkc.edu

1 - Pricing Strategy for Virtual Products Created by Online Gaming

Enping Mai, Ph.D. Candidate, Syracuse University, 311 Whitman School of Management, Syracuse University, Syracuse, NY, 13244, United States, emai@syr.edu, Jun Yang

Millions of people now spend several hours a week in the virtual reality worlds created by online gaming in which they battle monsters, go on quests, and build up their virtual power and wealth. As a result, real-world trade of in-game items, such as swards, gold, potions, or even whole characters, is flourishing in online market places such as eBay. This means in-game items and currency have real value and are important to the online video game industry. For example, in 2004, the online auction site eBay hosted about $42 million in trade for goods that only exist in virtual reality world. In this paper, we explore the transaction process, real values of the virtual products created by online gaming, and analyze pricing strategy after building a pricing model that incorporates virtual products. Finally we empirically test our model with real industry dataset.

2 - Versions, Successive Generations and Pricing Strategy in Software Markets: Theory and Evidence

Ke-Wei Huang, New York University, 44 West 4th Street, New York, NY, 10012, United States, khuang0@stern.nyu.edu, Anindya Ghose, Arun Sundararajan

Pricing and product line strategies based on versioning and introducing successive generations are widely used by software manufacturers. Such strategies, which aim to expand market share and implement more effective price discrimination, also expose sellers to the risk of cannibalization of their higher quality products by lower quality versions, and of current generation products by those from preceding generations. The nature of this tradeoff will depend on many factors, which includes the way in which consumers assess the relative "performance" impact of a better generations and more feature packed software versions. We study this tradeoff both theoretically and empirically, by developing a new analytical model that distinguishes how additional features and higher performance generations affect demand and pricing decisions, and by testing the predictions of this model using data about software demand and pricing collected from Amazon.com. Our empirical results demonstrate that gains from market expansion and price discrimination dominate losses from cannibalization, although there is some evidence that software manufacturers are not choosing their pricing optimally. We also discuss managerial implications of variations in each effect across different software categories, and across firms using a versioning strategy and a successive generations strategy.

3 - The Effect of Downward Leakage on Price Discrimination Policies of Rationed and Non-Rationed Deals

Aharon Hibshoosh, Professor, Dept of Marketing/DS San Jose State University, One Washington Square, San Jose, CA, 95192, United States, hibshoosh_a@cob.sjsu.edu, Uri Ben Zion, Uriel Spiegel

A profit maximizing monopoly is considering whether to implement a price discrimination policy using some deal instrument (say, coupon); and whether to ration the deal. In a rationed deal, the monopoly decides on the full (list) price, the discount depth and the limit on the number of items per coupon per customer. The upper market segment intended by the price discrimination policy is not sealable. The monopoly needs to examine the effect that a downward leakage has on the alternative policies. An analytical framework to support this examination is desired, but has been lacking. In particular, the development of normative analytical models capable of yielding explicit solutions, were all decision variables associated with the policies are simultaneously optimized have been in the case of non-rationed deals extremely limited, and in the case of rationed deals non existent. We remedy these modeling deficiencies. Our framework assumes a uniform rectangular distribution of reservation prices, linear demands with identical slopes, downward leakage, and simultaneous optimization of the decision variables. As economically expected, and in contrast with some early sweeping opposite conclusion in Marketing Science, rationed deals dominate non-rationed ones. Also, as expected, any discrimination policy is valid only as long as the leakage rate is not too large. Non-trivially, rationed deal is profitable at high leakage rate levels where the non-rationed one cease to be viable. Moreover, a rationed deal always offers a higher discount. We also demonstrate some distinguishing relationships among the decision variables. In the non-rationed deal, the optimal list price is not monotonic in the leakage rate. It has a single peak. As the leakage rate increases, the list price is first rising and then declining. In contrast, for a rationed deal, the list price is inversely related to the leakage rate. In any deal, rationed or not, the firm sets the full price at a higher level than a regular monopoly price. This result supports a classical hypothesis in the economics sales promotion literature.

4 - Rethinking Resale Price Maintenance

Mark Parry, Professor, University of MIssouri-Kansas City, 5110 Cherry Street, Kansas City, mo, 64110, United States, parryma@umkc.edu, Charles Ingene

Resale price maintenance (RPM) occurs when an upstream firm places a constraint on the retail price that its distributors can charge. RPM comes in three flavors: a maximum price, a fixed price, or a minimum price. It is known that some manufacturers, and many franchisors, impose RPM on their dealers. Proponents of RPM argue that, in conjunction with quantity fixing, it induces channel coordination, thereby benefiting all channel members, including consumers. For several reasons, this argument merits further investigation. First, arguments for RPM are based on analyses of bilateral-monopoly or identical-distributors models, neither of which are representative of reality. Upstream firms commonly utilize multiple, heterogeneous distributors, so coordination requires that each sell at a unique retail price. Second, administrative, bargaining, and contract-development costs, encourages a manufacturer to treat its distributors comparably: all distributors face the same RPM strategy and wholesale price. Therefore the fixed-price strategy is incompatible with coordination. Third, we know that when a manufacturer sells through heterogeneous distributors without applying RPM, channel coordination generally is not in the manufacturer's interest. Our research addresses three key issues. (1) Is the maximum or minimum price strategy, both of which are coordination-compatible, manufacturer-preferred? (2) Is coordination in the manufacturer's interest when it uses its preferred RPM policy? (3) Is it ever in the manufacturer's interest to employ RPM? Our broad conclusion is that the optimality of resale price maintenance depends on the nature and extent of retailer heterogeneity.

■ FC14

Somerset East

Mktg. Strategy V: Advertising

Chair: Peter Danaher, Professor, University of Auckland, Department of Marketing, Private Bag 92019, Auckland, New Zealand, p.danaher@auckland.ac.nz

1 - Advertising and Pricing Decisions for National and Store Brands: A Channel's Perspective

Salma Karray, Assistant professor, UOIT, 2000, Simcoe Street North, Oshawa, L1H 7L7, Canada, salma.karray@uoit.ca, Guiomar Martin-Herran

We study the pricing and advertising decisions in a distribution channel where national brands are competing with a private label. A differential game model is considered to take account of the carryover effects of brand advertising over time for the manufacturers and for the retailer. The obtained equilibrium solutions show that the pricing and the advertising strategies of channel members depend on both the manufacturers' and the retailer's goodwill stocks. They also show that the complementary and/or competitive role of manufacturers' advertising is very important in understanding the optimal responses of channel members to goodwill changes. In particular, we find that manufacturers increase their advertising expenditures and charge higher prices when the retailer invests more in brand advertising for his store. We also show that the retailer should charge lower prices for the private label when he carries stronger national brands in case advertising is highly competitive. Finally, complementary advertising leads to higher investments in brand advertising and to higher prices for all brands.

2 - The Short Term Impact of an Advertising TV Campaign on Brand Sales

Philippe Aurier, Professor, Montpellier 2 University and Montpellier School of Management, Place Bataillon, Montpellier, 34095, France, philippe.aurier@wanadoo.fr, Anne Giroux

We develop a model capturing the short term impact of a brand advertising campaign. Carryover effects are integrated throught a concave function of advertising stock (adstock), integrated in a multiplicative random coefficient response model explaining deseasonalized sales as a function of in store marketing variables for focal and competing brands (free product, feature, display with/without leaflet, price, brand number of SKU, turnover for the total category), the function of adstock for focal brand campaign, estimated on the basis of a half-life of length z (z = 2, 4, 6, 8 weeks, chosen to maximize t value), and an aggregated adstock function for all other competing brands (due to multicolinearity problems). The model was applied to 31 major brands in France, pertaining to 6 categories (chocolate bars, biscuits, mineral waters, diapers, shower gels, detergents), observed over 450 stores, 199 weeks. Retail panel data (IRI) were merged with weekly brand advertising expenditures. Only 75% of the 284 studied campaigns generated positive sales. The average carryover length is 10.5 weeks once the campaign is finished, increases with new brands (11.8 weeks) or high involvement category (12.2 for diapers). Advertising incremental sales rates vary between 3.6% and 7.1% across categories, to compare with effects of promotion varying between 3% to 15.3%. The payback rates ($ incremental sales associated to 100 $ in a campaign) vary between 28 $ (detergents) and 158 $ (diapers). Even under optimistic margin hypotheses for retailers (10%) and producers (40%), none of the studied campaigns were able to cover their direct variable advertising costs. Ad paybacks are then compared to those gained with promotion, providing bases for theoretical and managerial discussion.

3 - Kidfluence and the Quebec Advertizing Ban

Tirtha Dhar, Assistant Professor, University of British Columbia, 2053 Main Mall, Vancouver, BC, V6T1Z2, Canada, tirtha.dhar@sauder.ubc.ca, Katherine Baylis

With the growing concern about childhood obesity and the substantial health risks that come along with it, a number of countries are currently considering banning food advertising directed to children. Canadians have experience with this type of policy since the Province of Quebec imposed a ban on all TV advertising to children under the age of 13 in 1980. Advertising lobby groups involved in the current debate argue that even with the ban, children in Quebec are no less obese than children in other parts of Canada, whereas proponents note studies showing that child advertising is effective in altering consumption choices. We propose to look at whether the advertising ban affected consumer choice and demand of products in Quebec. To the best of knowledge this will be the first study to explore the effect of Quebec ban using market level data. Using data from the annual Canadian household expenditure survey and bi-annual Foodex survey, we ask whether consumption of products heavily used by children (such as: fastfood, toys, CDs and children's clothes) were influenced by this brand. In the Household expenditure survey, we control for the number of television sets, the expenditure on cable or satellite, internet use etc. Specifically, we estimate Quadratic Almost Ideal Demand Systems for foods after controlling for data censoring and various demographics. We test for the effect of the ban both by considering consumption before and after 1980, as well as by considering changes in TV programming availability through unregulated cable channels from the US. We find significant effect of this ban in terms of lowering own and cross price elasticities suggesting this ban had affected the flow of product level information to consumers.

4 - The Effect of Competitive Advertising Interference on Sales for Packaged Goods

Peter Danaher, Professor, University of Auckland, Department of Marketing, Private Bag 92019, Auckland, New Zealand, p.danaher@auckland.ac.nz, Andre Bonfrer, Sanjay Dhar

Competitive advertising interference arises when viewers of advertising for a focal brand are also exposed to advertising messages for competing brands within a short time period, say one week for TV advertising. Although competitive advertising interference has been shown to reduce ad recall and recognition and brand evaluation measures, no studies have examined the impact on brand sales. In this research we use a market response model of sales for three grocery categories in the Chicago area to investigate possible advertising interference effects. The model enables us to capture the 'pure' own- and cross-brand advertising elasticities that would arise if there were no competitive interference. The results show that competitive interference effects on sales are strong. When one or more competing brands advertise in the same week as the focal brand, the advertising elasticity diminishes for the focal brand. The decrease depends on the number of competing brands advertising in a particular week and their total advertising volume. We find that having one more competitor advertise is generally more harmful to a focal brand's advertising effectiveness than if the present number of advertising brands increase their total advertising volume.

Friday, 3:30 - 5:00pm (Session D)

■ FD01

Allegheny Ballroom I

Meeting The Editors

Editors of leading journals for marketing academics will present their editorial policies and perspectives. [In alphabetical order] The following editors are represented:

John Deighton (jdeighton@hbs.edu; JCR)
Huber Gatignon (hubert.gatignon@insead.edu; IJRM)
Dhruv Grewal/Michael Levy
(dgrewal@babson.edu, mlevy@babson.edu; JR)
Joel Huber (joel.huber@duke.edu; JMR)
Rajiv Lal/Peter Rossi (rlal@hbs.edu, peter.rossi@chicagogsb.edu; QME)
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Ram C. Rao (rrao@utdallas.edu; RoMS)
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Venkatesh Shankar (vshankar@mays.tamu.edu; JIM)
Steven Shugan (steven.shugan@cba.ufl.edu; Mktg. Sc.)
Charles Weinbert/Bart Weitz (charles.weinberg@sauder.ubc.ca, bart.weitz@cba.ufl.edu; Mktg. Ltrs.)

■ FD02

Crawford East

Financial Value of Marketing

Chair: Ashish Sood, Assistant Professor, Marketing,Goizueta School of Business, Emory University, Atlanta, GA, 30322, ashish_sood@bus.emory.edu

1 - Impact of Customer Churn on Financial Performance and Market Value of Telecommunication Securities

Debdulal Mallick, Doctoral Candidate, Department of Economics, Emory University, Atlanta, GA, 30322, Debdulal_Mallick@bus.emory.edu, Katherine Lemon, Rajendra K. Srivastava

Of late, many researchers have examined the impact of customer retention on customer lifetime value (CLV) and implied that customer loyalty should increase the long-term financial value of companies. However, the link between customer retention and market capitalization remains elusive—in part due to other related variables such as competitive activity, pricing strategies and customer management practices. In this research we focus on examining the relationship between financial performance (earnings per share) and intangible value (as captured by the market-to-book ratio) to metrics such as price/margins and customer churn rates by jointly estimating a system of three equations using the Seemingly Unrelated Regression (SUR) method. The first equation is based on the hypothesis that there is a positive association between churn rate and net margin (i.e., higher prices result in lower loyalty). The second equation hypothesizes earnings per share are negatively related to higher churn rates and positively related to higher net margins (prices), thus suggesting that firms need to balance their quest for higher margins and customer loyalty. The final equation is based on the hypothesis that earning per share increases, and churn rate decreases firm's market-to-book ratio and therefore it market capitalization. These expected relationships are largely confirmed for firms in the wireless telecommunications sector. After accounting for the impact of pricing strategy (margins), customer churn has a negative impact on both earnings and market value.

2 - Linking CLV to Shareholder Value

V. Kumar, ING Chair Professor in Marketing, University of Connecticut, 2100 Hillside Road, Unit 1041, Storrs, CT, 06269, United States, vk@business.uconn.edu

Firms spend resources to acquire and retain customers. The decision to allocate resources is based on both backward-looking metrics such as Share-of-Wallet, RFM, Historic Profits, etc. as well as forward looking metrics like CLV, and Lifetime Duration. Resource allocation process is critical since the right customers should get the right resources at the right time. The objective of the firm is to maximize the contribution from each and every customer and hence maximize CLV. As for the acquisition strategy, resources are spent such that the best prospects are contacted and converted to becoming a high value customer. The CLVs of all the customers as well as the CLVs of the newly acquired prospects are aggregated to get an estimate of Customer Equity. While the strategy of maximizing CLV/Customer Equity appears to be an appealing strategy, does it necessarily increase the shareholder value? In other words, whether increasing CLV results in increasing shareholder value? This study attempts to answer this critical question by using data from a leading firm in the financial services industry and illustrates that over time as the CLV increases, the shareholder value also increases controlling for other factors. Several implications are drawn for the top management to maximize shareholder value.

3 - Value of Brands: Is Value in the Eye of the Beholder?

Suleyman Cem Bahadir, Doctoral Student-Marketing, Goizueta School of Business, Emory University, Atlanta, GA, 30322, Cem_Bahadir@bus.emory.edu, Sundar G Bharadwaj, Rajendra K. Srivastava

The study examines the drivers of brand value in the context of mergers and acquisitions by utilizing a unique data set. The authors contribute to the marketing literature on following dimensions. First, it is the first study that focuses on brand value as a dependent variable. There is dearth of empirical research on brand value in marketing literature even though its importance is alluded to in many studies. Existing empirical attempt at studying the drivers of brand value by inferring it from aggregate measures such as goodwill. This study focuses on an isolated measure of brand value that is not contaminated by other intangible assets. The authors accomplish this by utilizing a unique data set and complementing it with secondary data sources. Second, conceptual work on drivers of brand value focuses only on the factors such as price, advertising and market share. Although these are very important and relevant drivers, the value of a brand in a merger and acquisition context is also driven by the acquiror's value expectations from that brand. The authors contribute to the literature by explicitly modeling the brand value drivers from acquiror's perspective. Third, the authors also test the moderating effect of market characteristics such as competition, growth and uncertainty on value drivers.

4 - Total Market Returns to Innovation

Ashish Sood, Assistant Professor — Marketing,Goizueta School of Business, Emory University, Atlanta, GA, 30322, ashish_sood@bus.emory.edu, Gerard J. Tellis

Analysts often decry the fact that managers under-invest in innovation due to their short term orientation. The reason may be that assessing market returns to innovation is difficult. Moreover, the studies that have done so have assessed market returns to one or other innovation events, rather the entire innovation project that results in a new product. Using new data on 3 industries and 13 technologies, the authors examine the market returns to entire innovation projects. They find that the response of markets to many, but not all, innovation-related events is positive. Market returns to the development phase are the higher than either the initiation phase or the commercialization phase. Returns to the announcing firm relative to its competitors are also the highest in the development phase. Most important, limiting the analysis to any one innovation event, e.g. commercialization of a new product or any other single activity within an innovation project severely under-estimates the total returns to innovation.

■ FD03

Crawford West

Experimental Methodologies

Chair: Min Ding, Assistant Professor, Pennsylvania State University, 408 Business Building, Smeal College of Business, University Park, PA, 16802, United States, minding@psu.edu

1 - Too Many Pairs: A Method to Aid Participants in Evaluating

Larry Garber, Associate Professor, Elon University, Love School of Business, Campus Box 2075, Elon, NC, 27244, United States, garberll@appstate.edu, Eva Hyatt, Unal Boya

The fact that the number of paired dissimilarity judgments experimental participants must make increases geometrically with the number of stimuli severely constrains the number of stimuli that participants can be asked to evaluate without fatigue hampering reliability and validity. Monte Carlo methods for the selection of subsets of pairs have been proposed as a means of reducing the participant's task load, but questions have been raised concerning whether this approach can adequately describe and predict an actual consumer's cognitive structure. Such limitations to the number of stimuli that can be evaluated severely handicaps many marketing studies that require large numbers, and whose purpose is the uncovering of such cognitive structures. Such was our dilemma upon encountering such constraints for our visual research, where for other methodological reasons the larger the stimulus set the more robust the results. For example, our method for evaluating and predicting the effectiveness of new package designs works best when the number of alternative designs being evaluated is larger. We have therefore contrived various methods to aid experimental participants in simplifying and structuring the proximities evaluations task, thus rendering it tractable even when very large numbers of stimuli are involved. These methods include simplifying the task by making do with lower orders of data, and breaking the task into several steps, and by helping to structure the task by providing various kinds of physical aids within which the stimuli are presented. We propose, in a working session, to present these methods, along with our plan to empirically test their validity and reliability, and possibly the results of a pilot study.

2 - The Interpretation of Moderated Regression and Anova

Joachim Vosgerau, Assistant Professor, Carnegie Mellon, Tepper Business School, 5000 Forbes Avenue, Pittsburgh, PA, 15213, United States, vosgerau@andrew.cmu.edu, Hubert Gatignon

Moderated regression and ANOVA can yield very different effects when applied to the same data. These differences occur because in moderated regression constant effects are estimated at zero and moderation is asymmetric, that is only one variable influences (moderates) the effect of the other variable but not vice versa. In contrast, in ANOVA main effects are estimated at their means, and interaction effects are symmetric, that is both variables moderate the effect of each other. Some researchers have argued to mean-center variables in moderated regression in order to make ANOVA and moderated regression effects comparable. We show that mean-centering yields statistically equivalent effects but changes moderation from asymmetric to symmetric. As a consequence, constant effects in moderated regressions are no longer constant but depend on the specific range of the variables. The same problem is shown to hold for main effects in ANOVA. Furthermore main effects in ANOVA, as constant effects in mean-centered moderated regression, are computed as the effect when the other variable is at its mean. Given that the independent variables in ANOVA are categorical, the effect at the mean of a categorical variable cannot be interpreted. We specify a) how to interpret constant and moderating effects in moderated regression b) when to mean-center variables in moderated regression (mean-centering can help to overcome the arbitrary origin problem of interval scale variables such as Likert-scales), and c) how to interpret main- and interaction-effects in ANOVA.

3 - Managerially Efficient Experimental Designs

Olivier Toubia, Columbia Business School, 3022 Broadway, Room 522, New York, NY, 10027, United States, ot2107@columbia.edu, John Hauser

In most marketing experiments managerial decisions are not based directly on the esti-mates of the parameters, but rather on functions of these estimates. For example, many managerial decisions are driven by whether or not a feature is valued more than the price the consumer will be asked to pay. In other cases, some managerial decisions are weighed more heavily than others. The standard measures used to evaluate experimental designs (e.g., A-efficiency or D-efficiency) do not accommodate these phenomena. We propose alternative "managerial efficiency" criteria (M-errors) that are relatively easy to implement. We explore their properties, suggest practical algorithms to decrease errors, and provide illustrative examples. Realistic examples suggest improvements of as much as 30% in managerial efficiency. We close by considering approximations for non-linear criteria and extensions to choice-based experiments.

4 - A Truth-Telling Sleuthing Game for Survey Research

Min Ding, Assistant Professor, Pennsylvania State University, 408 Business Building, Smeal College of Business, University Park, PA, 16802, United States, minding@psu.edu, John Hauser, Jehoshua Eliashberg

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) and information scoring (Prelec 2004) establish this topic as critical to research design. In this paper we propose a new mechanism to encourage respondents to think hard and truthfully. We propose a sleuthing game where a survey is embedded within a game of clues. 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. We state a formal dynamic game with incomplete information such that the Perfect Bayesian Nash equilibrium (PBE) for the respondents is that the cluers provide helpful and truthful clues and the sleuths think hard and infer accurately. We examine this truth-telling mechanism in a satisfaction survey among iPod and iTunes users.

■ FD04

Butler West

Brand Management IV

Chair: Hemant Patwardhan, Assistant Professor Marketing, Winthrop University, College of Business Administration, Thurmond bldg., Rock Hill, SC, 29733, United States, patwardhanh@winthrop.edu

1 - A Tobit Model Analysis on How Websites Deliver Differentiated Experiential Branding Strategies

Yanan Wang, Ph.D candidate in marketing, McGill University, R476 Bronfman Building, 1001 Sherbrooke street west, Montreal, QC, H3A1G5, Canada, yanan.wang@mail.mcgill.ca, Jordan L. Le Bel, Demetrios Vakratsas, Ashesh Mukherjee, Laurette Dube

Brand positioning strategies anchored in the delivery of differentiated pleasurable experiences (sensorial, emotional, social and intellectual) have become ubiquitous and web communications are privileged vehicles to convey such positioning. The objective of this research is to examine to what extent the intensity with which a website succeed, on average, in inducing each of the four types of pleasures composing consumption experience is predictive of market response at the brand level. Over 100 websites with differentiated experiential branding strategy, Media Metrix (an Internet audience measurement company) site-level data on traffic and information search patterns were obtained. Due to censored nature of the dataset, standard Tobit model using Maximum Likelihood estimation was adopted to conduct the analysis. The Tobit results highlighted the central role of intellectual pleasure, more so that the site functionality, in accounting for traffic and search pattern of the website. Specifically, intellectual pleasure has more predictive power to market response on website with sensory pleasure as the brand positioning. The empirical results demonstrated that the experiential positioning of the brand could moderate the pleasure intensity and market response relationship.

2 - A Study on the Factors Affecting the Brand Switching in Korean Mobile Telephony Market

YongSung Lee, Researcher, ETRI(Electronics and Telecommunications Research Institute), 161 Gajeong-dong, Yuseong-gu, Daejeon, South Korea, yslee@etri.re.kr, Sung Soo Han, Hyun Chung

By market stagnation and hyper-competition, corporations have made a concerted effort to attract other customers and to remain own customers for increasing market share(Jones and Sasser 1995; Lee at al. 2001). There is increasing concern about the research that is attracting other customer (brand switching) and to remain customers. Although brand switching has been an object of study for long time, there is little agreement as to effort factors. In the research, the effort factors of brand switching found that price, brand name, product attribution, etc(Carpenter & Nakamoto, 1996). In turn, products(service), such as telecommunication service, produce more switching cost and it is very difficult to switching brand. Nonetheless, the switching behavior is very important purpose that form the strategy for attract the customer. The Purpose of this paper is to find the factor about brand switching behavior in the mobile telephony market. Especially, number resource, a huge switching cost, has declined in importance because the MNP(mobile number portability) is being took effect from 2004. So, here we limited the discussion to the others factors(handset subsidies, customer satisfaction, usage pattern, loyalty). For purposes mentioned above, we collected quantitative data about 1,000 questionnaire. The following results were obtained : The largest factors affecting brand switching found that handset subsidies and loyalty. Firm strategy with loyalty is a long range policy. But, It is sure a short-term strategy that handset subsidies better than loyalty. We come to the conclusion that Handset subsidies with strategy for attracting customer is the most effective means.

3 - Multidimensional Customer Based Brand Equity, Marketing Actions, and Brand Profitability

Janell D. Townsend, Assistant Professor, Oakland University, 338b Elliott Hall, Department of Management & Marketing, Rochester, MI, 48308, United States, townsend@oakland.edu, Sengun Yeniyurt

The value created by marketing activities has been a topic of interest for some time; yet, a distinct gap in the literature exists regarding the drivers and the effects of brand equity dimensions on the profitability of a brand. As such, this study investigates the relationship between marketing related activities and market performance as mediated by multi-dimensional consumer based measures of brand equity. A framework based on information asymmetry is employed to develop empirical models that are estimated within the context of the U.S. automotive market. The conceptualization of brand equity proposed in this paper is an integration of the basic definitions offered in the literature, where the four primary dimensions of customer-based brand equity - awareness, image strength, perceived quality, and brand loyalty, along with the congruence of brand value are modeled as individual factors impacting the profitability of a brand. Further, we consider factors of the marketing mix, incorporating pricing, advertising, distribution and new product introductions as significant drivers of brand equity. The results indicate that the marketing mix variables have significant effects on brand profitability, as mediated by brand equity.

4 - Brand Romance: An Interpersonal Relationship Approach to Investigate Consumers' Brand Attachment

Hemant Patwardhan, Assistant Professor Marketing, Winthrop University, College of Business Administration, Thurmond bldg., Rock Hill, SC, 29733, United States, patwardhanh@winthrop.edu, Siva Balasubramanian

The research outlook for predicting loyalty remains uncertain (Fournier & Yao 1997, Oliver 1999). Consumers may like a brand but choose a competing brand for several reasons (Day 1956). How can a brand create and maintain strong attraction? Viewing loyalty in terms of consumer-brand relationships (Fournier 1998), we evoke two theories. First, the self-expansion model (Aron, Norman & Aron 2001) proposes novelty is a key to strong brand attraction. Second, attachment theory (Bowlby 1973, 1980, 1982; Hazan and Shaver 1987, 1994) suggests attachments are formed when partners in a relationship respond to each others' needs. In brand relationships, familiarity, novelty and satiation together create brand perceptions that are enhanced by consumers' romantic psyche. Labeled as "brand romance," we argue this state of attraction is a strong driver of brand loyalty. Empirical results support the construct's psychometrics. Brand romance is differentiated from attitudes and also explains loyalty significantly better than attitudes. A model depicting the antecedents and consequence of brand romance is also supported. Three model constructs (familiarity, novelty and satiation) offer important marketing implications. Strategies that reinforce a brand's key attributes enhance brand romance through familiarity; while those which inject novelty impart newness to the brand. Together, they increase the strength, favorability and uniqueness of brand associations (Keller 1993, 1999). Keeping familiarity and novelty always ahead of satiation is the key to facilitate brand romance. Enhancing brand romance hinders evocation of competing brands; accentuates the brand's virtues; ignores its shortcomings or attributes them to external factors.

■ FD05

Butler East

Consumer Learning I

Chair: Robert Meyer, Professor, University of Pennsylvania, Dept., of Marketing, Jon M. Huntsman Hall, Philadelphia, PA, 19104, United States, meyerr@wharton.upenn.edu

1 - Cross Category Learning and Brand Valuation Evolution

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Karsten Hansen

Multi-product firms often use the same brand name on multiple products and in multiple categories (e.g. Sony, J. Crew, Dove). To actively manage their brand strategy, firms must accurately measure consumers' brand valuations and understand how they change over time as consumers accumulate consumption experience with their brand in multiple categories. We develop a structural model of consumer learning across categories to measure changes in brand valuation. In our model, overall product valuations are decomposed into three components: product, category and brand. Consumers are modeled as Bayesian learners, who update their beliefs of these three components simultaneously after each consumption experience. Through the linkage of common components (i.e. category, or brand), the learning about one product affects the valuations of other products in the same or different categories. We estimate the Bayesian learning model on a unique dataset from a large retailer that includes complete customer transaction histories in several categories. Individual level parameters are obtained using Hierarchical Bayesian Methods. This model provides a new method to track the evolution of consumer's perceived brand value using choice data. It also has implications on how to manage brand equity for multi-product firms.

2 - When Children Teach Parents New Food Habits ...

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The topic of this presentation is a discussion of "inverse socialization" as it applies in food preferences of parents and changes that occur as parents buy food marketed for children. This "inverse socialization" results in both parents and children transmitting new habits to each other so that each group experiences consumption learning from the other. Consumption learning is a continuous process that begins at infancy and continues throughout adulthood (Brée, 1993; Bocker, 1986; Gollety, 1999; Moschis, 1997). Proponents of this theory view parents and children as actors who influence each other in a social system where everyone learns from others new ways of consumption. There is a body of research indicating that parents are a socialization factor of children as consumers but there are fewer studies on the impact children have on parents. We know very little about how children modify the food behaviour of their parents. Food learning is a complex phenomenon to study because of the numerous factors that make up this behaviour. These factors relate to the individual, social and cultural contexts, and product properties. The objective of this presentation is to contribute to the specialization of research on consumption learning. This is done by developing a better understanding of food learning within the family through a pluridisciplinary literature review. Empirically, the author is currently engaged in the study of this phenomenon through the development of in-depth studies of several families and their subsequent qualitative analysis.

3 - Disentangling Preferences and Learning in Brand Choice Models

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In recent there have been growing stream of literature in marketing and economics that models consumers as Bayesian learners. Such learning behavior is often embedded within a discrete choice framework which is then calibrated on scanner panel data. At the same time it is now accepted wisdom that disentangling preference heterogeneity and state dependence is critical in any attempt to understand either construct. We posit that this confounding often carries through to Bayesian learning models; i.e. the failure to adequately account for preference heterogeneity may result in over/under estimation of the learning process. Using a unique dataset that contains stated preferences (survey) and actual purchase data (scanner panel) for the same group of consumer we attempt to untangle the effects of Bayesian learning, state dependence and preference heterogeneity. Our results are striking and suggest that the in the absence of preference information the Bayesian learning component of behavior is vastly overstated. We also conduct various counterfactual simulations to asses the economic and managerial implications of our findings.

4 - Myopia in the Hurricane Belt: Why Consumers and Managers Fail to Learn from Experience

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Most of normative economic theory rests on the presumption that if individuals have the ability to learn from experience departures from optimality in decision making will tend to be transient—particularly when the consequences of errors are large. Given this, a common puzzle is why organizations and individuals often seem slow to learn from significant negative events; airlines go through recurrent cycles of bankruptcy, and cities find themselves under prepared for natural hazards despite previous experience and ample warnings—such as during Hurricane Katrina in 2005. This paper reviews a program of experimental work designed to establish the basis of—and limits to—failures of trail-and-error learning in the case of low-probability, high-consequence events. Central to the work is a hypothesis that learning in such cases is hindered by the spurious re-enforcing effect of non-event feedback—the tendency for individuals to erroneously attribute the absence of negative events to either a diminishment in their base likelihood or the effectiveness of minimal mitigation measures. The consequence is a predicted recurrent cycle of tragic events, aggressive after-the-fact corrective actions, and then easement of those actions over time. This hypothesis is tested using data from a realistic hurricane mitigation simulation in which a sample of 247 decision makers had to make successive decisions whether to invest in protection against approaching storms over a multi-year horizon. The data supported the predicted pattern of cyclical learning, a pattern that did not ease over repeated play in the simulation. Implications for learning from stochastic negative feedback in a broader range of managerial and consumer tasks are explored.

■ FD06

Cambria West

Recent Developments in the Optimal Design of Discrete Choice Experiments and Their Applications

Chair: Jordan Louviere, Professor, University of Technology Sydney, Broadway, Sydney, NS, 2007, Australia, jordan.louviere@uts.edu.au

1 - Designing Optimal Discrete Choice Experiments

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Discrete choice experiments (DCEs) have been used in marketing, transport and health economics (among other areas) for more than 20 years. Initially these designs were constructed by randomly grouping treatment combinations from one or more fractional factorial designs. Subsequently, fractional factorial designs with km attributes in total were used, where k attributes describe each of m options. However, neither method of construction gave designs with known optimality properties. This paper describes and discusses systematic design construction techniques that overcome this problem for generic DCEs. We know the optimality properties of the DCEs under the null hypothesis of no attribute effects and we can establish the performance of the designs for other assumptions about the attribute effects. We discuss our developments in optimal designs to estimate main effects for any number of attributes with any number of levels for any choice set size. We also discuss our developments in optimal designs where a "none of these" option or a common base alternative is included in each choice set. For estimating main effects and two factor interactions we show how to compare any two designs, and how to construct optimal designs if all attributes are binary. We also compare DCEs constructed using several commonly used construction strategies with DCEs constructed using our methods for a small, but meaningful, example.

2 - Using New Design Construction Methods To Relate Choice Consistency in Discrete Choice Experiments To Design and Task Characteristics

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This paper relies on recent developments in optimal design theory for discrete choice experiments (DCEs) to quantify relationships between choice consistency and design efficiency, numbers of attributes and number of attribute differences. We report on the design and analysis of 44 separate DCEs that were designed by systematically varying numbers of attributes (4 to 16) and numbers of attribute differences (2 to 16), and hence levels of design efficiency (35% to 100%) for two product categories (pizzas and island holidays). The experiments were administered online by randomly assigning participants to each condition. Participants were recruited from a large opt-in online panel designed and maintained to be representative of the Australian population. Participants' discrete choice responses were analyzed using covariance-heterogeneity models, which allowed us to specify choice consistency as a function of the key design factors in the stochastic component, together with the attributes varied in each DCE, specified in the systematic component. We find that choice consistency decreases approximately logarithmically with numbers of attributes and the level of design efficiency. Implications for practice and future research are discussed.

3 - Analysis and Comparison of Completion and Non-Completion Rates in Optimally and Non-Optimally Designed Online Discrete Choice Experiments

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We report empirical results for completion/non-completion rates for web-enabled discrete choice experiments (DCEs). The research is a by-product of a larger study into the impacts of numbers of attributes and numbers of choice options on the ability to estimate discrete choice models for single individuals. We focus only on factors associated with completion/non-completion rates, and test whether observable differences (covariates) of individuals account for differences in rates. Specifically we made 11 combinations of 2- and 4-level attributes, and constructed DCEs as follows: a) eight designs were optimal, and based on construction methods discussed in this special session; b) three more designs were constructed using more traditional methods; c) different designs were constructed for DCEs described by 3, 4 or 5 choice options per set; and d) the designs were replicated for two product categories (delivered pizzas and cross-country flights). Thus, there were 66 separate experiments. We recruited participants via a large, opt-in web panel designed to be representative of the Australian population. A random sample of the panel was invited to participate by email, and 77.9% accepted the invitation and attempted the DCE survey. Completion rates across the 66 experiments based on the 77.9% who accepted invitations ranged from 100% to 67%. These rates were significantly impacted by the total number of attributes and the number of choice options, such that completion rates decreased at a decreasing rate in both factors. Surprisingly, however, these effects were much smaller than we anticipated. The number of choice sets was confounded with numbers of attributes and design optimality; nonetheless, completion rates for 32 compared with 16 choice sets were fairly high. Moreover, the cost per observation for the larger designs proved to be much lower. We also report statistical results for completion times

4 - Estimating Discrete Choice Models for Single Individuals by Integrating Optimally Efficient Choice Experiment Designs with Best-Worst Choices

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We briefly discuss the link between the ability to construct optimally efficient discrete choice experiments (DCEs) and the quality of the resulting choice data. We then discuss the use of best and worst choice questions to enrich and expand the amount of choice information that can be obtained in each choice set. We show how this very greatly increases the amount of choice data that one can obtain from single individuals, in turn allowing one to estimate models for each individual. We illustrate the approach by discussing the results of a series of experiments in which we used different combinations of 2- and 4-level attributes to construct DCEs that varied in size from 23 x 43 to 26 x 47 for, respectively, 3, 4 or 5 choice options per set. These designs were replicated for two product categories (delivered pizzas and cross-country flights), resulting in 66 separate experiments. Experimental participants were recruited from a large, opt-in web panel designed to be representative of the Australian population. A random sample of the panel was invited to participate by email; 77.9% accepted the invitation and attempted the DCE survey. As noted in Paper 3 in this session, completion rates across the 66 experiments ranged from 100% to 67%. We illustrate results for the smallest experiment (23 x 43) and the largest experiment (23 x 47) constructed on the basis of optimal design principles discussed in Paper 1 in this session. Models are estimated for 3, 4 and 5 choice options, and compared with covariance heterogeneity models estimated from the same subjects treated as an aggregate sample of individuals. Our results demonstrate that a) one can consistently estimate models for single individuals, b) the functional forms of the conditional response functions (e.g., how conditional price response means vary as a function of price levels) differ for different individuals, c) covariance-heterogeneity models provide reasonable first approximations to these distributions. We then show that one can calculate measures of unobserved variability for each individual, and that these measures are systematically related to the estimated MNL model parameters for each individual in a way that is consistent with random utility theory. We discuss implications for current practice in which individual differences in unobserved variability are rarely taken into account.

■ FD07

Cambria East

New Product Development - IV

Chair: Praveen Kopalle, Associate Professor, Dartmouth College, 100 Tuck Hall, Tuck School of Business, Hanover, 03755, United States, kopalle@dartmouth.edu

1 - Does Better Quality Really Pay? Stock Market Response to Quality Dimensions

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Firms are always in a rush to bring new products to market. However, researchers have shown that speed alone does not lead to higher sales growth nor does it lead to higher accounting returns. Superior quality is what consumers really look for in a new product. Yet quality is difficult to define, measure, and assess unambiguously. Also, firms cannot relate the underlying dimensions of quality to some firm level performance metric such as financial returns. This paper shows how we can assess quality of new high tech products from published reviews of those products. The authors develop a scale for quality and for its underlying dimensions. The authors uncover 7 mostly orthogonal dimensions of quality. Subsequent analysis via the powerful event analysis shows how quality affects the stock price of the parent firm. This approach ties up the managerial control variable of quality dimensions to the financial valuation investors place on the firm.

2 - Analyzing the Effect of Consumers' Interaction with New Products Purchase Using Agent-based Approach

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Launching new products in the consumer-goods segment is important for companys' performances because launching new products will bring several merits. Those merits includes as increased sales/profit, optimizing R&D efforts, developing cost advantage, maintaining market leadership, and creating an innovative corporate image. In pursue of favorable outcomes, companies usually make various marketing efforts; especially advertising and promotion heavily. These two activities are expected to enhance consumers' recognition toward new products by providing information on the products. Individual consumers' are interacting each other in the marketplace through their purchasing behaviors. Consumers' interaction can be divided into two types; one is explicit interaction and the other is implicit interaction. Word-of-mouth communication is a good example of explicit interaction and it has been well-attentioned from both academicians and practitioners for a long time. In addition, consumers are influencing interactively each other unconsciously. For example, suppose many consumers purchase one new product, it might expand the product's shelf space in the marketplace. This will attract more consumers' recognition toward the product and will generate more sales. This example suggests that even simple purchasing behavior can have an interactive influence in the marketplace. In this paper, we will focus on consumers' implicit interaction. We will use agent-based approach to examine the relationship between various marketing efforts and consumers' interactive purchasing behaviors. The agent approach will enable us to aggregate individual consumer's purchasing behavior rules, and to realize consumers' implicit interactive mechanism model in the marketplace.

3 - Creating New Product Ideas with Idea Markets

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The search of future market opportunities requires the identification of promising technological trends and the generation of a large number of valuable new product ideas that might succeed in the future market place. At this product development stage many new product ideas have to be (i) identified out of a large universe of potential possibilities, and then (ii) evaluated in order to make a go/no-go decision for the next stage. Frequently, methods such as creativity techniques, technological forecasting or lead user analysis are used to perform that task. We propose information markets as a new method to identify and evaluate new product ideas. The basic idea of information markets is to use stocks to represent those new product ideas, let participants trade those stocks on a virtual stock market, and use the efficiency of markets and the resulting stock prices as indicators for the likely success of the different new product ideas. Compared to other methods, information markets offer potential advantages such as the efficient aggregation of anonymous predictions via a market mechanism, the enjoyment aspect of interaction in an online community and the potential to gather opinions on an almost unlimited number of product ideas. We will present the application of a real-world large scale information market and analyze its results with respect to participants' willingness to participate and its prediction quality. We also present top-management's evaluation of the overall performance of the information market.

4 - Comparing the Expectation and Satisfaction Processes for New Products in US, China, and India

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One area where substantial work has been done, and hence where marketing generalization is possible, is customer satisfaction. However, a large percentage of work has involved customers in developed economies. The question we explore is how well the results from these economies generalize to developing economies with different cultural traditions. Specifically, this paper examines the extent to which the expectation and satisfaction formation processes for new products differ across the U. S., China, and India. Using subjects from large metropolitan areas, we compared the expectation setting and satisfaction judgment processes for a consumer durable (car tires) controlling for variables shown to impact decision making (e.g., involvement, expertise) and culture-related variables such as individual-collectivism, perfectionism, and belief in karma. The results indicate the basic model of quality expectations for new products is similar across countries. In addition, while the widely used individualism-collectivism variable showed no impact on expectations, local cultural variables do. In the U. S., those higher on perfectionism have higher expectations and are harder to please. Belief in karma, relevant in India, has a significant effect there, effectively raising expectations and offsetting the impact of disconfirmation sensitivity. In terms of satisfaction, the results are again generally similar (i.e. positive and significant effects of performance and the gap between performance and expectations) with one exception. In the U. S. and India, the gap squared term in the satisfaction equation is significant and negative, suggesting a diminishing effect. In China, this term is insignificant but slightly positive.

■ FD08

Westmoreland West

Diffusion II: Network Externalities

Chair: Qi Wang, Assistant Professor of Marketing, State University of New York at Binghamton, School of Management, P.O. Box 6000, Binghamton, NY, 13902, United States, qiwang@binghamton.edu

1 - Impact of Heterogeneity and Heterophily in Consumer Networks on Intention Dynamics via Word-of-Mouth

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Whereas heterogeneity is a concept to account for variability in individual traits, its extension to social interactions has not been well developed. We start with the common insights that most social affiliations are formed on the basis of similarity/dissimilarity along individual characteristics (homophily/heterophily) and that there is a distribution among consumers of their preferences to associate with similar/dissimilar others. Thus, crossing such a distribution of associative preferences with a distribution of individual characteristics generates "high likelihood" consumer networks for estimation and forecasting purposes. Next we propose a theoretical model to study the dynamics of experiential intention formation using an information theory-based decision analytic framework of product adoption and incorporating word-of-mouth interaction as its central information generating process. Using the SWARM computational modeling platform, we find that, assuming a uniform distribution of heterogeneity, adoptions times are faster in pure heterophily networks, whereas the variability of adoption times is lower in pure homophily networks. The strategic implications for new product introductions are that: initially firms should encourage and facilitate word-of-mouth circuits in communities of similar individuals, and as positive word-of-mouth is generated in these pure homophily networks, they should ensure that more and more dissimilar individuals come into contact. A general conclusion is that in network-mediated communication processes, where complete data on network structures are absent, segmentation based only on heterogeneity distributions will confound the true effects of heterogeneity with the true effects of heterophily on consumption choices.

2 - A Signaling Explanation for the Performance of Viral Marketing Campaigns

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In addition to its growth as an alternative channel of distribution, the Internet is rapidly becoming a channel for promoting goods and services. In particular, businesses are relying on online audiences to rapidly disseminate word of their products and services to potential consumers. This has been called viral marketing. The key assumption in viral marketing is that a message targeted initially to some online users acts as a seed and gets distributed to many other users who, in turn, distribute to other users and so on. Not all viral marketing campaigns, however, are successful. While some campaigns are highly successful, many others fail. One explanation for whether or not a viral marketing campaign is successful is that it depends on the type of audience that it attracts - if the audience consists of users who become advocates of its message and spread the word, the campaign succeeds and fails if it doesn't. In this research, we propose and test an alternative explanation for the performance of these campaigns.

Specifically, we use the signaling framework and examine whether the number of online users that a campaign has already attracted signals its attractiveness to others and affects its performance. Our expectation based on signaling theory is that success or failure would feed on themselves: campaigns that attract a bigger audience go on to attract bigger audiences since the large size of the audience signals to the potential audience that the campaign's message is attractive. Conversely, campaigns that fail to attract a sizeable audience early on fail because the lack of an audience is a signal that the message is not interesting. We take a Bayesian approach to test this hypothesis on data collected from some online settings.

3 - Adoption of Innovation in Network Markets: A New Model of Competitive

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New technologies can dramatically change established products, services or business processes. We often see conflicting evidence of how dominant firms respond to opportunities for innovation due to the advent of new technologies. Some dominant firms take an aggressive innovative stance whilst others respond in a lethargic manner. The conflicting evidence calls for a detailed study of the underlying market share dynamics in order to investigate the relationship between dominance and innovation. We study the dynamics of adoption of products, services or business processes driven by a technological innovation in a market populated by companies with substantially different pre-adoption market shares. Our analysis focuses on how the market share affects the timing of the adoption of a new technology. We develop a novel approach for studying technology adoption decisions based on the extension of the classical monopolistic Bass diffusion model. Our model explicitly describes the competitive nature of market share dynamics by focusing on the intra-firm as well as cross firm imitation processes. We obtain explicit expressions for the market share trajectories of the competing firms in a general setting, as well as shaper closed form characterizations in a "homogenous imitation" setting. We illustrate our conclusions using empirical evidence from the adoption of electronic trading technology by investment banks in the US corporate bond market and the global foreign exchange market.

4 - Intra-Standard Price Competition in Markets with Network Effects

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This paper empirically examines the strategic interactions between an innovating firm and its imitators in markets influenced by network effects. Theoretical research of network effects has generally assumed fixed competitive structure (e.g., bertrand, leader-follower, or cooperation) among firms supporting the same technological standard (i.e., intra-standard competition). We argue that network effects create two opposite effects on intra-standard competition, an installed-user-base effect that motivates competitive behavior and a supporting-firm-base effect that motivates cooperative behavior. Since both installed-user-base and supporting-firm-base change with time and since the strength of their effect may differ across different stages of the product life cycle, the competitive structure of intra-standard competition is likely to be stage-dependent. We apply the new empirical industrial organization framework (NEIO) to examine intra-standard competition in 3.5-inch floppy disk drives during the period 1983-1998. Our time-varying structural model estimations on the floppy disk drive market yield several interesting results. First, we find empirical evidence that consumers' valuations are not only positively related to the installed base, but also positively related to the number of imitating firms. Second, we show a positive relationship between the number and price of imitating firms, which suggests that the supporting-firm-base effect discourages competitive behavior. Third, our results show that the competitive structure of the floppy drive market did change over the period studied. Firms behaved collectively in the early stage, competitively in the middle stage, and collectively again in the late stage of the product life cycle.

FD09

Westmoreland Central

eCommerce VI: Shopping Behavior

Chair: Nai-Hwa Lien, National Taiwan University, 1, Sec. 4, Roosevelt Rd., Taipei, 106, Taiwan, lien@management.ntu.edu.tw

1 - Web-to-Store Shopper: The Dynamics and Feedback Loops between Online Information and Offline Buying

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While academic researchers have paid close attention to the Internet phenomenon (e.g. 6% of all articles in the top 5 marketing journals over the last 7 years), only a few (0.4%) have studied consumer behavior on informational web sites. Nevertheless, the dominant use of the Internet is still information search, and many consumers who search online, subsequently buy offline. Such "web-to-store" shopping represents about $1.70 for every dollar spent directly online. The objective of this study is to determine the effect of the introduction of an informational web site and changes in the site design on both offline and online consumer behavior. We distinguish the separate impact for different customer segments and explicitly consider feedback loops, including how offline behavior may trigger online behavior. To this end, we estimate a Vector AutoRegressive (VAR) model including 4 offline performance series (money, articles, visits and customers), 4 online performance series (time, pages, visits, and visitors) and 4 marketing variables (offline promotional activities, the site introduction, temporary web site changes and permanent web site changes) for a period of 126 weeks. The results indicate that online marketing activity may either help or hurt offline store performance, depending on whether it induces or substitutes for store visits and spending. The demographics, store distance and store patronage of customers play a major role in this regard. Overall, we find positive immediate effects of online behavior on offline behavior, indicating that the informational web site ads value to the same period sales in the offline store.

2 - Differences Between Online and Offline Shopping Behavior

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Current Internet's development and commercial use have brought up an increasing interest to the understanding of online purchase behavior. The purpose of this paper is to explore the elements characterizing online shopping in comparison to those traditionally observed offline. Our study analyses consumer behavior at these two channels using Multinomial Logit (MNL) models and a procedure for MNL parameter comparisons suggested by Swait and Louviere (1993). We use scanner data from a leading Spanish grocery chain and pioneer at Internet sales. This grocery chain establishes two different levels of price for its physical stores —some physical stores having higher prices than others— but replicates the offline high-price level for its whole virtual store. Thus, our paper incorporates two main contributions: I) We use a unique sample of consumers to model both online and offline consumer choice. This way the differences observed in the effect of brand name, size, brand loyalty, size loyalty, price and promotion are due to the channel itself. II) We differentiate between a group of consumers facing exactly the same prices online and offline, and a group of consumers facing higher prices online than offline. This allows us to better understand the role of price online. Some interesting preliminary results for the canned tuna category show that the impact of brand and size loyalty is statistically stronger online than offline, and that those consumers finding online prices higher than offline are more price sensitive online than those finding exactly the same prices online and offline. We are currently expanding the research to other categories like kitchen paper.

3 - Predicting User Involvement in Internet Social Networks

Michael Trusov, UCLA Anderson School of Management, 110 Westwood Plaza, Suite B401, Los Angeles, CA, 90095-1481, United States, Michael.Trusov@anderson.ucla.edu, Anand Bodapati, Randy Bucklin

As online activity continues to increase, many Internet businesses are providing infrastructure for online communities. Perhaps the fastest growing arena in the World Wide Web is the space of so-called social networking sites (e.g., Friendster, Facebook, Xanga). These sites rely upon user-generated content to attract and retain visitors. They also accumulate large amounts of user information which may be valuable for targeted marketing purposes. At present, such sites obtain revenue primarily from the sale of online advertising. As the number of new Internet users in the U.S. has started to plateau, online businesses are shifting their focus from the growth of unique visitors to the growth in the level of engagement of existing users. For social network sites, the greater the user involvement in the network, the greater the opportunity to monetize this activity through the sale of online advertising. We study the visitation and usage behavior for a large sample of users of a major social networking site. Our goal is to predict the level of site involvement as a function of user characteristics, past behavior on the site, and the actions of other users on the site. Because members of an online community do not act in isolation, we focus on the extent to which users' online behavior is influenced by the actions of other individuals in the network. Our model also incorporates effects of spatial density, demographics, geographic location, and social network properties. We estimate the model at the disaggregate-level using Bayesian methods, accounting for both observed and unobserved heterogeneity. Keywords: Internet, social networks, Bayesian methods

4 - The Influence of Webmosphere on Shopping Values and Impulsive Buying Intention

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Although a large number of studies have been made on impulse buying in retail stores, the effect of atmospheric stimulus is largely unknown. Based on Mehrabian-Russell model of environmental psychology, this study investigates the effects of atmospheric design of on-line store on impulse purchasing behavior. Webmosphere, or the atmospheric design of on-line store, is analyzed along three dimensions: organizational, entertainmental and informational. It is proposed that webmosphere first influences on-line shoppers' emotions, and then creates hedonic and utilitarian shopping values, which then lead to impulsive buying urge. One hundred and five subjects participated in an on-line experiment. Three on-line stores with different webmospheric designs were chosen as the experimental context. The major findings are as follows: 1.The organizational, entertainmental and informational webmospheric designs have positive influences on two kinds of shopping emotions: pleasure and arousal. 2.Pleasure has positive impacts on two of the hedonic values: visual effect and enjoyment and one of the utilitarian values: needs gratification. The emotion of arousal can only explain the variance of enjoyment value. 3.Shopping values do not have direct influences on the urge to buy. 4.Webmospheric designs have direct effects on shopping values and impulsive buying urge. Entertainmental and informational designs can affect the perceived value of needs gratification and enjoyment. Entertainmental and organizational designs can affect visual effect value. Moreover, entertainmental design can also affect the urge to buy.

■ FD10

Westmoreland East

Channels VI: Multi-Channels

Chair: Xubing Zhang, Assistant Professor, Hong Kong Polytechnic University, Kowloon, Hong Kong, China, msxubing@polyu.edu.hk

1 - Identifying Cross-Channel Dissynergies for Multi-Channel Service Providers

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In many service industries customers can choose from different channel formats provided by the same firm. In order to maximize profits, a provider may drive its customer relations from branch offices (e.g. offline banking) to Web sites (online banking). As online activities should be considered within the context of the conventional channels, service firms need to know how offline channel evaluations affect online channel use. By extending the Technology Acceptance Model, we explore if and how customer's offline channel assessments constitute cross-channel synergies for online usage. Based on data of 668 customers of a financial service provider, we find multiple effects of the satisfaction with the offline channel on the intention to use the online channel. First, the complementary channel effect increases trust which in turn positively influences the intention to use the online channel. Second, the competitive channel effect negatively impacts the intention to use the innovative channel. Moreover, this effect decreases the perceived usefulness of the new channel and enhances the perceived risk of switching to the online channel. In sum, we identify a strongly negative total effect of offline satisfaction on online channel usage intention. This indicates that even "dissynergies" exist. Thus, successfully influencing online channel use does not only depend on enhancing perceived usefulness of the online option or on building trust into the service provider. Instead, providers have to highlight or even enhance the relative disadvantages of the traditional service channel in order to shift customers to the new alternative. As a result, multi-channel service providers face the trade-off between triggering online channel use and maintaining offline channel satisfaction.

2 - Adoption of Multi Channel Banking by Customers in Indian Banks: An Empirical Analysis

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Purpose — The study sought to investigate factors that influenced Indian bank customers' adoption of four major banking channels, i.e. branch banking, ATM, telephone banking, and internet banking. Specifically, it aimed to focus on the perceptual difference in usage of these channels by different bank customers Design/methodology/approach — Based on extensive literature on bank marketing and depth interviews a questionnaire was designed. A survey of 269 customers of six banks was conducted. The survey results were transposed on to SPSS for factor analysis. The f test was conducted to find out the difference among the services provided by different banks to its customers. Findings — Overall, ATM was the most frequently adopted channel, followed by branch banking and tele banking, and internet banking was the least frequently adopted channel. Psychological beliefs about the extent to which a channel possessed certain positive attributes were more predictive of adoptions of ATM and internet banking than adoptions of branch banking and telephone banking. A major research implication is that the theory of reasoned action is less applicable when a behavior is habitual, such as the adoptions of branch banking and telephone banking. Research limitations/implications — The managerial implications are that telephone banking can be gradually phased out, whereas internet banking is becoming the dominant channel in the future. For branch banking, different marketing strategies should be adopted for those who are financially and cognitively less resourceful, and those who are wealthier but higher time cost. Originality/value — The value of the study for bank managers is that it provides an updated account of the banking behaviors of Indian bank customers.

3 - Shelf-Space Dependent Incentive for National and Private Brands' Competition

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We propose a game-theoretic model involving a national brand's manufacturer and a retailer selling her private label (PL) along with the national brand (NB). The retailer can use either a differentiation strategy or an imitation strategy when offering her brand. Differentiation strategy is achieved by offering either low quality PLs that include white-label generics and distinct second-tiers, or high quality PLs that target segments different from those targeted by NBs. However, imitation strategy consists of introducing me-too brands that mimic popular NBs. We compare the benchmark case where both players having symmetric information play a Nash game, to a second case in which the NB's manufacturer acts as leader and offers an incentive to the retailer to increase the NB's proportion on the shelf and ultimately raises his own profit. We assume that both players are profits maximizers. The manufacturer controls the wholesale price and the retailer the price to consumer of the two brands as well as the shelf-space allocated to each brand. Each brand's demand depends on both brands' prices and on the shelf space allocation. By exploring a large number of scenarios, we attempt to derive under which conditions it is feasible to implement such incentive strategy in terms of the transfer price's level and the possible ranges for shelf space allocated to the NB in the benchmark case. Also, we investigate if the results are idiosyncratic to the PL's concept as defined by appropriate levels of the PL's image and the NB and PL's price competition.

4 - A Model of Multichannel Retailing: The Information Provision Function of the Online Channel

Xubing Zhang, Assistant Professor, Hong Kong Polytechnic University, Kowloon, Hong Kong, China, msxubing@polyu.edu.hk

Multichannel retailing has become significant in retailing. Nowadays, it's increasingly referred to the practice that a retailer has conventional retail stores as well as an online presence. The online channel boasts two advantages: the convenience of home shopping (the delivery service) and the easy access to information. This game-theoretical research focuses on information issues, in particular, the price information provision function of the online channel in multichannel retailing. With a series of Hotelling type models where some consumers observe prices (the informed) but others do not (the uninformed), the analysis offers the following results. First, a monopoly retailer is motivated to advertise its lowered regular price to make its demand more elastic. Therefore, a monopoly retailer adopts a multichannel retailing strategy in equilibrium, advertising its offline price online and serving consumers far away with delivery services. The results change dramatically in a duopoly model. Now price advertising is suboptimal because it improves information efficiency, intensifies price competition but does not help to expand market size. Further more, neither retailer would offer delivery services online because delivery mitigates differentiation on location, resulting in keen price competition in both channels. Finally, multichannel retailing becomes optimal only when the informed and uninformed consumers significantly differ in their travel costs. In this case, not only can a multichannel retailer better serve its customers with different needs, it also enjoys an informational advantage over a conventional retailer who cannot disseminate its price information to all. Managerial implications are discussed.

■ FD11

Washington

Promotions IV

Chair: Jie Zhang, Assistant Professor, University of Michigan, 701 Tappan Street, Ann Arbor, MI, 48109, United States, jiejie@umich.edu

1 - Improving Trade Promotions Through Virtual Forward Buying

Amit Poddar, Doctoral Student, Georgia State Universiy, Marketing Department, Atlanta, GA, 30303, United States, apoddar1@gmail.com, Naveen Donthu

For a long time researchers had held the view that trade promotions are bad as it reduced brand value and lead to forward buying, which meant lesser profits for manufacturers. Also trade promotions caused the whiplash effect which meant that it was inefficient from the channel point of view. The remedy suggested to get over the problem had been to not use trade promotions at all. Recent research has however challenged this view (Lal, Little, and Villas-Boas 1996) and has argued that trade promotions are good not only for retailers but also for manufacturers. However there still exits problems with trade promotions as they lead to forward buying which create logistical dysfunctions which in turn create admin, storage and capital costs. Having accepted the fact that trade promotion can be good for all the parties concerned, researchers have tried to create new models that improve the efficiencies of trade promotion (Ailawadi, Farris, and Shames 1999; Dreze and Bell 2003). Our research is similar in approach and we design a mechanism called Virtual Forward Buying, which can lead to substantial reduction in overall channel cost, a goal which is desired by practitioners and researchers alike. We use a simulation model to test the efficacy of our model in comparison to a model that mimics the current practice of the industry and an ideal model where there is no trade promotion at all. We find that while the ideal model has the lowest overall channel costs, our model performs equally well under some circumstances. Also while in the ideal model the efficiency gains accrue mainly to the retailer (therefore becoming a win-lose model), in our model the efficiency gains are distributed much more equitably.

2 - Demand, Cost or Past Price: When do They Drive Retailer-pricing Decisions?

Koen Pauwels, Associate Professor, Tuck School of Business, Dartmouth College, Hanover, NH, 03755, United States, koen.pauwels@dartmouth.edu, Shuba Srinivasan, Vincent Nijs

Retailers' pricing decisions have become very complex. Growing assortments, the push towards category management, and intense competition require that many factors be considered as prices are set for each product in each store in each week. Recent empirical research uncovered that retailers often rely on past prices for a product when setting its current price, to the detriment of category margins. In contrast, sophisticated demand-based pricing is associated with higher margins. Why then, and when would a retailer not engage in such sophisticated pricing? We aim to address this question by analyzing the high variation in dynamic price drivers across categories and brands. We develop a conceptual framework of the costs and benefits to retailers of changing prices over time. First, the costs of sophisticated pricing are likely to be higher for categories with many brands and SKUs, and for infrequently bought products. In contrast, retailer benefits of sophisticated pricing are likely to be higher for large and growing categories, for high-share brands and for private labels, and when manufacturers offer many discounts. We derive metrics of price driver importance at the brands' level using time-series models and Generalized Forecast Error Variance Decomposition. In a second stage, we link these drivers to specific brand, market structure, and product category characteristics as laid-out in our conceptual framework.

3 - Merchandizing as a Moderator of the Effect of Price and Promotion Sensitivity on Product Sales

Astrid Keel, Goizueta Business School - Emory University, 1300 Clifton Rd, Atlanta, Ga, 30033, United States, astrid_keel@bus.emory.edu, Douglas Bowman

Drawing on consumer decision research established largely through controlled laboratory experiments, we develop a theoretical framework that explains how shelf placement and merchandising interact with pricing and promotion to impact consumers' product evaluations and preferences, and thus sales. Our theory is based on the concept that, in categories where there is preference uncertainty, shelf placement and merchandising influence how consumers form consideration sets and frame the product choice decision. For testing, we seek convergent validity from a) an experimental study and b) an analysis based on store-level scanner data augmented with store-specific shelf placement data. We use a regression-mixture model with cross-product effects to capture the framing effects due to shelf placement for different consumer segments. We find that the effects of price and promotion depend in part on the relative shelf placement of a product. Our results show the importance of accounting for in-store merchandizing more comprehensively than is done using commonly available syndicated data measures of feature and display. Insights from this study can help marketers tailor marketing activities to better capitalize on knowledge of consumers.

4 - Optimal Feature Advertising Design under Competitive Clutter

Jie Zhang, Assistant Professor, University of Michigan, 701 Tappan Street, Ann Arbor, MI, 48109, United States, jiejie@umich.edu, Rik Pieters, Michel Wedel

This study investigates consumers' attention patterns for retail feature ads and optimizes the design of the ads. Utilizing a large-scale dataset of consumers' attention measures for over 1,100 individual feature ads collected with eye-tracking technology, we analyze the effects of design characteristics of the ads on consumers' attention to them. Attention is measured in terms of gaze selection and duration. We focus on the effects of the surface size of five key design elements --brand, text, pictorial, price, and discount -- due to their central role in feature advertising design. Moreover, our model takes into account the effects of visual clutter in the ad-display page. To capture the clutter effects, we propose new entropy-based measures that characterize the salience of feature ads in their competitive environment. Based on parameter estimates in the model, we simultaneously optimize the layout of ad-displays and their constituent feature ads in terms of the five design elements. Our optimization results indicate that significant improvements in attention to feature advertising can be achieved without any increase in costs, and that the resultant optimal designs also create win-win opportunities for manufacturers and retailers.

■ FD12

Fayette

CRM II

Chair: Baohong Sun, Associate Professor of Marketing, Carnegie Mellon University, Tepper School of Business, 5000 Forbes Ave, Pittsburgh, PA, 15213, United States, bsun@andrew.cmu.edu

1 - Returns on Investments in Customer Relationship Management – A Case of Indian Manufacturing Companies

Sridhar Ramaswami, Professor, Iowa State University of Science and Technology, Department of Marketing, College of Bus., 2350 Gerdin Business Building, Ames, IO, 50011-1350, United States, sramaswa@iastate.edu, Harmeen Soch

Customer Relationship Management (CRM) as a tool and a philosophy of business has gained attention and importance in recent years because of its potential impact on the bottom line of companies. Existing CRM literature is somewhat ambiguous about what constitutes the domain of CRM. Based on extensive review of both the academic and the practitioner literature, the present study captures the domain of CRM using fourteen broad constructs. Further, the study proposes measurement scales for each of these constructs. Using empirical data collected from two sets of studies, the proposed measurement scales are purified and validated using item and reliability analysis. Finally, the study evaluates the relationship between implementation of CRM and financial performance of companies in India across eight different industry types. Results suggest that CRM implementation does not have much impact on the profitability of companies in India.

2 - The Impact of Multiple Channels On Customer Acquisition, Tenure, and Profitability

Kersi Antia, Assistant Professor, Marketing, University of Western Ontario, 1151 Richmond Street N., London, ON, N6A3K7, Canada, kantia@ivey.uwo.ca, Ranjan Banerjee, Shantanu Dutta

As firms deal with the complex task of allocating resources across multiple channels, their ability to assess channel performance in terms of customer acquisition costs and share of future acquisitions has become a strategic imperative. Although recent research has linked customers' use of multiple channels with higher profitability, there has been virtually no research on how the characteristics of the acquiring channel affects customer profitability. The present study integrates the literature on multiple channel design with the extant research on customer relationship management. We explore the relationship between the transactional behavior of customers and the nature of channel used to acquire these customers. In particular, we examine the impact of channel-specific descriptors on customer behavior. We assess this relationship in the context of the high-growth mobile telecommunications market in India. Our data tracks a cohort of customers and relates their evolving usage of mobile telecommunications services from the initial month of acquisition, across different channels. We are thus able to link customer attraction, retention and profitability over multiple channels in an emerging market context.

3 - The Integration of Supermarkets Marketing and Sport Marketing in Taiwan

Hsiang-Ting Su, graduate student, Marketing Department of National Chung Hsing University, 250,Kuo Kuang Road,Taichung, Taichung, 402, Taiwan, grace.489451335@yahoo.com.tw, Tzong Ru Lee

1. Background Sinon is one of Chinese Professional Baseball League (CPBL), and Sinon baseball team claimed that their chain supermarkets will discount their products if their baseball team gets the championship in 2004. Finally, Sinon got the championship of CPBL, and then Sinon chain supermarkets were on sales. 2. Problems we want to solve (1) We will analyze what factors promote baseball fans to purchase in these supermarkets through their support professional sport team. (2) Discuss the difference of baseball fans' consumer behavior under three situations: the baseball team wins the championship, fans consume in the chain stores and the baseball team loses the championship. (3) Also, we discuss how to combine the baseball fans' loyalty and consumer's loyalty for supermarkets, and examine that there is a new consuming model for baseball fans. 3. Design/methodology/approach There are two questionnaires in our research, one was gathered in 2004(200 questionnaires), the other was gathered in 2005(300 questionnaires). In this research, we will utilize 4C and develop 4C items to decide these determinants of the loyalty from aspects of supermarkets and professional baseball team. According to Robert Lanterborn, the 4Cs: Consumer wants and needs, Cost, Convenience, Communication. 4. Contribution and benefits for the other countries This paper would provide valuable information of consumers' behavior in the supermarkets owned by the business of their support professional sport team in Taiwan. Therefore, the supermarket owners in other countries can consider the factors obtained from this paper and then improve these factors' performance in the cases in their societies.

4 - Improving Effectiveness of Customer Service in a Cost-Efficient Way

Baohong Sun, Associate Professor of Marketing, Carnegie Mellon University, Tepper School of Business, 5000 Forbes Ave, Pittsburgh, PA, 15213, United States, bsun@andrew.cmu.edu, Shibo Li

Ever since the 1990s, the role of call centers has been transformed from simply dealing with customer inquiries to performing integrated marketing functions. The management of call centers has become an important part of customer relationship management (CRM) strategy. In this paper, we treat service duration as a measurement of operating cost (operating efficiency), as well as a determinant of customer retention (marketing effectiveness). We propose a dynamic structural framework that allows the firm to learn about the heterogeneous preference of customers, balance the trade-offs between short term cost benefit and long term customer reactions, and make optimal allocation decisions that best match customer preference for service duration and maximize long-term profit. Applying the proposed framework to customer call history data, we first estimate the model to parameterize the relationship among call allocation, service duration, customer retention and profit. We then conduct simulations to derive the optimal service allocation decisions. We next establish the dynamic, customized, and state-dependent nature of the derived optimal operating decisions and show how they are driven by marketing consequences. Finally, we demonstrate that by taking into account long-term marketing consequences, the optimal allocation decisions (1) improve customer retention; (2) reduce service costs; and (3) enhance profit by growing relationships. In short, the effectiveness can be improved in an efficient way. Our findings shed new light on the understanding of marketing consequences of service operation decisions. The developed adaptive learning rule and optimization solutions provide the computational algorithm to automate the implementation of service allocations.

■ FD13

Somerset West

Issues in Remote Retailing

Chair: Eric Anderson, Associate Professor of Marketing, Northwestern University, 2001 Sheridan Road, Evanston, IL, 60208, United States, eric-anderson@kellogg.northwestern.edu

1 - A Structural Model of Customer Return Behavior

Karsten Hansen, Assistant Professor of Marketing, Northwestern University, 2001 Sheridan Road, Evanston, IL, 60208, United States, karsten-hansen@kellogg.northwestern.edu, Duncan Simester,
Eric Anderson

Most retailers offer consumers an opportunity to return previously purchased merchandise. For catalog and internet retailers, the option to return merchandise is critical since most consumers purchase without an opportunity to inspect the product. Despite the prevalence of customer returns there is little empirical evidence investigating how the option of returning merchandise affects customer behavior. Further, insight into the relationship between customer purchase and return behavior is required for optimization of a firm's return policy. In this paper, we empirically investigate how the option of returning merchandise affects consumer purchase and return behavior. We utilize a unique dataset from a large retailer that includes purchase and return data over ten years for a large sample of consumers. We model each consumer's decision to purchase and return an item. Importantly, our demand model differs from the standard discrete choice models in that we explicitly model the option of returning merchandise. We estimate our model on consumer transactions from three different categories. The individual level results demonstrate the extent to which an opportunity to return merchandise increases each consumer's demand.

Importantly, we find that there is considerable variation in this option value across customers and products. We use the model estimates to conduct counterfactual experiments in which we vary each consumer's ease of returning an item.

2 - The Causal Effect of Opening a New Channel

Eric Anderson, Associate Professor of Marketing, Northwestern University, 2001 Sheridan Road, Evanston, IL, 60208, United States, eric-anderson@kellogg.northwestern.edu, Karsten Hansen, Duncan Simester

A common fact cited by managers is that multi-channel customers are better customers: multi-channel customers tend to spend more money and purchase more frequently than other customers. Firms have used this fact to justify their expansion into multiple channels. Firms that previously relied on catalog and Internet channels have expanded into physical retail stores; firms that previously sold through retail stores have opened web sites and purchased catalog operations. These firms have spent hundreds of millions of dollars to expand into these new channels. Unfortunately, justifying channel expansion based on this empirical fact confuses correlation with causality. While multi-channel customers are typically a firm's best customers this does not imply that opening a new channel will cause customers to increase spending or purchase rates. In this paper, we use a unique dataset of customer transactions from a remote retailer. Over the time period of our data, the retailer expands into Internet and retail stores. We develop a methodology to estimate the true causal effect of opening a new channel.

3 - Fairness and Inter-Temporal Pricing

Duncan Simester, Eric Anderson

Firms often vary their prices over time to price discriminate. A direct implication of this strategy is that customers who purchase at the high price may later see the same item available at a lower price. These situations naturally evoke the issue of price fairness. We conducted a large-scale experiment with a US catalog company in which we exogenously varied prices in catalogs mailed to randomly selected samples of customers. This resulted in some customers seeing low prices and other customers seeing high prices on products they had previously purchased. We then measured demand over the next 28 months. The results confirm that many customers react adversely to seeing lower prices on items that they had previously purchased. Future demand was reduced by up to 15%. Importantly, the adverse effect was concentrated on the catalog's best customers, particularly those who had purchased recently and paid a high price. The implications are substantial: the difference in revenue amongst the 8,000 affected customers was approximately $250,000. The experiment involved less than 5% of the firm's past customers, and so extrapolating to the complete list of past customers reveals a considerable impact on firm profit. Moreover, the effect was persistent, suggesting that it extends well beyond the 28-month Post-Test period.

4 - State Use Taxes and Consumer Behavior: A Field Experiment using Catalog Purchase Choices

Catherine Tucker, Duncan Simester, Eric Anderson

When a retailer owns a store in a state, customers in that state pay sales tax when they purchase from any channel, including the store, internet, or catalog channels. However, if the retailer has no physical presence in the state, sales tax is not charged on internet and catalog orders. Therefore, the decision to open a first store in a state in which a retailer's products are subject to sales tax, could have negative spillovers on demand in other channels. We exploit this quirk of the tax laws as a natural experiment to investigate how sales tax affects consumer demand. We use extensive panel data at the individual household level for a multi-channel apparel retailer. A difference in differences approach is used to evaluate the effects of store entry. We find that the effect of store entry depends on the physical distance of the customer from the new store. On average, customers who live near the store tend to increase their consumption when a store opens. The convenience of purchasing from a retail store outweighs the negative effect of taxes. In contrast, customers who live further away from the new store purchase less from the firm after the retail store opens. The decrease in consumption reflects the negative affect of taxes on the internet and catalog channels. Our research has two sets of implications. First, it provides new evidence for policy makers about the welfare effects of sales taxes. Second, when opening a new store, firms should think carefully about how the new taxes will affect the demand of existing customers who purchase from other channels.

■ FD14

Somerset East

Mktg. Strategy VI

Chair: John Hulland, Associate Professor of Business Administration, University of Pittsburgh, University of Pittsburgh, 345 Mervis Hall, Pittsburgh, PA, 15260, United States, jhulland@katz.pitt.edu

1 - Market Signals for Sticky Purchases: The Case of Start-Up Firms

Jade Sturdy, Doctoral Student, Emory University, 1300 Clifton Road, Atlanta, GA, 30322, United States, jade_sturdy@bus.emory.edu, Ajay K. Kohli

Customers often rely on market signals such as brand names (e.g., Erdem and Swait 1998), warranties (e.g., Soberman 2003), and prices (e.g., Rao and Bergen 1992) to infer the quality of suppliers' products and services. Purchases, however, vary in their "stickiness," or the extent to which they create buyer dependence on suppliers for follow-on products and services. Do customers rely on qualitatively different market signals when purchases are sticky? We propose they do, and introduce the concept of "flow signals." We empirically examine multiple properties of flow signals and their effects on firm sales under different levels of purchase stickiness. Our study employs secondary data for start-up firms that are in pre-reputation phases, and cannot rely on traditional signals such as brand names, warranties and advertising.

2 - Interaction Orientation: An Empirical Assessment

Girish Ramani, University of Connecticut, 2100, Hillside Rd, Marketing Department, School of Business, Storrs, CT, 06269, United States, gramani@sba.uconn.edu, V. Kumar

Advances in technology have resulted in increasing opportunities for interactions between firms and customers, between customers, and between firms. The management of interactions is being recognized as a source of lasting competitive advantage. However, there does not exist in extant research a construct that reflects the strategic orientation of firms that is appropriate for success in increasingly interactive market environments. Interaction orientation is a measure of a firm's capability along four dimensions: 1) customer concept, 2) interaction response capacity, 3) customer empowerment, and 4) customer value management. First, we validate the components of interaction orientation with a sample of 200 practicing managers from a cross-section of firms. Using available and newly developed scale measures, we establish the positive consequences of an interaction orientation, both in terms of customer and firm level metrics. These consequences are:1)the identification of profitable customers, 2)acquisition and retention of profitable customers, 3)conversion of unprofitable customers to profitable ones, 4)increased satisfaction among profitable customers, 5)generation of positive word of mouth, 6)a higher degree of customer ownership of the firm, 7)profits, 8)return on marketing investment, and 9)customer equity. We also establish the antecedents of interaction orientation as a firm's: 1) dependence on trademarks and patents, 2) product line width, and 3) outsourcing expertise. Over the years, firms that succeeded by adopting a product orientation had to give way to firms with a sales orientation, who in turn gave way to firms with a market orientation. But, today, firms are learning to succeed by adopting an interaction orientation.

3 - Market Orientation and Firm Performance: The Moderating Role of Dynamism and Strategy Type

Rui Wang, Doctoral Candidate, Pennsylvania State University, Marketing Dept Smeal College of Business, 406A Business Building, University Park, 16802, United States, rxw231@psu.edu, Rajdeep Grewal, John Liechty

Central to the field of marketing is the notion of market orientation that emphasizes that firms that focus on understanding and meeting customers better than competitors would win over firms that do not lay emphasis on these organizational constituents (i.e., customers and competitors). However, the degree to which market orientation affects firm performance depends on a host of moderators including facets of the environment and firm strategy. Typically, researchers study the impact of these moderating effects one at a time, thereby possibly masking the true relationship moderating relationships. To simultaneously examine the moderating effects of environmental dynamism and strategy type (operationalized using Miles and Snow typology), we specify continues interaction between market orientation and environmental dynamism and allow for these main and interactive effects to vary with strategy type (i.e., whether the firm is a defender, prospector, analyzer, or reactor). In this hierarchical formulation we empirically determine whether the effect of explanatory variables, both main effects and interactive effects, vary with firm strategy type by specifying a variable dimension model. Inference is obtained through an appropriate reversible jump proposal density for Markov Chain Monte Carlo (MCMC) sampling procedure. We estimate the model using survey data from 107 Business-to-Business electronic market makers. After appropriate checks for measure quality, the results from MCMC sampling procedure shows that the interactive effect of market orientation and environmental dynamism varies with firm strategy type. The vitality of the proposed reversible jump proposal density sampling procedure is evident from these results.

4 - Marketing Strategy Implementation in Ambidextrous Organizations

Matthew Sarkees, Doctoral Student, University of Pittsburgh, 351 Mervis Hall, Pittsburgh, PA, 15260, United States, msarkees@katz.pitt.edu, John Hulland

As the growing pressures of globalization, technological obsolescence and market turbulence impinge on firms, the cycles of incremental improvement and discontinuous change become increasingly unpredictable. Thus, it is critical for managers to be able to capitalize on both current and future market opportunities. Ambidextrous organizations effectively balance the allocation of resources between current operational needs and the development of future opportunities. Prior research suggests that ambidextrous organizations outperform their competitors (Gibson and Birkinshaw 2004). However, maintaining this delicate balance requires the successful implementation of an ambidextrous strategy, thereby avoiding an imbalance of resource investments in either exploration or exploitation activities. As an important link between the external environment and internal firm constituencies, the proper execution of marketing strategy in support of the ambidextrous organization looms large for overall firm success. Surprisingly, little research attention has been paid to how marketing is affected by an ambidextrous strategy or how it contributes to or impedes the pursuit of an ambidextrous strategy. This research examines whether marketing strategy implementation mediates the overall firm performance of an ambidextrous organization. We also investigate the factors that might enhance or prevent the marketing function from implementing a dual emphasis of exploitation and exploration, such as turbulence in the environment.

Saturday, 8:30 - 10:00am (Session A)

■ SA02

Crawford East

Financial Services

Chair: Thomas Gruca, Assoc. Professor, The University of Iowa, S356 Pappajohn Business Bldg, The University of Iowa, Iowa City, IA, 52242, United States, thomas-gruca@uiowa.edu

1 - Does Channel Usage Have an Effect on Customer Behavior and Customer Profitability?

Sonja Gensler, University of Frankfurt, Mertonstrße 17, Frankfurt, D, 60054, Germany, sgensler@wiwi.uni-frankfurt.de, Martin Boehm, Peter Leeflang, Bernd Skiera

Firms are increasingly utilizing multiple distribution channels and have made large investments to operate those different channels. For that reason, managers are interested whether a distribution channel adds value to the firm. Therefore, we need to determine the effect of channel usage on customer profitability. If the usage of a particular channel increases customer profitability, customer channel migration can turn out to be profitable. However, selection effects have to be disentangled from channel effects. To distinguish between those two effects, we apply the hybrid matching method to decompose the effects of channel usage on customer profitability, its driver and components into treatment and selection effects. In an empirical study, we investigate whether online-banking usage has a positive effect on customer profitability, its drivers and components. The results of the study indicate that online-banking customers are more profitable. Yet, substantial selection effects exist and we demonstrate that the size of the treatment effect cannot be determined appropriately if we do not account for selection effects. Moreover, accounting for selection effects leads to different managerial implications for customer channel migration activities. Decomposing customer profitability into its drivers and components allows additional insights. We find, for example, that online-banking usage has a strong effect on net interests received, and that transaction costs do not decrease when customers migrate to online-banking. Overall, customer migration to the online channel could have a positive effect on profitability. The size of this effect can also be used to evaluate the return on investments in the online channel.

2 - A State-Space Model of Predicting Consumer Repayment Behavior in the Credit Card Market

Yi Zhao, Hong Kong University of Science and Technology, Department of Marketing, HKUST, Hong Kong, Hong Kong, mkzhaoyi@ust.hk, Inseong SONG, Ying Zhao

In this paper, we develop a dynamic model of consumer debt repayment behavior in the credit card market. We treat the decision of whether to be delinquent or not and of how much to pay conditioning on deciding not to be delinquent as two separate decisions, and assume the amount repaid for the delinquent consumers as missing censored data. Our approach enables us to capture the evolution of consumer repayment behavior and to distinguish the consumers whose delinquency is due to high risk and the consumers whose delinquency is due to non-risk related factors such as oversight. We applied our model to a data set on consumer's monthly spending and repayment of credit card. The empirical result suggests that the coefficient of the explanatory variables evolves over time due to the change of the credit card terms and consumer socio-demographic variables. The proposed model performs better in predicting consumer repayment behavior than a base model that does not accounts consumer dynamics. A policy simulation based on the estimation result suggests that the proposed modeling approach benefits credit card companies in helping them identifying high/low risk consumer segments and developing targeted strategy.

3 - The Effect of Modes of Acquisition and Retention Strategies on Customer Profitability

B.P.S. Murthi, Associate Professor, University of Texas at Dallas, SM32, School of Management, Richardson, TX, United States, murthi@utdallas.edu, Ram Rao, Erin Steffes

One aspect of CRM is the relative profitability of customers based on the methods used to acquire them and retain them. How do acquisition strategies differ in their ability to produce more profitable customers? Likewise, how do retention strategies compare with respect to customer profitability? We attempt to answer these questions using a proprietary data set from the financial services industry. Of the four modes of acquisition used in this industry, we find that internet and direct mail efforts generate more profitable customers than telemarketing and direct selling. We then examine the role of two popular customer retention strategies, namely, loyalty cards and affinity cards in driving customer profitability. Surprisingly, we find that customers with loyalty cards and/or affinity cards are less profitable than those customers without access to these retention strategies. We provide possible explanations for these findings. Our work adds to the growing literature in CRM and our results have important managerial implications for resource allocation in acquisition and retention strategies.

4 - A Retrospective Analysis of Customer Acquisition under Adverse Selection

Thomas Gruca, Assoc. Professor, The University of Iowa, S356 Pappajohn Business Bldg, The University of Iowa, Iowa City, IA, 52242, United States, thomas-gruca@uiowa.edu, Yong Cao

Selecting the right customers is a key goal of customer relationship management. At the same time, companies should also strive to avoid acquiring bad customers who cost more to serve than they return in future sales and profits. For firms selling risk products, i.e. insurance, loans, etc., identifying bad customers is a matter of survival. Therefore, these firms have a screening process to predict which customers will end up being a good or bad risk in the future. Currently, such companies use a snapshot of a household's finances as reflected in an extensive credit report to determine whether a given prospect represents a potentially good customer. However, things change over time and some acquired customers improve their financial standing over time while others do not. If a firm could predict which customers are more likely to become worse (or better) risks in the future, it would end up with a better approach to identifying good customers. In our study, we examine the experience of one financial services firm that solicited applications for a risk product. We examine how various measures of household credit usage and payment history change from the time of application to one year later. We are interested in predicting which households became worse risks after they were approved for the loan. Using this information, we formulate a new customer approval model, tested on a hold-out sample, to identify a better (i.e. less risky) set of prospective customers.

■ SA03

Crawford West

Bayesian Methodologies

Chair: John Liechty, Associate Professor, Pennsylvania State University, 409 Business Building, University Park, PA, 16802, United States, jcl12@psu.edu

1 - Relaxing Measurement Invariance In Cross-National Consumer Research Using A Hierarchical IRT Model

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With the growing interest of consumer researchers to test measures and theories in an international context, the cross-national invariance of instruments designed to measure consumer behavior constructs has become an important issue. Consumer researchers now routinely test for measurement invariance using confirmatory factor analytic (CFA) techniques before comparing countries on substantive issues. Yet at least two issues still need to be addressed. First, the ordinal nature of the rating scale is ignored, which has recently been shown to have deleterious effects on the validity of cross-national comparisons. Second, when few, or no items in CFA exhibit metric and scalar invariance across all countries, comparison of results across countries is difficult, if not impossible. We propose to solve these problems using a hierarchical item response theory measurement model. The model takes differential item functioning, including scale usage differences into account. Countries can be substantively compared, even in case of absence of cross-national measurement invariance. An empirical application is provided for the consumer susceptibility to normative influence scale, using a sample of 5,484 respondents from 11 countries on four continents.

2 - A Bayesian Multi-Level Factor Analytic Model of Price Sensitivities

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Understanding consumer purchase behavior across categories has become increasingly important for retailers. Cross-category research shows that it is important to incorporate the cross-category marketing mix effects in the model specification to make reliable inferences, especially when dealing with related categories. We develop a Bayesian factor analytical model for understanding the role of prices in cross-category purchase incidence. Conceptually, our model can be specified in two stages (however, both stages are estimated simultaneously). In the first stage, we model a consumer's purchases in highly related categories using multivariate probit model which provides estimates of own-price and cross-price parameters for the various categories. In the second stage, these price parameters serve as inputs to a hierarchical factor analytic model that reveals the latent factors which explain the covariation in the price sensitivities across all of the categories. We use two sets of scanner panel data for related categories—one data set has clearly complementary categories (e.g.: pasta and sauce) and the other data set has both complementary and substitutable categories (regular and decaffeinated instant coffee in both soluble and freeze dried form). Our results show that the patterns of correlations among price sensitivities are more complex and richer than previously reported. Further, we find that there is no second-order factor for the complementary categories while for the mixed complementary/substitute data there is second-order factor related to HH-level price sensitivity. Substantive and managerial implications of the results are discussed.

3 - Estimating A Random Coefficient Logit Model Using Aggregate Data - Bayesian Approach

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We present a likelihood based approach for analyzing aggregate level sales data in a differentiated product market. We model consumer heterogeneity using a random coefficient logit model. The advantage of our likelihood based approach is two-fold. First, as with all Bayesian methods, it facilitates exact, finite sample inference without the need for relying on asymptotics. Second, it generates sequences of posterior draws for all the model parameters, thus provides a natural environment to assess the precision of model inferences. This second point is in contrast to the frequentist approach for which computation of asymptotic standard errors of the (nonlinear function of) parameter estimates is often a complicated matter. We also extend our approach to model both the demand side and the supply side.

4 - Modeling Consumer Heterogeneity using Super-Clusters

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In the conjoint setting, consumer heterogeneity is typically modeled using either a finite mixture model or a random effects model. In this study, we consider several natural extensions to both of these modeling frameworks. We consider a random effects model where the aggregate parameter vectors comes from a random effect model; we also consider a nonparametric Bayesian specification, which provides a highly flexible model of individual partworth utility vectors. The final model that we consider is a finite mixture of nonparametric distributions, where the non-parametric distributions are connected with in a segment and separated from other segments with respect to a reference distribution. Performance of these models is explored by analyzing synthetic and real conjoint data.

■ SA04

Butler West

Personal Selling I

Chair: Srinath Gopalakrishna, Associate Professor, University of Missouri, 434 Cornell Hall, Columbia, MO, 65211, srinath@missouri.edu

1 - A Configuration-Theory Assessment of How Incongruity in Sales Force Control Systems Drives Salespeople

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This study draws on configuration theory conceptualizations and methodologies to propose a new construct --incongruity in a sales force management control system—and develop and test an index of it. Analysis of archival and survey data from 2532 salespeople in 38 companies on 5 continents reveals that the lack of co-alignment (incongruity) of the constitutive elements of sales force control systems is associated with inferior performance on objective, customer-generated performance measures. Using the Varying Parameter Methodology, results indicate that a salesperson's tenure in the organization moderates this relationship. Two mechanisms (misdirection of effort and de-motivation) are shown to underlie, in complementary fashion, the negative impact of incongruity on customer-generated individual performance. Multiple implications for management and for future research are presented.

2 - Investigating Performance Gains In Sales Teams

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A growing number of companies utilize teams to sell products and services (Jackson et al. 1999, Weitz and Bradford 1999). While team design often has a complementary flavor (as in cross-functional teams) to address a range of customer issues, they may also be set up to energize members from within i.e., attain higher performance levels (Sullivan 1995). Drawing on group motivation theory, and given the nature of the task, we investigate (a) if performance gains can occur for the weaker team member and (b) whether the extent of gain depends on past relative performance of both team members. The literature suggests that weaker members perform better in teams than they would as individuals. Further, gains are highest when the pairing is with someone moderately superior in performance (Messé et al. 2002). Such findings come from laboratory environments - the effects are unknown in field settings. Little is known about the impact on the stronger team member. In our research, we explore these effects in a field experiment, assigning sales agents to teams in one of two conditions (additive and conjunctive). Agents sell life insurance policies during a three-week sales contest. In the control condition, agents remain in an individual task. We find that agents perform better in teams than in individual settings. The weaker member's performance has a curvilinear relationship to the difference in ability of the team members. We extend the findings in group motivation gain by exploring possible theoretical explanations for the performance gain. Furthermore, we test the impact on the teaming activity on the stronger member.

3 - The Mediator-Moderator Model of Salesperson Performance

Steven Michael Burgess, Professor of Business Administration in Marketing, Graduate School of Business, University of Cape Town, 9 Printzia Close, Kronenzicht Estate, Hout Bay, 7806, South Africa, sburgess@gsb.uct.ac.za, Sabine Koen, Esther Venter

Learning and adaptation in selling situations have been the focus of considerable sales performance research and contributed to our understanding of customer orientation within the firm. This research addresses the important need to identify underlying individual differences that influence salespeople's adoption of learning orientation and adaptive selling behaviors (Harris et al. 2005; Park and Holloway 2003). We focus on optimum stimulation level (OSL), a personality trait that concerns preferred stimulation in life. OSL has been related in the consumer context to exploratory behaviors (e.g., environmental exploration, learning, tolerance of ambiguity and novel situations, innovativeness, risk-taking) in the consumer context (Steenkamp and Baumgartner 1992). These behaviors are conceptually related to the salesperson constructs of learning orientation and adaptive selling behaviors. However, rather surprisingly, OSL has not been studied previously in the salesperson context. We develop and test a mediator-moderator model of salesperson performance. We specify hierarchical relations of personality traits (OSL), domain-specific goals (learning orientation, Sujan et al. 1994), and selling behavior (adaptive selling behavior, Spiro and Weitz 1990) on salesperson performance using a sample of 489 insurance salespeople in South Africa. Importantly, our performance measure uses objective, archival data rather than self-report data, which are prone to method bias (Bearden, Manning, and Tian 2004). These relations are hypothesized to be systematically moderated by the salesperson's degree of experience. The South African context contributes to the understanding of the generalizability of constructs and theories to non-Western contexts.

■ SA05

Butler East

BDT III

Chair: Joydeep Srivastava, Robert H. Smith School of Business, University of Maryland, College Park, MD, 20742, srivasta@rhsmith.umd.edu

1 - The Impact of Marketing on the Choice of Insurance Deductibles

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Economic theories of asymmetric information, as applied to insurance markets, predict that customers who are more likely to file claims during the coverage period will choose lower deductibles on their policies. But marketing activities and behavioral tendencies can influence the choice of deductible as well. For example, customers may exhibit inertia and not reconsider their insurance options for an extended period of time. The ultimate "trigger" for a deductible change could then be a marketing factor unrelated to that customer's expected claim propensity, such as a pricing change or a message from the company. Hence, the rate at which a customer files a claim after a deductible change may be related to why the deductible change was made at all. We examine this phenomenon empirically, using a proprietary multi-year dataset from a leading US homeowners' insurer.

2 - Learning with Successes and Failures: An Empirical Study of Learning Evolvement at Auctions

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Bidding in auctions is an intrinsically complicated decision, especially for individual bidders without extensive knowledge about the mechanism of auctions. In this paper, we examine how the bidding behavior of auction buyers evolves over time, especially when influenced by winning and losing experiences. We use a panel of new customers at eBay and keep track of their bidding strategy, which is characterized by the number of incremental bids, the bid variances, and the time the first bid was placed, over time. A time series model is constructed and analyzed using Hierarchical Bayesian approach. We find that among other factors, winning and losing experience has a significant impact on bidders' learning patterns. The findings of this research have significant managerial implication for auction sellers as well as auction websites. Insights from this research provide guidance for the sell-side to optimize their configuration of auctions, so as to facilitate buyer learning and subsequently improve customer satisfaction and retention.

3 - Two-stage Prize Promotions and the Value of Unresolved Uncertainty

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We study prize promotions in two Internet experiments. Study 1 examines explicit choice between two Internet stores, one with prize promotions and the other without. Study 2 examines repeated visits to an Internet site. In each of the two Internet studies, we study two conditions—one where the prize is realized instantly, and the other where the prize is given through a two-stage prize promotion, a promotion wherein in the first stage the consumer may win a "lottery ticket" and in the second stage some of the entries win prizes. In both environments, the two-stage lottery increases the desired behavior by roughly 50%.

4 - Transaction Bundling: Effect of Price Presentation on Consumer Perceptions

Joydeep Srivastava, Robert H. Smith School of Business, University of Maryland, College Park, MD, 20742, srivasta@rhsmith.umd.edu, Dipankar Chakravarti

Consider a new car purchase that is accompanied by a trade-in of an old car. In such transactions that naturally occur together in time, marketers have different options in pricing the overall exchange episode. This research reports two studies that demonstrate that the manner in which the price of the overall transaction is presented influences consumer perceptions, holding constant the total amount. Study 1 finds that evaluations of the overall transaction are more sensitive to the price of the new car than to the trade-in value of the old car. Study 2 finds that consumers' sensitivity to the price of the new car versus the trade-in value of the old car depends on factors such as the level of attachment with the old car. Study 2 also shows that presenting a single price for the overall transaction hides the gains/losses on each component and allows consumers to apportion the total price across the components in a flexible manner. Highlighting the vulnerability of overall evaluations as a function of price presentation, the findings have important theoretical, managerial and consumer welfare implications.

■ SA06

Cambria West

Marketing Models

Chair: Glenn Mayhew, Assoc. Prof., International University of Japan, 777 Kokusai-cho, Minami Uonuma-shi, Niigata-ken, 949-7235, Japan, mayhew@iuj.ac.jp

1 - Strategies for Building New Brands

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The drivers of new brand success have received substantial amount of interest in the marketing literature. Recent research on new product diffusion has advanced our understanding on how external factors, such as economic conditions and country characteristics, affect the growth of new brands across space and time. Yet none of these studies can be seen as offering conclusive answers on which marketing strategies create successful new brands. This paper tries to shed light on this issue by adopting the view that the diffusion of a new brand can be managed strategically and the differences between growth patterns arise due to the firms' post-launch strategic choices. We argue that certain marketing mix instruments that are under the control of brand managers can be used to accelerate the growth of a new brand, while others mainly serve the purpose of keeping sales at a certain level. In order to justify this view we systematically investigate how advertising, promotion, distribution, and product activities influence two components of new brand performance, namely sales level and sales growth. We achieve this by estimating a polynomial dynamic linear model where each growth component is linked to marketing mix instruments. We perform the analysis on more than 300 brands from 25 product categories to generalize our findings. Furthermore, we explore how brand and category characteristics moderate the effect of the marketing mix on new brand growth.

2 - Managing Customer Evolution and Marketing Mix Allocation for Long-Term Profitability

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In managing its customer base and optimizing the marketing mix allocation, the firm needs to consider the evolution of its customers over time. Changes in the marketing environment and intrinsic changes in consumers' preferences or needs may discretely shift customers into different buying-behavior states. The ability to identify these latent states and the drivers of the transition among them presents an opportunity for the firm to influence the movement of customers to more favorable states and therefore to maximize its long-term profitability. Accordingly, we address the following managerial questions in this research: 1. What is the buying-behavior state of each customer at any point in time? 2. How does marketing mix affect the transition of customers among these behavioral states? 3. How should the firm allocate and target its marketing resources to maximize long-term profitability? To address these questions, we propose a heterogeneous hidden Markov model that accounts for dynamics in consumer behavior and the long-term impact of marketing actions. We capture dynamics in consumer behavior by allowing consumers to transition over time among a set of latent states of purchase propensity. We propose a unique and flexible approach to capture the enduring impact of the marketing actions by incorporating a non-stationary transition matrix that is affected by these actions. To optimally allocate marketing actions, we propose a dynamic programming approach which takes into account the evolution in consumers' behavior. We illustrate the model using direct-to-physicians marketing data from a major pharmaceutical company. We compare the model to several existing methods in terms of fit, prediction, and the implied marketing strategy.

3 - Uphill or Downhill? Locating Your Firm on a Profit Function

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Companies know the amount of profit they make, but may not know whether they are operating on the uphill side or downhill side of the profit function with respect to each marketing investment variable. We first identify the risks of an uphill-located firm acting as if it were a downhill-located firm. Then, we develop a diagnostic tool to infer a company's type based on its location on the profit function. Next, applying the proposed approach to daily newspaper industry data, we analyze the allocation behavior of companies with respect to three marketing efforts: investments in quality, distribution, and advertising. We find that a majority of the companies are located near the optimal level of spending for quality, which is a surprising finding given that previous studies have characterized marketing managers as over-spenders. In fact, when managers are sub-optimal, they are about twice as likely to be under-spending than over-spending. In other words, newspaper companies are clustered on the uphill side of the profit function. We find similar results with respect to advertising and distribution investments. In addition, we provide sales elasticity estimates with respect to quality and distribution investments, which are sparsely available in the extant literature (compared to price and advertising elasticities). Finally, we furnish normative and empirical analyses of marketing resource allocation in a dual revenues market with interrelated demands for subscriptions and advertising space.

4 - Multi-Spell Hazard Modeling for CLV

Glenn Mayhew, Assoc. Prof., International University of Japan, 777 Kokusai-cho, Minami Uonuma-shi, Niigata-ken, 949-7235, Japan, mayhew@iuj.ac.jp, Kerimcan Ozcan

Customer lifetime value (CLV) is becoming increasingly important as a marketing concept and increasingly calculable as more businesses generate customer-level databases. CLV calculations are generally made with Markov Chain models based on purchase recency, frequency and monetary value (RFM) as a basis for a state-space in discrete time. As the explanatory variables get richer, however, the state-space explodes exponentially. Such models also have problems capturing purchase events that may happen in rapid succession within a discrete time period. Our research investigates the use of continuous-time modeling of purchase incidence in calculating CLV. Specifically, we develop a multi-spell hazard model of purchase incidence and estimate it using Bayesian techniques. Such modeling has the potential to revolutionize the way in which explanatory variables enter CLV models, allowing CLV to become a much more commonly used marketing metric.

■ SA07

Cambria East

New Product Development - V

Chair: Federico Rossi, PhD Student, Northwestern University, 2001 Sheridan Road, Leverone
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1 - Born to Win: Network Structure at Founding and Open Source Project Survival

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Innovation in the community model of software development has given rise to a number of successful products such as the Linux OS, the Mozilla browser, and Apache web server. However, apart from these very successful open source projects, there are many projects that do not reach maturity and end up inactive. Projects are linked to the open source community through their founders and hence can be viewed as being born into an embedded structure of relationships of the founder in the open source community. Based on the literature on organizational founding, which suggests that the environment and features developed at organizational birth have lingering effects on the organizations evolution and survival; and the literature on social networks, which emphasis the importance of network embeddedness even in the open source environments; we propose that the network structure into which a project is born will play a dominant role in determining its life-span. We test this persistent effect of network structure at project inception using data from SourceForge.net, the largest collection of open source projects on the Internet. We model the data using the hazard modeling framework where we (1) incorporate time varying covariates, (2) estimate the eventual probability of failure (i.e., split-hazard model), (3) allow for competing risks (death due to failure, death due to objectives being achieved, and parse out still born projects that never takeoff), and (4) project-specific heterogeneity. We estimate the model using MCMC procedures that rely on the Hastings-Metropolis algorithm. The results provide support for the hypothesized model and suggest that network structure at birth does have lingering long-term effects on project success in the open source environment.

2 - A Forecasting Model of 3G Mobile Service Diffusion after Converting Cumulated into Bernoullian Data

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Managers in 3G wireless markets require sales response models that provide substantive insights into the effects of marketing activities as well as reliable sales forecasts. In such markets the effects of service attributes and marketing activities could rapidly change over time; moreover, buying rates at individual consumer level often exhibit non stationarity. In recent years, many marketing scholars recognized that forecasting models based on bernoullian data seem to be a good tool in order to capture the purchasing process properties mentioned above. However, many companies collect cumulated (rather than bernoullian) purchasing data and they are unable to directly apply such high forecasting performance models. In this paper we first develop a stochastic Data Distribution Model (DDM) that transforms an original dataset of cumulated purchasing data into bernoullian infra-period observations and then apply a Dynamic Changepoint Model (DCM; Fader et al.2004) that captures the underlying evolution of the buying behaviour associated with the new mobile service. The DDM is based on the marketing principle that as consumers gain more experience with the service, we would expect their preferences (and therefore their sequence of purchases) to stabilize to some extent. We employ data on a consumer panel in which we track the monthly purchasing of each panelist for the duration of the test market and redistribute the cumulative data within each day according to the stochastic model. We then apply the DCM to a number of versions of the modified dataset. Parameters are obtained as the mean of simulated parameters for each application. We find that the model applied to an highly innovative service show a considerably strong empirical performance.

3 - Designing Distribution Channels for An Innovative Durable Product with After-sales Service

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We focus on a set of strategic and tactical decisions that concern a manufacturer who is about to launch an innovative durable product (IDP) along with its complementary service and product. First, the manufacturer needs to decide on distribution channel configuration. Then for any given configuration, he needs to dynamically set the prices. Our analysis is based on the joint decision of marketing and operations. We propose a generalized Bass model to study the demand dynamics. We study various channel configurations, including a direct, indirect and hybrid distribution systems. We propose a general revenue model which includes profits from selling the IDP and profits from the after-sales service. We assume that the manufacturer maximizes the lifecycle profits. In contrast, retailers are uncommitted and only concerned with the instantaneous profit. We formulate the manufacturer's problem under the optimal control framework. For each channel configuration, we characterize the optimal dynamic prices, instantaneous sales rate and instantaneous profits. From those results, we identify three major trade-offs: the trade-off is between double marginalization market influences of retailer, the trade-off between immediate and future profit, the trade-off between profits from product and after-sales services. We make several contributions to marketing and operations literature. First, we contribute to the marketing literature by bringing the distribution channel structure into the Bass type diffusion model. Second, we contribute to the Operations Management research by explicitly quantifying the trade-off between the double marginalization and market influences and analyzing the impact of after-sales service profits on the sales, pricing and profit trajectory.

4 - An Empirical Model of Dynamic Attribute-Space Competition

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Multiproduct firms periodically sell new products and remove existing products from the market. The decision whether to launch a new product is intrinsically dynamic: managers are required to assess whether the future cash flow generated by future sales of new products can compensate for the current investment effort. They also need to consider the potential cannibalization of the sales of the other brands in the portfolio and anticipate the competitive response of other firms in the market. In this paper we empirically investigate the mechanism underlying the launch and positioning of new products. We develop a model of multiproduct firms who periodically decide whether and where to launch new products and whether to remove existing products. Products compete over a multi-attribute space, which is made of different possible locations; firms decide in which location to introduce new products in order to dynamically optimize their discounted future expected profit. The model is applied to the U.S. ready-to-eat breakfast cereal industry. By estimating the dynamic structural model we disclose the firms' new product strategies and recover the primitives of the industry; these in turn allow us to predict the change in the strategic decisions taken by firms for different market scenarios. The framework presented in this paper can also be applied as a decision-making tool for product portfolio management and brand positioning.

■ SA08

Westmoreland West

Diffusion III: New Product Decisions

Chair: Shan-Yu Chou, Associate Professor, College of Management, National Taiwan University, No. 50, Lane 144, Sect. 4, Kee-Lung Rd., Taipei, Taiwan, chousy@mba.ntu.edu.tw

1 - Spatial and Temporal Competition in Event Ticket Sales

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For most products, the purchase of an item is closely tied with the consumption of that item. These product categories, which include automobiles, consumer packaged goods, and movies, have been the primary focus of existing marketing research. However, a substantial segment of the consumer market involves product categories where advance purchasing takes place (i.e., purchase occurs well in advance of consumption). For example, airline tickets and concert tickets are typically purchased several weeks before the tickets are used. Previous research has shown that several factors, including consumer uncertainty and price sensitivity, can affect the consumer's decision of when (or how far in advance) to purchase. We contribute to the advance purchasing literature by studying how spatial and temporal competition affect the consumer's purchasing decision. For example, a given event such as a rock concert, a play, or the circus typically shows multiple times on different days across several cities. We will examine how the same event scheduled on a different day and perhaps in a different city can affect sales for the target event. We model weekly event sales as a Weibull hazard process which incorporates spatial and temporal matrices. In our empirical analysis, our data includes weekly sales for the same event occurring in four different cities across five consecutive weeks in the Los Angeles metropolitan area.

2 - How Does Distance Matter? Market Knowledge Acquisition and New Product Outcomes

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Geographical distance plays an important role in explaining new product development outcomes. Previous research shows that knowledge acquisition is often geographically bounded (Jaffe, et al. 1993), while proximity to knowledge-generating firms affects new product outcomes (Ganesan, et al. 2005). Models dealing with these issues usually pay little attention to the problem of autocorrelation inherent to spatial data. Literature shows that ignoring this increases type I error (e.g., Anderson and Legendre 1999). Based on findings about technical knowledge acquisition we hypothesize that proximity to the market also affects new product outcomes. Proximity to the market facilitates market knowledge acquisition, hence affecting the innovativeness of the product portfolio. We explore some effects of proximity to market knowledge and resources for market knowledge acquisition on new product outcomes. We use permutation based tests that are robust against spatial autocorrelation to illustrate how distances matter. Data are obtained from the pharmaceutical industry, where various of stakeholders (e.g., regulators, medical professionals, and patients) provide market knowledge. Anderson, M. J. and P. Legendre, "An empirical comparison of permutation methods for tests of partial regression coefficients in a linear model," Journal of Statistical Computation and Simulation, 62, 3 (1999), 271-303 Ganesan, Shankar, Alan J. Malter and Aric Rindfleisch, "Does distance still matter? Geographic proximity and new product development," Journal of Marketing, 69, 4 (2005), 44-60. Jaffe, Adam B., Manuel Trajtenberg and Rebecca Henderson, "Geographic localization of knowledge spillovers as evidenced by patent citations," The Quarterly Journal of Economics, 108, 3 (1993), 577-675.

3 - Consumer's Adoption of Continuous Technology Innovations: A Modified TAM with Coping Strategies

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Given accelerated product innovations and shorter product lifecycles, explaining and predicting consumers' adoption of continuous technology innovations have been increasingly difficult. With new generations of the same products emerging every few years or less, consumers often face the dilemma of choosing between continuing to use the existing product and upgrading to a new version, and have increasingly experienced a certain level of technology fatigue. They may delay the adoption, frog-leap the new product, and dis-adopt it after a trial. Thus, the traditional models of adoption based on product attributes and consumer innovativeness can no longer accommodate these new realities. Based on the concepts of uncertainty and paradoxes associated with new technologies, this study proposes a modified technology adoption model (TAM) by incorporating the concept of coping tendencies, which include ignoring, rejecting, delaying, extended decision making, continuing to use the existing product, and immediate adoption. Based on a survey of consumers regarding the 3G mobile phones, we find that by incorporating these coping tendencies, the new adoption model has a significant improvement in model fit, and that consumers' coping tendencies and their interactions with product attitude have significant effects on their adoption intention. Thus, the modified technology adoption model provides more coherent explanations of consumers' adoption of continuous innovations and meaningful implications for marketing technology products to today's tech-savvy consumers, and can potentially help build more accurate forecasting models.

4 - The Optimal Complementary Good Strategy for Duopoly Firms

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We analyze the optimal strategies of complementary good for duopoly firms who compete in the market of basic goods. We build a game-theoretic model where two firms produce their basic products that differ not only in quality but also in their positions in a horizontal space where consumers' ideal points are uniformly distributed. Our results show that the decision of whether to introduce a complement product depends on consumers' valuations to the basic products of the two competing firms, the value added by the complementary product to the two basic products, and the level of R&D expenditures required. The following results are obtained. First, when the value added to the two competing basic products by the complementary good is small, the firm that exclusively introduces the complementary good will set a price low enough to serve all consumers. Second, when the value added to the high-end basic product by the complementary good is high enough, the high-end firm will choose to allow its rival to exclusively introduce the complementary good and soften the price competition in the market of the basic products. Finally, when the value added to the high-end basic product by the complementary good is extremely high, the low-end firm may give up its basic product and concentrate on the complementary market. In this situation, two firms become monopolists in their respective markets and act cooperatively.

■ SA09

Westmoreland Central

eCommerce VII: Mktg. Mix Decisions

Chair: Charles Ingene, Hearin Chair of Business Administration, The University of Mississippi, 232 Holman Hall, The University of Mississippi, University, MS, 38677, United States, cingene@bus.olemiss.edu

1 - Non-Linear Pricing in E-Commerce.

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Internet markets are usually under the control of an intermediary that charges fees for its services. Differences in quality across items being sold allows market intermediaries to employ lucrative nonlinear pricing strategies that result in differentiation across items according to their potential market value. The objective of this paper is to analyze theoretically and empirically a particular case of non-linear pricing policy. For several years now eBay has been using a non-linear pricing policy, or as they call it "Featured Plus! " This pricing policy gives sellers the option to incur an extra fee at the time of posting their items for sale and in return have these items listed first when buyers search for specific products. Overstock.com and ArtByUs.com also employ similar pricing strategies. The basic idea behind "Featured Plus!" is that potential buyers incur a lower cost of search when looking at featured items. Sellers of high quality items benefit the most from having many buyers competing for their products in an auction setting. Thus, sellers of high quality items are likely to choose "Featured Plus!." In the empirical sections of the paper we analyze a unique panel data of approximately twenty five hundred art auctions from artists who sell their own work through eBay. We use our data to quantify the overall impact of the "Featured Plus!" pricing policy on the market players and the intermediary. Our results indicate that this pricing policy increases revenues significantly and acts as a coordination mechanism that facilitates the match between buyers and sellers.

2 - Rapid Testing of Online Marketing Communications

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We develop a pre-testing methodology for online marketing communications that significantly reduces both testing time and test sample-size needs. Working in the context of email marketing, we take advantage of the fact that email companies can accurately record send, open, and click times to build a split-hazard model of click and open rates. A novel feature of our model is that we use the concept of "virtual time" to handle intra-day seasonality. By estimating the split-hazard model in virtual time and using Bayesian shrinkage to pool information across campaigns, we find that we can dramatically reduce the time needed to test an online campaign. We validate our methodology using data generated by 25 email campaigns sent by a large entertainment company. The analysis shows that using our approach, we can reduce testing time from 14 hours to 4 hours without any decrease in testing reliability. It also highlights the pitfalls inherent with compressing testing time. Indeed, the more compressed the testing time, the more sensitive the quality of the results are to the specifications of the hazard function and to intra-day seasonality.

3 - Competitive Emailing in Direct Marketing

Olivier Rubel, PhD Candidate, HEC Montreal - GERAD, 3000, chemin de la Côte-Sainte-Catherine, Montreal, Qc, H3T 2A7, Canada, olivier.rubel@hec.ca, Guiomar Martin-Herran, Georges Zaccour

We consider a differential game played by two direct marketers over an infinite horizon. Each player controls the number of e-mails sent at each instant of time to potential customers.There is a cost associated to the messages sent and a potential reward. The cost function is taken convex increasing. The revenue, or reward, is assumed to depend on the state variable defined to be the level of the representative consumer's attention. Two features are included in the model, namely marginal decreasing returns and bounded rationality. By the latter, we mean that the representative consumer has a limited capacity in processing the information received. Therefore, the higher the number of the messages sent by the firms, the lower the the response rate is. Further, this capacity is seen as a renewable resource that regenerates following a linear growth function. We characterize competitive equilibria for different scenarios based on the type of each player, i.e., whether the player is a spammer or not. We define a spammer as myopic player, that is a player who cares only about short-term payoff and ignore the impact of his action on the state's dynamics. In all scenarios, the game turns out to be of the linear-quadratic variety. Nash equilibria for the different scenarios are fully characterized analytically and sensitivity analysis are conducted to assess the impact of the different model's parameters on the strategies and on the steady-state. Finally, we analyze the game in normal form where each player has the options of choosing between being a spammer and not and characterize Nash equilibria.

4 - Geographically-Customized Promotions for Netizens

Charles Ingene, Hearin Chair of Business Administration, The University of Mississippi, 232 Holman Hall, The University of Mississippi, University, MS, 38677, United States, cingene@bus.olemiss.edu, Rahul Govind

Rahul Govind and Charles A. Ingene Primary Presenter: Charles A. Ingene A classic retail problem is how to maximize sale probability and store profitability by rapidly determining an optimal sales presentation to make to a potential customer who enters the store. The proffered presentation is typically based on demographic and psychographic cues embedded in the entrant's dress and demeanor. Like bricks-and-mortar retailers, on-line retailers strive to maximize sales probability and website profitability. On-line retailers have a wide repertoire of tools, including instant promotions and (in principle) customized websites; but they are constrained by neither seeing nor hearing a netizen, which limits their ability to market segment or price discriminate. In fact, all that is known about a newcomer is the netizen's internet-protocol address which can be used to infer his or her geographical location. We introduce a decision support system that generates geographically-customized online promotions for newcomers to a website. Our promotions are predicated on estimated purchase intent and promotion proneness. Our estimates are based on geographical dependence: netizens are modeled as being like their neighbors in the sense of having similar demographic and behavioral characteristics. This similarity might stretch across just small regions like census blocks or larger regions like counties. We construct a purchase incidence model that is dependent on the region of residence of the individual browsing the website. We also incorporate a covariate that measures the technological sophistication of the region. We illustrate the proposed methodology with data from the US Census.

■ SA10

Westmoreland East

Channels VII

Chair: Anthony Dukes, Associate Professor, University of Aarhus, School of Economics and Management, Building 1322, Aarhus, DK, 8000, Denmark, adukes@econ.au.dk

1 - Impact of Discount Store Entry on Small Businesses, Employment, and Wages: An Empirical Investigation

Vishal Singh, Assistant Professor, Carnegie Mellon University, 244, Posner Hall, 5000, Forbes Ave, Pittsburgh, PA, 15213, United States, vsingh@andrew.cmu.edu, ting zhu

Over the past decade or so, the economic and social impact of Big Box retailers (particularly Wal-Mart) on local communities has been the subject of intense debate. Commentators have argued over the pros and cons of the entry by these stores into the local markets. However, there is little academic research on the issue. In this paper we study the impact of Wal-Mart, K-Mart and Target stores on local communities. We use detailed information on the number of small business establishments, employment, retail wages, and annual payrolls for counties across the US. The data are obtained from the Department of Commerce and the US Census Bureau and are available for over two decades (1977-99). We combine these data with information on location and opening dates of the discount stores to study the impact of entry and exit of the discount stores on immediate and neighboring counties. Since the store locations are strategic decisions made by the retailers, we account for the potential endogeneity in the analysis.

2 - Understanding Market Dynamics through Channel Migration

Cheryl Bergeon, Vice President, Information Resources, Inc., Analytics R&D, 150 North Clinton Street, Chicago, IL, 60661, United States, cheryl.bergeon@infores.com, Arvid Johnson, Avu Sankaralingam

In today's increasingly-dynamic consumer packaged good marketplace, it is more important than ever for retailers (and manufacturers on a retailer's behalf) to retain existing purchases within a channel, attract new purchases to a channel, and respond appropriately to the entry of new cross-channel competitors. This paper will describe how a Markov-inspired transition matrix is used to characterize and track channel migration and retailer switching across eight channels (food/grocery, drug, mass, super centers, covenience/gas, dollar, club, and other) - using Information Resources' Consumer Network Panel. In particular, the results of a study of over 200 product categories will be presented - including the identification of which product categories are associated with increased/decreased channel loyalty. In addition to providing traditional tracking of market dynamics, this approach naturally lends itself to consumer segmentation and adds focus for further consumer insights. The results of a choice model developed using this segmentation will also be presented.

3 - The Strategic Role of Private Labels in Upstream Competition

Om Narasimhan, Carlson School of Management, University of Minnesota, 321, 19th Ave S, 3-150 CSOM, Minneapolis, MN, 55455, United States, onarasimhan@csom.umn.edu, Xinlei (Jack) Chen, George John, Tirtha Dhar

Private labels have been growing in importance over the years, with market shares ranging from 20-40% in North America and Europe. Their presence is ubiquitous in a host of categories, ranging from groceries to health and beauty products. While there has been a lot of attention devoted to the private label phenomenon, extant research has mainly focused on the downstream (retail level) effects of private labels on national brands, and on retailers' incentives to introduce private labels. There is almost no empirical work that investigates private labels' strategic role at the upstream (supply) level. In this paper we model competition between national brands and private labels at the upstream level. We uncover the strategic role of private labels at the upstream level by demonstrating that they can be used by a national brand manufacturer as a tool to compete (by supplying private labels) or collude (by pushing the private labels to a costlier producer) with other national brands. Using data for the milk market from a major metropolitan area, we estimate demand and supply models, taking into account that while private labels and national brands can be considered differentiated products at the retail level, only the latter are differentiated products at the manufacturer level. Using estimates obtained from the demand and supply side, we conduct a number of counterfactuals to answer questions such as: What if both upstream manufacturers supply private labels (instead of just one, as in our data)? What are the effects, upstream and downstream, of switching private label suppliers?

4 - Strategic Assortment Reduction

Anthony Dukes, Associate Professor, University of Aarhus, School of Economics and Management, Building 1322, Aarhus, DK, 8000, Denmark, adukes@econ.au.dk, Tansev Geylani, Kannan Srinivasan

Large discounters, such as Wal-Mart, are known to offer shallow assortments relative to traditional retailers in order to reduce the stocking and inventory costs associated with a large number of SKU's. We investigate the competitive incentives for such assortment decisions and the implications for manufacturers' distribution strategies. If larger assortments increase the marginal cost of retailing, then a retailer may consider dropping a manufacturer's less popular product varieties. If the retailer is strategic, it considers the consequence on the manufacturer's distribution strategy with respect to other retail channels. To assess these strategic incentives, we examine an analytical model of a manufacturer distributing a popular variety and a specialty variety of its product through two competing retailers who have increasing assortment costs. If one retailer has the channel power to determine its assortment first, then it can strategically reduce its assortment by carrying only the popular variety while simultaneously inducing the rival retailer to carry both varieties. The rival retailer then bears higher assortment costs, which leads to relaxed price competition for the commonly carried popular variety. We use the model to derive conditions under which the strategic assortment reduction is incentive compatible for the manufacturer and the rival retailer. Under these same conditions we show that when the manufacturer has the channel power, it chooses alternatively to distribute both product varieties through both retailers. Our analysis suggests, therefore, that when a retailer becomes dominant in the distribution channel, it facilitates retail segmentation into discount shops, carrying limited product lines, and specialty shops, carrying wider assortments.

■ SA11

Washington

Promotions V

Chair: Marnik Dekimpe, Catholic University Leuven, Naamsestraat 69, Leuven, Le, 3000, Belgium, marnik.dekimpe@econ.kuleuven.be

1 - Cross-Category Promotions: Which Strategy Is Most Effective and Under What Circumstances

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Companies have an increasingly diversified menu of strategies with which to promote their products, yet managers lack common metrics to evaluate the ROI potential of these promotions and a road map to understand when they will be most effective. Our research context involves a large consumer packaged goods manufacturer that offers an array of promotions across numerous product categories, which include: traditional price promotions such as coupons, product positioning promotions in the form of health-benefit label claims, and embedded premium (EP) promotions (purchase-contingent donations to charity). Over 4,500 national Internet panelists completed a conjoint choice experiment for multiple product categories in which they buy, providing the opportunity to examine promotion valuation and choice behavior within and across six product categories. The results show that traditional price promotions have the strongest impact on consumer utility, but our cost-centric approach qualifies that conclusion. The choice experiment and our hierarchical Bayes approach provide the tools to assign an individual-level monetary equivalent to each promotion strategy. We demonstrate that at small denominations, consumer utility for an EP promotion exceeds its economic valuation, and is dollar-for-dollar more effective than an equivalently valued coupon. Across categories we show that promotional effectiveness is contingent on the competitive dynamics of the choice set and that EP promotions may be the most cost-effective means to "buy market share" and justify price increases. These results have implications for brand managers looking for margin expansion opportunities and evaluating the ROI potential of an emerging class of promotions where self and other meet — EP promotions.

2 - Why are Rebates so Hard to Redeem? Analyzing the Effect of 'Hassle Costs' on Firm Profits and Consumers

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Despite the widespread use of rebates, little is known about the essential trade-offs involved in the design of rebate programs with respect to how much "hassle" the rebate redemption process should impose on consumers.Marketers may impose high hassle costs by including multiple forms and requesting cut-outs of UPC symbols from the packaging. Alternatively, marketers minimize hassle costs by shifting the redemption process to convenient templates such as those hosted on the internet. Surprisingly, there is scant formal analysis of how the level of "hassle cost" in a rebate program impacts firm profits and consumer welfare.We redress this gap in the literature by developing a formal model of rebating that explicitly includes the hassle cost associated with rebate redemption. We address the managerially relevant questions:(i) Is there an optimal level of hassle costs? (ii)What is the relationship between rebate, list price and hassle costs? (iii)What is the validity of a commonly employed heuristic such as maximizing sales while maintaining rebate redemption rates to some previously specified norm? We find that the profitability of a rebate program turns on whether the gains from market expansion and list price sales exceed the losses from opportunistic redemption.Moreover, there is a single optimal level of hassle cost associated with any rebate program. Thus, even though efficient templates are readily available for the rebate redemption process, marketers may not wish to employ them with a view to lowering hassle cost.In addition, we demonstrate that lowering hassle cost may not increase consumer welfare.Finally, we also show the non-optimality of commonly used heuristics such as maximizing sales while maintaining rebate rates to some previously specified norm.

3 - Manufacturer vs Retailer: A Study of Promotional Benefits

Sanjib Mohanty, University of Rochester, 224 Conant Rd, Apt A, Rochester, NY, 14623, United States, mohantysa2@simon.rochester.edu, Minakshi Trivedi, Karthik Sridhar

The effect of promotions on brand choice and category purchase has received extensive attention in the marketing literature. Promotions have different roles to play from the point of view of manufacturers and retailers. While manufacturers seek to maximize their profits, retailers may benefit from increased traffic, category expansion, etc., even if the product itself does not benefit. Furthermore, the manufacturer often bears the additional financial burden of the promotion itself, which needs to be accounted for before profitability of promotional issues can be studied. In such circumstances, who really benefits from the promotion - the manufacturer or the retailer? Is it really worth it to the manufacturer, even after accounting for the post promotion sales slump that is often seen for most product categories? In this paper, using household level choice data, we disaggregate the promotional impact to model separately the advantages to the retailer and the manufacturer. Using an integrated model for purchase behavior, we evaluate the impact of promotions on the retailer and manufacturer profits and issues such as financial implications for category expansion or purchase feedback effect.

4 - How to Improve Promotional Effectiveness?: An Individual Promotion Analysis

Katrijn Gielens, Erasmus University Rotterdam, Burgemeester Oudlaan 50, Rotterdam, 3062 PA, Netherlands, kgielens@rsm.nl, Marnik Dekimpe, Berend Wierenga, Francesca Sotgiu

European and American consumers alike are confronted with numerous price pro-motions. Therefore, it is not surprising that considerable attention has been devoted to study their performance implications. Previous studies, however, deal mostly with the average effects of price promotions, as reflected in a brand's price-promotion elasticity. As such, differences across individual promotions are largely ignored. In this study, we no longer consider average effects, but rather assess the effectiveness of individual promotions which differ widely in terms of execution (implementation), context, and support. In a two-step approach, we first determine the total sales effectiveness of each individual promotion using a multiple-break analysis. This procedure extends the intervention approach of Leone (1987) to multiple promotions, in line with the procedure developed by Ben-David and

Papell (2000). In the second step, we subsequently relate each of these effects to various promotion implementation (e.g. timing, framing and communication) and contextual (e.g. retailer and brand image) characteristics. To that extent, we study all promotion events of a multinational CPG manufacturer at four national retailers in the Dutch market over a period of four years (208 weeks). The data cover more than 500 promotions in seven different product categories, for seventeen brands, and forty different products.

■ SA12

Fayette

CLV II

Chair: Sunil Gupta, Professor, Columbia Business School, Columbia University, New York, NY, 10027, United States, sg37@columbia.edu

1 - Customer Equity and an Individual Level RMF Analysis based on a Consumer Behavior Model

Makoto Abe, Professor of Marketing, Graduate School of Economics, University of Tokyo, Hongo, Bunkyo-ku, Tokyo, 113-0033, Japan, abe@e.u-tokyo.ac.jp

RFM data are widely collected in even the most basic CRM. While many practioners analyze recency, frequency and monetary value information independently for simplicity, better marketing insights can be obtained by uncovering the inter-relating structure behind these three numbers. In this research, I will construct a simple repeat transaction model at an individual level using standard RFM data (similar to Schmittlein & Peterson 1994, Fader, Hardie & Lee 2005), and heterogeneous individuals are aggregated through a hierarchical Bayesian framework. The model permits correlation among the behavioral parameters (transaction frequency, dropout rate, spending amount), which are also linked to customer characteristics (demographic variables). The model can provide important insights into substantive marketing issues such as the relationship between customer lifetime and transaction frequency, lifetime and spending level, frequency and spending. In addition, the following managerial implications can be obtained. (1) One-to-One Marketing to existing customers: Estimation of customer specific behavioral parameters allows more effective execution of customized Marketing actions. (2) Customer Equity: Calculation of lifetime value at an individual level results in more accurate assessment of customer equity. (3) Acquisition of Prospect Customers: The link between customer characteristics and behavioral parameters permits finer targeting for acquiring new customers, whose RFM data have not been collected yet in a company's database.

2 - Customer Profitability: A Practitioner Viewpoint

John Waldes, IBM Corp., 10 West 66th Street, New York, NY, 10023, United States, jwaldes@us.ibm.com, Denise Beckman

Customer profitability has been the subject of much work over the years, both by academics and practitioners. It is at the heart of Customer Lifetime Value, Customer Portfolio Management, Customer Relationship Management and other customer-focused profit-oriented initiatives. Customer profitability is the key to the continuing existence of a corporation since an unprofitable corporation has a short life. The literature contains many examples of powerful tools to understand and predict customer profitability. But on close reading such methods lack the detailed consideration of the cost structures and components necessary to calculate "true" customer profitability. These elements are needed to manage a customer portfolio in a real world setting. The major requirement for getting an accurate measurement of customer profitability is the allocation of direct costs to each account. This provides a basis for differentiating profitability between accounts. Such a level of detail is difficult to obtain since it is generally not captured in accounting records. Other complicating factors are product mix profitability and the dynamics of profit variation as the product mix purchased by a customer changes over time. As a consequence, revenue must be estimated at a "constant gross margin" product mix level. We will explain these different cost layers and arrive at a structure that yields a better measure of customer profitability. The final structure can be a solid foundation for understanding relative customer profitability and managing a customer portfolio. We will discuss the various cost components that contribute to these layers.

3 - The Value of a 'Free' Customer

Sunil Gupta, Professor, Columbia Business School, Columbia University, New York, NY, 10027, United States, sg37@columbia.edu, Jose Vidal-Sanz, Carl Mela

Measures of customer lifetime value afford guidance regarding the appropriate level of investment to acquire a customer. Moreover, summed across customers, the discounted cash flows are an integral component of firm valuation. Several approaches have been developed in recent years to measure customer value. However, these valuation approaches consider customers in isolation of one another. Yet customers in many industries are subject to network effects. Consider the case of Monster.com, an employment market place where job-seekers post their resumes and firms sign up to find potential employees. Monster provides this service free to job-seekers and makes money by charging the employers or the firms. How much should Monster spend to acquire a job-seeker? Traditional models of CLV can not answer this question since job-seekers do not provide any direct revenue. This indirect network effect is not limited to employment services only but also extends to any exchange with multiple buyers and sellers (e.g. real estate, eBay). We develop an approach to determine the customer lifetime value in networked settings. We do this by jointly modeling the demand of various agents in the network. These equations place constraints on the rate of a firms' growth because the growth of one population (e.g., buyers) is tied to the growth of another (e.g. sellers). Relaxing these respective growth constraints by one customer and assessing the effect on long run profits yields the incremental value of that additional customer to the firm. We apply this model to the context of one geographic region for an electronic auctions house. We find that the average value of a buyer and seller increased over the duration of the data to about $300 and $1,100 respectively.

■ SA13

Somerset West

Pricing VI: Dynamic Pricing

Chair: Martin Spann, Professor, University of Passau, Department of Marketing and Innovation, Innstr. 27, Passau, Ba, 94032, Germany, martin.spann@uni-passau.de

1 - Minutes at Risk: Dynamic Pricing of Services

Anja Lambrecht, UCLA Anderson School, 110 Westwood Plaza, Los Angeles, CA, 90095-1481, United States, al@anjalambrecht.com, Katja Seim, Bernd Skiera

For products with contractual agreements between consumers and provider, such as wireless, banking, or entertainment services, consumers often choose among products with varying access prices and associated usage allowances, e.g. the number of included wireless minutes. Most tariffs treat monthly billing cycles in isolation: each month, consumers start afresh with a usage allowance that expires at the end of the billing period if partially unused. Recently, providers such as Cingular and German E-Plus have introduced "rollover" plans that allow consumers to transfer unused portions of their allowance to subsequent billing periods. The extent to which a rollover option alters usage patterns and profitability and the optimal price of such a feature is uncertain. We analyze the impact of rollover on consumer choice between tariffs and their demand for the service in a structural model of demand and tariff choice. We estimate our model based on data on usage of alternative tariffs in two industries, wireless phone service and Internet access. The project makes three contributions. (1) By accounting for rollover in tariff choice and demand, we add a dynamic element to discrete/continuous choice modeling. (2) We aim to improve our understanding of factors that drive consumer choice of a rollover tariff. (3) Our model allows us to estimate the revenue and profit potential under rollover and derive recommendations for rollover pricing strategies for providers.

2 - Dynamic Pricing of Seasonal Goods: An Empirical Approach

Gonca (Cengiz) Soysal, Ph.D. Candidate, Northwestern University - Kellogg School of Management, Marketing Dept. Leverone Hall 4th Fl., 2001 Sheridan Rd, Evanston, IL, 60201, United States, g-cengiz@kellogg.northwestern.edu, Lakshman Krishnamurthi

This study aims to investigate dynamic pricing policies by retailers in markets for seasonal (short life-cycle) goods in the presence of strategic consumers. Seasonal goods industries are characterized by short selling seasons and high demand uncertainty and dynamic markdown policies are widely used to take advantage of differences in consumers' valuations and time preferences (price discrimination) and to manage demand uncertainty. An initial retail price is announced at the beginning of the season and prices are (permanently) marked down a number of times throughout the season. Consumers face a tradeoff between purchasing early in the season when their valuations are high and the goods are available and purchasing later in the season when the prices are lower. We develop a structural model of the dynamic decision process on both the consumer (demand) side and the retailer (supply) side. We estimate our model using aggregate sales and inventory data from a fashion goods retailer. Our framework accounts for how consumers' expectations about future prices and product availability affect current period purchase decisions and how the retailer jointly sets prices and inventory levels to maximize his profits throughout the season. We show that in a limited inventory environment, strategic consumers facing declining prices take the possibility of future stock-outs into consideration and the retailer can use limited availability profitably as a tool against strategic consumers to induce earlier purchases at higher prices.

3 - Pricing Digital Services

Fernando Nascimento, Assistant Professor, Universidade Católica, FCEE, Palma de Cima, LISBON, 1600, Portugal, prof.fn@gmail.com

This paper deals with dynamic pricing for digital services. In the context of a multibrand dynamic environment profit-maximizing trajectories of price are derived over time for repeat purchase digital services under atomistic competition. These trajectories are obtained in the framework of a sales diffusion model which encompasses (a) a non-stationary adopter population over time, (b) an explicit distribution of reservation prices across that population, and (c) short-term response inertia with respect to price changes. The results are according with empirical behavior found in e-firms: irrespective of the shape of the reservation price distribution, the theoretical evidence supports the notion that initial prices should be low to stimulate trial and adoption.

4 - Skimming or Penetration? Test of Dynamic Pricing Strategies for New Products

Martin Spann, Professor, University of Passau, Department of Marketing and Innovation, Innstr. 27, Passau, Ba, 94032, Germany, martin.spann@uni-passau.de, Marc Fischer, Gerard J. Tellis

The pricing of new products is an important but difficult managerial challenge. Two basic dynamic pricing strategies for innovative consumer durables are discussed in the literature: the skimming and the penetration strategy. Textbooks and the management oriented literature explain the idea and benefits of these different strategies but do not report any empirical studies which recommend when to choose which strategy. Few empirical studies exist which focus on the category level or packaged goods. Analytical models attempt to provide such recommendations but their results depend to a large extent on rather restrictive assumptions. The goal of our study is to empirically test the success of different dynamic pricing strategies for new products in a competitive market at the brand model level. Our data come from the German market for digital cameras covering a period of 46 months. Since pricing strategies are not directly observable, we first classify such strategies based on a hedonic price analysis. In a second step, we analyze the impact of pricing strategy on market share and the present value of total cash flows over a model's life cycle. The results enable a manager to identify the optimal dynamic pricing strategies for his or her model.

■ SA14

Somerset East

Multichannel Marketing

Chair: Venkatesh Shankar, Professor and Coleman Chair in Marketing, Mays Business School, Texas A&M University, Department of Marketing, Wehner Bldg, 4112 TAMU, College Station, TX, 77843-4112, United States, vshankar@mays.tamu.edu

1 - From Clicks to Bricks: The Long-term Revenue Impact of Adding Physical Stores

Scott Neslin, Tuck at Dartmouth, 100 Tuck Drive, Hanover, NH, 03766, United States, scott.a.neslin@dartmouth.edu, Koen Pauwels

One of the crucial decisions facing firms today is which channels they should open to customers for transactions. As part of the growing emphasis on multichannel customer management, companies have typically added channels. A common example is a catalog company opening a website, or a bricks-and-mortar store adding a catalog or website. We study the opposite case: a company already allows customers to buy through its website and catalog, and adds three physical bricks-and-mortar stores to its repertoire. We use a "before-after" dataset representing more than 12,000 customers, where we know in each week the percentage of customers making purchases, returns, and exchanges, along with the average dollar value of these transactions. We also have data on the company's marketing efforts, including catalog mailings and e-mails, as well as store advertising and promotions. We employ a multivariate baseline approach based on a vector autoregression model to examine the impact of adding the physical stores. We study the impact on customer value measured by customer purchase frequency, order size, returns, and exchanges, as well as the number of customers added to the company's database, for each channel. We calculate the impact of adding physical stores on each of these components, and then combine them to obtain the total revenue impact.

2 - Targeting Customers for Channel Adoption

Rajkumar Venkatesan, Asst. Professor, University of Connecticut, 2100 Hillside Road, Storrs, CT, 06269-1041, United States, rvenkatesan@business.uconn.edu, V. Kumar, Nalini Ravishanker

Identifying when a multichannel customer would adopt another transaction channel is vital for effective execution of targeted channel migration campaigns. In this study, we propose a social exchange theory based framework for predicting the time taken to adopt another transaction channel for multichannel customers. We identify various drivers of channel adoption that are broadly classified as interaction benefits, interaction frequency, relationship conflicts, interaction costs, and customer heterogeneity. We also investigate the profit implications of customer channel adoption behavior. Specifically, we evaluate if customers who adopt an additional transaction channel faster than others also provide higher profits. We use the customer database of an apparel manufacturer who sells through three different channels to conduct our empirical analyses. Our analyses indicate that improvements in interaction benefits, interaction frequency and relationship conflicts lead to a greater reduction in the channel adoption duration of the second channel versus the third channel. In contrast, reduction of interaction costs leads to a greater reduction in the channel adoption duration of the third channel shoppers than the second channel. We find that the customers who take a longer time to adopt a second channel provide the highest profits and ROI. Our study emphasizes the need to recognize the dynamics in the channel adoption process when designing multichannel customer management strategies.

3 - Optimal Multichannel Allocation Of Marketing Efforts

Tarun Kushwaha, Doctoral Student, Mays Business School, Texas A&M University, Department of Marketing, 220 Wehner Bldg, 4112 TAMU, College Station, TX, 77843-4112, United States, tkushwaha@mays.tamu.edu, Venkatesh Shankar

As firms increasingly offer their products through multiple channels and more consumers buy them through different channels, the allocation of marketing efforts to acquire and retain customers across channels is becoming a critical issue for many marketers. We propose a model for optimal allocation of marketing efforts across multiple channels. We first develop a set of models for consumer response to specific marketing efforts for each channel-customer segment (based on different combinations of channels of purchase). This set comprises three models, one for the probability or timing of purchase, the second for frequency or quantity of purchase, and the third for monetary value of purchase. We then derive the optimal marketing allocation to each channel-customer segment. We illustrate our model by analyzing customer level purchase, cost,and promotional data from a large marketer of shoes and apparel accessories across multiple channels, namely, the direct mail, the store, and the web. We estimate the marketing response models using the MCMC approach and solve the optimization model using simulations. The results show that customers who shop at any two channels are likely to spend more than twice the amount spent by single channel shoppers and that customers who shop at all the three channels will likely spend more than three times as much as that spent by single channel customers. The optimization model results show that profits can be increased by realigning the current marketing efforts across the different channel-customer segments. In particular, more product and promotional catalogs should be mailed to customers who shop at all the three channels and to those who shop at the store and direct mail channels and to those who shop at the store and web channels.

4 - Channel Blurring: An Analysis of the Evolving Retail Market Structure

Ryan Luchs, Doctoral Student, Katz Graduate School of Business, University of Pittsburgh, 351 Mervis Hall, Pittsburgh, PA, 15260, United States, rjluchs@katz.pitt.edu, J. Jeffrey Inman, Venkatesh Shankar

Channel blurring--a phenomenon in which consumers are moving beyond their traditional category source (e.g., grocery) into alternative sources (e.g., mass, club, extreme value) and retailers are selling items outside of their traditional assortment---is of great interest to both manufacturers and retailers. At one time, different retail formats such as grocery, drug, and mass merchandiser served different purposes, but now they are slowly becoming hard to distinguish. For example, large mass merchandisers such as Wal-Mart are now carrying sizeable assortments of grocery, pharmaceutical, and electronic products, while large drug chains such as Eckerd and CVS are stocking their shelves with toys and household items. In this research, we examine channel blurring from both the supply and demand sides. From the supply side, we analyze how these changes in market structure among retail chains and study how these changes are affecting the way that consumers view retail chains. From the demand side, we seek to find out how evolution in consumer shopping behavior is shifting the competitive landscape of the retail industry. We develop choice models across channels, categories, and brands with supply side retail behavior and estimate them using wand panel data for several product categories, including paper towels and analgesics. Our results provide theoretical and practical insights into channel blurring.

Saturday, 10:30 - noon (Session B)

■ SB01

Allegheny Ballroom I

Practitioner Perspectives

Chair: Roland Rust, University of Maryland, Robert H. Smith School of Business, College Park, MD, 20742, rrust@umd.edu

1 - Panel Discussion: Vanguard Issues in Marketing Science Practice— The Next Five Years

Panelists: Gaurav Bhalla, Jan Hofmeyr, Nigel Hollis, Roger Sant

Kuhn uses the word "pre-paradigm' to describe science before it settles on a dominant theory. Two important characteristics of "pre-paradigm' science are a lack of agreement over key terms and poor prediction — not unlike the current state of the marketing sciences. Neither practitioners nor academics help; the former because it is in their interests to sell proprietary models and hinder cooperation; the latter because methodological constraints they impose on theory development make their work impractical to practitioners. In this session, four leading marketing research practitioners from the world's market leading research companies confront the issues which they believe will define the development of marketing research practice in the next five years: Driver analysis: key driver analysis refers to a suite of techniques which are used by marketers who want to know what "levers' will drive relevant purchase behaviours. However, implementation often leads to questionable results due to inadequate conceptualization, competing techniques, and poor behaviour measurement. We confront the need for a paradigm shift. -Marketing accountability: it is easy to measure the pay-back from marketing action when the causal chain is obvious, but what about actions whose effects are less direct — advertising, for instance? We confront the issue of modelling marketing effectiveness in general and advertising in particular. -The "equities": some develop strategy around brand management, others around customer management. But what if definitions of brand and customer equity fail to converge? We confront the need for integrated models of business value creation through marketing — whether the route be brands or customers. Each presenter will speak for 10-15 minutes, leaving ample time for audience interaction. It is the hope that this session will spur either a competition or a journal special issue.

■ SB02

Crawford East

International Marketing - I

Chair: Jaap Wieringa, Assistant Professor, University of Groningen, P.O. Box 800, Groningen, Gr, 9700 AV, Netherlands, j.e.wieringa@rug.nl

1 - Getting a Grip on the Saddle: Cycles, Chasms or Cascades?

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A pattern not commonly considered in the product management literature is the phenomenon of a "Saddle", which we define as the first trough in new product sales, following takeoff. This pattern of a sharp decline in sales with an average depth of 27% and duration of 7 years has grave consequences for product marketers. Managers, who believe the phenomenon to be isolated to their product, may pull the plug too early. Or their processes may be inadequately geared to meeting a sudden slowdown in sales and a subsequent pick-up. We aim to develop a better understanding of this phenomenon and examine the following questions using a large data set of product sales and penetration in the US and Western Europe: One, why do saddles occur? Two, how pervasive is the saddle? Three, what are the differences across countries and categories? Formally, we distinguish between three competing explanations for the saddle viz. Business Cycles, Dual Markets (Chasms), and Information Cascades. Initial results of a discrete-time hazard model indicate support for the Cycles explanation but not for the Chasm explanation.

2 - Strategic Sourcing and Imitative Competition

Jiong Sun, Carnegie Mellon University, Tepper School of Business, 5000 Forbes Ave, Pittsburgh, PA, 15213, United States, jiongs@andrew.cmu.edu, Sunder Kekre, Laurens Debo, Jinhong Xie

This paper studies a problem in which a global firm transfers technology to a newly-emerging market in order to manufacture in its local affiliate in the new market. Technology transfer offers the global firm an opportunity to gain access to this new market and source from the low-cost country. However, it also creates risks of potential technology imitation by local competitors who impose threats to the global firm in both the new market and in the global firm's home market. We model the global firm's technology transfer and sourcing decision as the percentage of manufacturing to localize, while allowing potential technological imitation and exporting by a local competitor. We study how the competition between the global firm and the local imitator in both markets affects the global firm's manufacturing localization and sourcing decisions, and the local competitor's imitation and exporting decisions. We examine the impact of various factors, such as market demands, technology transfer cost, technology imitation cost, and firm-specific (dis)advantages in production and distribution costs. We also analyze the incentive for the global firm to license its technology to the potential imitator.

3 - A Global Investigation into the Individual and Cultural Drivers of Socially Desirable Responding

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Socially desirable responding (SDR) has been recognized as an important source of method error in survey research (Johnson and Van de Vijver 2002). Mick (1996, p. 106) called it "one of the most pervasive response biases", while Lalwani et al. (2004, p. 16) noted that "Desirable responding is one of the major causes of response bias and is a serious threat to the validity of research findings." Consequently, SDR has attracted much attention in the social sciences. However, most of this important research has been conducted with students, in a single country only (i.e., the U.S.; Smith 2004), and many studies have had a relatively narrow focus, studying a limited set of drivers of SDR. Consequently, the contribution of this study is threefold. First, we develop a conceptual model and set of hypotheses incorporating a systematic set of drivers of SDR, at both the individual and national-cultural levels. Our individual level variables consist of the Big-Five personality dimensions and sociodemographic variables. For the national-cultural dimensions, we draw on Hofstede's (2001) framework. Second, the hypotheses are tested in a cross-national context, using over 20 countries located in four different continents (Asia, Europe, North America, South America). Third, our data set, encompassing more than 10,000 respondents, provides a basis for deriving empirical generalizations concerning the drivers of SDR. Bass and Wind (1995, p. G1) pointed out: "Science is a process in which data and theory interact leading to generalized explanations of disparate types of phenomena. Thus, empirical generalizations are the building blocks of science."

4 - Balancing the Fit and Logistics Costs of Market Segments

Jaap Wieringa, Assistant Professor, University of Groningen, P.O. Box 800, Groningen, Gr, 9700 AV, Netherlands, j.e.wieringa@rug.nl, Gerard Sierksma, Marcel Turkensteen

Segments are typically formed to serve distinct groups of consumers with tailored marketing mixes, in order to better fit their needs and wants. In geographic segmentation applications, a company responds to geographical differences by, for example, offering localized products. Existing segmentation generate segments in which the constituting elements are not necessarily geographically closely located. When a geographically dispersed segment is served with one marketing mix, the logistics costs are high due to high transportation costs and long lead times. As a consequence, decision makers sometimes use other segmentation criteria. For example, a retail chain may decide to serve each country with its own formula. Such a segmentation strategy suffers from the disadvantage that transnational segments are ignored. Moreover, the results are expected to be sub-optimal in terms of meeting customer needs. In this paper, we develop a segmentation method that balances the fit to consumer needs and logistics costs. We apply this method to the problem of assigning a set of European regions to retail formulas, using store attribute preferences of consumers as a segmentation basis. We compare the method with k-means, mixture models, and with the countries-as-segments approach. Our approach results in transnational segments that combine moderate logistics costs with a relatively high level of within-segment homogeneity. Our approach also performs well for randomly generated instances. One practical implication of our study is that transnational segments may become profitable in markets with high logistics costs.

■ SB03

Crawford West

Marketing Research - I

Chair: Dan Putler, Associate Professor, UBC Sauder School of Business, 2053 Main Mall, Vancouver, BC, V6T 1Z2, Canada, dan.putler@sauder.ubc.ca

1 - The Effect of Shape Complexity on Perceived Package Volume

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Recent research has noted the effects of package shape complexity on shoppers' estimations of volume. Folkes and Matta (2004) find that packages that exhibit taper appear larger than packages that are cylindrical. Garber, Hyatt and Boya (in second review) find that regular, compound complex forms (i.e., those packages consisting of several parts separated by deep concavities) appear smaller than packages that are cylindrical. In both cases the domain of the research was existing packages, so not all possible shape types are examined. In a laboratory experiment, we manipulate shape complexity by varying the number of concavities, their position and their depth to test their respective effects on area estimation, in order to better understand the estimation strategies that consumers employ and the errors they engender, that may resolve why it is that complex forms are estimated differently than simple forms, and resolve the question of whether complex forms appear larger or smaller than simple forms, and why. Results of a pilot study may be presented. Managerial implications will be discussed.

2 - Procrustes Analysis for Categorical Data Applied to a Transactional Data Base on Power Consumption

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In this paper we analyse a transactional data base of a Dutch power supplier. We have data on power consumption, costs of delivery, complaints and demographics of a very large group of customers. A subset of these customers is surveyed about their satisfaction with the suppliers service. We study the relationships between the different sets of variables using a data set matching method. The ultimate goal of the study is to be able to predict satisfaction for customers for which there is no satisfaction data available. As the data base contains a very large number of customers (1.6 million cases) and a diverse set of variables, we use an exploratory approach. Many situations where a lot of data are collected are conducive to using Generalised Procrustes Analysis (GPA). GPA is a method to match data sets where the data sets are fitted onto each other using transformations, typically rotations. The linear version of GPA has been applied in a wide range of contexts. In the current application the data sets contain many categorical variables, unfit for the usual linear application of GPA. We develop a non-linear extension of GPA, using Optimal Scaling (OS). This method produces biplots of the customers and the survey items, including the categories of the categorical items. The biplots give an overview of interesting relationships that provide a basis for customer segmentation and are used to predict customer satisfaction.

3 - Estimating the Value of a Single Marketing Contact

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We address the problem of determining which customers should receive a particular marketing contact so that the expected profit for each contact, including its cost, is positive; in direct marketing, for example, this problem is called selecting the mailing depth. Previous research has recommended that only short-term profit be considered, which leads organizations to under-invest and contact too few customers. Some recent research recommends adding incremental long-term profits to this criterion, but there is no clear consensus on how to do so. We identify two additional components of profitability — the value of having additional information on customers and incremental profits from other purchase channels — and develop methodology to quantify their value. We investigate whether firms can use our new valuation to find additional profitable marketing contacts with their customers. We illustrate our approach and compare it to extant methods by analyzing data from two catalog retail firms.

4 - Biases in Sales Potential Estimates Due to Limited Demographic Information

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Many firms estimate total sales potential for small geographic areas for locating retail stores or implementing geographically targeted marketing programs. The most common method is to estimate an expenditure function on household level data and combine this with demographic information on the households that reside in the geographic area to obtain projections of sales potential. A challenge with making these projections is that only limited demographic information is readily available for geographic areas. The question of interest is whether the use of the readily available but limited information leads to large biases in market projections. In this paper we examine the nature and magnitude of biases introduced by the use of limited demographic information. We employ both analytical and Monte Carlo techniques for a set of commonly used expenditure functions. We analytically show that the use of limited demographic information does not result in any bias for several commonly used expenditure functions. For those expenditure functions where potential bias cannot be ruled out analytically, we present an extensive Monte Carlo analysis that indicates that in nearly all cases the bias is less than 10%. We reconfirm our numerical analysis with an empirical application using household spending data on supermarket products in a geographic area. Our empirical application reconfirms that the level of bias is quite small, around 5%, consistent with our Monte Carlo results. For firms that estimate sales potential of geographic areas using demographic data our findings provide good news that can simplify the time and cost of estimates.

■ SB04

Butler West

Empirical I/O

Chair: Carl Mela, Professor, Duke University, Fuqua School of Business, Durham, NC, 27708, United States, mela@duke.edu

1 - Evaluating the Short and Long Term Effect of New Brand Introductions on Stock Market Performance

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The current paper evaluates the impact of new brand introductions on short-term and long-term firm's stock market performance. We analyze data on 287 new brands that were launched by 17 companies into the US pharmaceutical market in the period of 1974-2005. The first part of our paper describes an event study that captures the short-term impact of new brand introductions on stock price around the introduction day. Results show a positive stock price reaction that can be generalized over different product types and forms. However, we found that stock price reactions vary across different types of firms. In the second part of our paper we use Tobin's Q framework to evaluate the long term performance of new brand introduction. Specifically, we examine the effect of launching new brands on firms' market capitalization at the end of the year. The results show that launching a new product generally yields a 1% increase of stock market value. The launch of an extended brand delivers an average increase of 2%. Launching a new brand raises stock market value by 12% at the end of the year. However, despite its attractiveness, new brands have an inverted U-shape relation with market value. The effect of a new brand introduction in will increase market value up to a maximum 3 new brands per year. With more than 3 new brands market value will decrease. These results are robust across different estimation methods. The paper concludes with several implications for marketing strategy.

2 - Pricing and Market Concentration in Oligopoly Markets

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We study the relationship between prices and market concentration in the Auto Rental Industry. We develop an original database that includes the number of auto rental operating firms at every commercial airport in the country. In addition we collect daily rental prices in each market that are regressed against the market structure variables and other control factors. Unlike most previous studies we explicitly account for endogeneity of market structure by estimating a model of equilibrium number of firms in the first stage. The parameters from the entry model are then used to derive terms that are inserted in the price equation to correct for endogeneity of competitive parameters. Our results show that ignoring this endogeneity severely underestimates the market structure parameters. The prices in concentrated markets (monopoly/duopoly) are found to be approximately 30% higher compared to competitive markets with seven or eight firms. Policy implications of our model and results are discussed.

3 - Structural Demand Estimation with Varying Product Availability

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Demand estimation based on discrete choice theory has become a very important tool in Marketing and empirical Industrial Organization. Since the work of Berry et al (1995) researchers have used discrete choice methods in situations in where only aggregate data are available. In essence, these methods allow making inferences on the distribution of preferences over products or attributes by integrating purchase probabilities and relating them to the aggregate market share observed in the data. However, if not all products were available in every store, the observed market share would be a convolution of two different --albeit related-- factors: consumer choice and the probability of finding the product available in the store. Failing to account for the varying degree of availability would bias the demand parameter estimation and would lead to the wrong inferences about consumer preferences, competitive reactions, etc. This paper develops a model that extends the current methodology and allows to account for varying levels of availability although the actual store/trip product assortments faced by the consumer are not observed by the researcher. We simulate potential product assortment vectors by drawing multivariate Bernoulli vectors consistent with the aggregate level of availability. We show that our model is a generalization of traditional model and similar estimation methodologies can be used. Furthermore, Monte Carlo experiment results show that utility parameters can be recovered in spite of changing distribution intensities. The model is applied to the UK chocolate confectionery market, focusing on the convenience store channel. We compare the parameter estimates and analyze the pricing and competitive implications.

4 - The Role of Spatial Demand on Outlet Location and Pricing

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In this paper we consider the problem of outlet pricing and location in the context of unobserved spatial demand. Our analysis constitutes a subgame wherein capacity-constrained firms set prices conditioned on location. Using a structural model of outlet sales and competition, we develop maps of latent spatial demand patterns across space. These maps enable firms to engage what-if policy simulations wherein they can consider the short-term effect of adding or removing a single outlet on equilibrium profits and prices. We apply our model to seven years of data regarding apartment location and prices in Roanoke, Virginia. For these data, the 95% range for spatial demand effects is about 7.5 miles and that the capacity constraint can cost upwards of $130 per apartment. As predicted, price elasticities and costs are biased downward when spatial effects are ignored. Our what-if analysis suggests that an additonal apartment complex would yield additional profits, and that ignoring spatial effects and capacity constraints yields a recommendation regarding location and size that would reduce profitability. Keywords: Outlet Location, Pricing, Spatial Statistics, Structural Models, Competition.

■ SB05

Butler East

Perceived Quality

Chair: Raghuram Iyengar, Assistant Professor, The Wharton School, 3730 Walnut Street, Philadelphia, PA, 19104, United States, riyengar@wharton.upenn.edu

1 - Done Anything for Me Lately?

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Consumer beliefs about quality shape perceptions and impact purchase decisions (Rust, et al. 1999). Marketing has often used a Bayesian model to study how consumers update quality perceptions over time and how this perception impacts choice (Boulding, et al. 1993; Rust, et al. 1999). This model assumes that the mean of quality process stays the same across periods. Following from this, researchers have suggested that quality uncertainty decreases (i.e. expected variance shrinks) with each experience. Given risk-aversion, this implies that the more a consumer experiences the brand, the more likely the consumer will be to choose the brand (Rust, et al. 1999). However, companies are continually making changes to products and to processes, and so quality can change (it may improve, or it may deteriorate!) period to period. We use a dynamic Bayesian model by allowing the mean of the quality process to change across periods. Our model thus incorporates two key variances: static and dynamic variance. The static variance represents the reliability of the process at any given time. The dynamic variance represents how much the quality process changes over time. Incorporating dynamic effects, we find that consumers become more uncertain and tend to rely more on recent experiences. This impacts both product perceptions and actual product choice. We investigate the model empirically, with multiple laboratory experiments, that allow us to capture how consumers update quality perceptions and make choice decisions under dynamic conditions. Rather than brands gaining significantly from past successes, consumers in dynamic environments are now increasingly likely to ask, "Done anything for me recently?" Firms are well advised to have a good answer.

2 - Practice: The Construction Of Quality Perceptions And Choice Decision

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In this paper, participants completed seven shopping trips by choosing one of two competing simulated online stores after having been exposed to both stores once. We examine the relationship between consumer learning over time and preferential choice. We specify and estimate an individual-specific parallel process growth model that tracks shopping task completion time, relative quality perceptions, and shopping site choice over each of the seven purchase occasions, while controlling for subject-specific traits and demographics.

3 - The Effect of Marketing Communication on Informational Spillovers: A Structural Model

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Research in both economics and marketing has established that consumers' uncertainty about the quality of new products can significantly slow product adoption. Recent empirical literature has also established that consumers learn about product quality through experience and marketing communication, and that the experience with a parent brand can reduce uncertainty associated with new products of the same brand, even if these are in different product categories. In this paper, we examine whether perceptions of quality of a product that consumers develop over time can also be transferred to other competing brands in the same category. Drawing on the theory of consumer choice behavior theories, we hypothesize that informational spillovers can occur in the same category across competing brands. Using a novel panel dataset of physicians' prescriptions, we develop a structural model to test for informational spillovers across competing brands. The model is based on a Bayesian learning process and examines whether the brand quality information garnered through prior (clinical) experience and the marketing communication of a brand affects physicians' quality perceptions for competing brands in the same product category. We also investigate whether the extent of informational spillovers depends on the degree of perceived similarity between brands. We capitalize on the natural experiment that results from the introduction of multiple products during the study time period to quantify the spillover effects across different products. We use the results obtained from the structural model to perform what-if experiments, and to test the extent of informational spillovers on the evolution of the shares of the new products.

4 - A Model of Consumer Learning for Service Quality and Usage

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In many services, e.g., the wireless service industry, consumers choose a service plan based on their expected consumption. In such situations, consumers experience two forms of uncertainty. First, consumers may be uncertain about the quality of their service provider and can learn about it after repeated use of the service. Second, consumers can be uncertain about their own usage of minutes and learn about it after observing their actual consumption. We propose a model to capture this dual learning process while accounting for the nonlinearity of the pricing scheme used in wireless services. Our results show that both quality learning and quantity learning are important. Several policy experiments are conducted to capture the effect of changing quality on customer defection and lifetime value. For instance, we find that a 1\% increase in mean service quality results in a \$2.00 increase in the lifetime value of a customer, which translates to a long-term increase in profit of around $42 million dollars for the entire customer base.

■ SB06

Cambria West

Choice Models V: Multi-Category Choice

Chair: Gary Russell, Professor of Marketing, University of Iowa, 108 Pappajohn Business Bldg, Iowa City, IA, 52242, United States, gary-j-russell@uiowa.edu

1 - Consumer Decision Rules for Complementary Product and Service in the Presence of Exclusivity

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Consumers often need a pair of complementary product and service, such as a cell phone and a wireless plan, to satisfy their consumption needs. It is common to observe incompatibility/exclusivity among the product and service often offered by different firms (e.g., a certain model of cell phone may be compatible with only some wireless plans). In such context, consumers' decision rules (e.g. simultaneous vs. sequential) can alter decision outcomes, which subsequently affect both firms' profitability. Although firms have strategically managed the extent of incompatibility/exclusivity across industries and product differentiation within its own industry, empirical research has been scant on the effectiveness of these competitive tools and their impact on consumers' choices. Our research intends to bridge this gap. Specifically, we explore 1) the extent to which consumers use various decision rules in choosing a pair of complementary product and service; and 2) what factors determine their use of a specific decision rule? Key factors examined include intra-industry differentiation, incompatibility/exclusivity, and consumption goal. We calibrate an HB multi-category choice model on a computer-based choice experiment data set. Our examination of consumers' decision rules in the presence of incompatibility/exclusivity and factors determining these decision rules presents a unique contribution to the multi-category choice literature. Managerially, our research also provides useful guidelines to firms offering complementary product and service with regard to optimal provision of new product/service features and strategic selection of exclusive partners.

2 - A Multi Category Model of Brand Choice, Purchase Incidence and Purchase Quantity Decisions

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Prior empirical research that has investigated umbrella branding effects across categories has focused primarily on measuring the extent of correlations in the preferences for umbrella brands in brand choice decisions across categories. In this paper, we extend the prior body of research by investigating how the extent of cross price/promotional elasticities in brand choice, purchase incidence and purchase quantity decisions differ for umbrella vs. non-umbrella brands across categories. Additionally, we show that the difference in the extent of cross elasticities across umbrella vs. non umbrella brands depends on the extent of consumption complementarity/substitutability between the categories. In order to fulfill our objective, we first propose an estimable micro-economic framework that lays out consumers' brand choice, category purchase incidence and purchase quantity decisions across multiple product categories, in which the three decisions are modeled as an outcome of consumer's basket utility maximization. We estimate the model for two different pairs of categories: consumption complements (cake mix and cake frosting) and consumption substitutes (butter and margarine). Our results show that umbrella branding significantly increases the extent of cross elasticities between brands across categories that are consumption complements, but significantly decreases the cross elasticities between brands across categories that are consumption substitutes.

3 - Optimizing Purchase Behavior at the Basket Level

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Multi-category brand choice models are increasingly popular class of models, whereby consumer preferences for brands in multiple categories are modeled using a joint distribution that allows purchases in different categories to be correlated. Research on such models has looked into the effects of purchasing in a single category, or a limited number of them, suing some form of a joint distribution. We argue, however, that in many cases, the study of consumption behavior cannot be constrained within a set of categories. While one would not consider cereals to be in a related category with desserts, for the purposes of watching a specific element of the shopping basket (say, sugar), they may very well be and a consumer may decide that choosing a "sweet" cereal will have to be balanced out with a sugar free dessert. Technically, these categories need neither be substitutes nor complements, but merely such that a common element is shared and that they are present in the same basket. To model consumer heterogeneity, we use a basic nested logit model, which will require some apriori segmentation of consumers. By running the model over various subsets of the data, we show that consumers optimize utility not just over a few categories, but in fact, over the entire shopping basket. We evaluate the model over an extensive scanner transaction dataset and expect to measure model fit, sensitivities to the amount of the "common element' in the items they purchase, and segmentation patterns across consumers. The competitive field, at least for certain elements in the consumer basket, is apparently far broader than previously thought. Obviously, such basket level utility maximizing behavior has tremendous implications for retailer and manufacturer strategy as well as for public policy.

4 - A Multivariate Logistic Choice Model to Investigate SKU Competition

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Models of cross-category choice generalize traditional choice models by allowing for both complementarity and substitution effects. Researchers have proposed two general types of cross cateogory models: multivariate probit and multivariate logistic. Although multivariate probit models are extremely flexible, certain types of effects (such as cross price elasticities) are difficult to express in a parsimonious fashion. In contrast, the multivariate logistic model can express cross-category relationship in a parsimonious fashion by calibrating a symmetric matrix of parameters as part of the utility equation. Both models present computational challenges — particularly when the model is applied to a large number of SKU's belonging to several product categories. In this research, we propose a household-specific SKU-level multivariate logistic model that allows for a flexible specification of demand relationships both within and across categories. We show that different specifications of the model allow for a wide range of relationships across SKU's — including simple logit, versions of nested logit, pick-any choice, and market basket (complementarity) choice. Moreover, by estimating cross-effect parameters with mild structural constraints, we can use the model to investigate the pattern of SKU competition without imposing strong assumptions on the data. We consider different aspects of model calibration. In particular, we compare the feasibility of a number of approaches (joint-likelihood, simulated likelihood, and pseudo-likelihood) both with and without household heterogeneity in parameters. The methodology is applied to the analysis of panel data involving multiple-category SKU choice.

■ SB07

Cambria East

High Technology - I

Chair: S Sriram, Assistant Professor of Marketing, University of Connecticut, School of Business, 2100 Hillside Road, Storrs, CT, 06269, United States, ssriram@business.uconn.edu

1 - Buy a 26 Inch LCD-TV Today or a 32 Inch Next Month? Modeling Purchases of High-tech Durable Products

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The technology level of new high-tech durable products, such as digital cameras and LCD-TVs, continues to go up, while prices continue to go down. Consumers may anticipate these trends. In particular, a consumer faces several options. The first is to buy the current level of technology at the current price. The second is not to buy and stick with the currently owned (old) level of technology. Hence, the consumer postpones the purchase and later on buys the same level of technology at a lower price, or better technology at the same price. We develop a new model to describe consumers' decisions with respect to buying these products. Our model is built on the theory of consumer expectations of price and the well-known utility maximizing framework. Since not every consumer responds the same, we allow for observed and unobserved consumer heterogeneity. We calibrate our model on a panel of several thousand consumers. We have information on the currently owned technology and on purchases in several categories of high-tech durables. Our model provides new insights in these product markets and managerial implications.

2 - Investigating the Temporal Nature of Network Effect in High-tech Markets

Eden Yin, Assistant Professor, Cambridge University, Judge Business School, Cambridge, CB2 1AG, United Kingdom, e.yin@jbs.cam.ac.uk, Rakesh Niraj, Gerard Tellis

Researchers disagree over what the critical driver for the success of high-tech products is. Some argue that network effects and path dependence are the primary factors that determine these products' success. Because of consumer reliance on the network of users, a product that obtains an initial, even insignificant, lead in market share is likely to take over the entire market even if its quality is inferior to rivals. Thus the eventual market share leader may not be the one with the best quality, resulting in an inefficient or perverse market. Some others, however, argue that quality is the dominant driver of product success even in high-tech networked markets. We argue that the balance of these two forces also depends on the heretofore ignored nature of the network size for high-tech products. Namely, the effective network size is self-renewing as firms introduce new generations of products. Therefore, the impact of network effect on consumer adoption decision is also temporal by nature. We investigate the implications of the temporal nature of network effect on the outcome of market competition where consumers care about both network size and product quality. While we do find perverse outcomes where network effects completely dominate quality effects, when a sufficient number of consumers relies on quality and consumers' dependence on network is moderate, quality can not only be an important determinant of market success, in such situations the presence of network effects enhances rather than negates the role of quality. We empirically test the theoretical model using data from many software and hardware product markets.

3 - Redefining m-business with Wi-Fi

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M-commerce based on cellular technology has lost much of its hype, as it failed to live up to its expectation. But another emerging wireless technology namely Wi-Fi, is more appealing as it is proliferating so rapidly that it can make ubiquitous wireless a reality. Wi-Fi service includes a more diverse set of stakeholders such as WISP, retail chains, venue owners, content providers, aggregators, cellular operators and cities/municipalities. It is so evident that in the near future public Wi-Fi hotspots or hotzones will support more proximity applications, in which Wi-Fi devices get automatically connected when we are within the coverage. When Wi-Fi integrated with cellular network and other wired network the m-business value chain looks more sophisticated and it leaves more room for new opportunities and innovations yet to come. All the potential stake holders in the m-economy must redefine their business strategy by beginning to leverage Wi-Fi "hot spot" infrastructure to add new location capabilities to their applications. So we like to broaden the scope to define certain future wireless business models which are Wi-Fi driven (from location based marketing of a product/service to payment of the same). We also coined a new acronym namely W-economy and studied how Wi-Fi plays a crucial role in defining new business models.

4 - Studying the Adoption of Technology Products Across Multiple Categories Using Individual Level Data

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Markets for technology products are typically characterized by significant decrease in prices over time. A challenge for marketers is to identify potential segments for new technology products and understand how they respond to price. Potential adopters could be identified by examining their patterns of adoption of other technology products. In this paper, we develop and estimate a joint model of adoption across multiple technology products when consumers are forward-looking and base their adoption decisions on the anticipated future prices. Consequently, consumers who derive a high utility from the product adopt earlier at higher prices while those who derive lower utilities wait until the prices decrease further. Consumers base such adoption decisions on the expected trajectory of price. We calibrate the model on a dataset that contains information regarding the timing of adoption of several technology product categories by a sample of consumers. The results reveal that a joint model that considers the adoption history of consumers across different categories yields two segments of consumers who differ based on their valuation for the products. However, independent models of adoption that only consider the information regarding adoption in one category are unable to discern the existence of two distinct segments. Hence, there might be value in modeling the adoption decisions jointly. Based on the model estimates, we further investigate both the short-term and long-term consequences of altering the price trajectory on the timing of adoption across various demographic segments. Further, we investigate if the joint model can predict future adoptions better than the independent models. Keywords: Technology products, product adoption, forward-looking consumers

■ SB08

Westmoreland West

Diffusion IV: Competitive/International

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1 - Understanding Coverage, Intensity, and Competition in the Spatial Diffusion of Health Care Services

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While diffusion research has been a focus of research in marketing for decades, its focus is almost exclusively on the customer side. As Brown (1980) points out, much of the success of the diffusion of new ideas, practices and products arises from the efforts of propagators, those who push the phenomenon outward, into the population at large. At the same time, there is an important spatial aspect to the decisions made by propagators in terms of which markets to enter and how intense their efforts should be. In our study, we focus on the understudied situation where there are multiple propagators who compete with respect to choosing locations and on the level of service they provide over time. Health care services, especially specialized surgical care, provide an advantageous setting for studying this topic. The availability of advanced medical procedures is concentrated in a small number of urban hospitals while demand is diffused spatially, often in nearby rural areas. Traditionally, specialists were passive in seeking referrals by primary care providers. Today, specialists travel regularly to rural areas for on-site consultations with physicians and patients with the aim of influencing the referral of more advanced cases to the better equipped urban medical centers. In addition to location decisions, we examine the frequency of visits and how these decisions are shaped by distance and competition. This paper extends our knowledge of spatial diffusion by focusing on the decisions of propagators while enhancing our understanding of competition in health care services.

2 - The Influence of Within-Brand and Cross-Brand Word-of-Mouth on the Growth of Competitive Markets

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Consider the following scenario from the cellular industry: The incumbent has been a single player in the market for quite a few years. At a certain stage, a competitor enters the market. The new entrant uses innovative technologies, and invests heavily in advertising. It grows very quickly, and its time to takeoff is much shorter than the pioneer at its beginning. Naturally, the business press and industry experts predict that it will shortly out-beat the pioneer and become a market leader. However, a thorough inspection of cellular growth penetration in Western Europe reveals that in all the cases, despite a rapid initial growth of the late entrant, and in spite of the fact that the market share of the pioneer was relatively small at the time of competitor's entry, the pioneer maintained its advantage. Moreover, in most cases the pioneer managed to increase the gap and reinforce its advantage. In this study we argue that such a growth pattern can be an outcome of the basic nature of competitive industry growth. We present a diffusion model which separates the internal influence into two parts: within-brand and cross-brand word-of-mouth. We explore how cross-brand word-of-mouth affects the diffusion process and show that pioneering advantage depends on the ratio of magnitudes of within-brand and cross-brand influences.

3 - Testing for Inter-Country Differences in Diffusion Using Penalized Splines

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In the current globalization context, the marketing research community has extensively studied how the diffusion process of new products varies worldwide. Knowing how new product diffusion varies from one country (or region) to another provides managers with guidelines on international launch strategies and the choice of global versus local marketing strategies. This paper develops a methodology to test whether countries undergo different diffusion processes consistently across products, and allows one to generate a country-specific diffusion curve. It develops a multi-country, multi-product semi-parametric diffusion model. In contrast to the classical parametric mixed-influence diffusion model (Bass 1969; Talukdar et al. 2002), this methodology does not impose any assumption on the shape of the diffusion process. Besides being more flexible, it also allows us to take into account diffusion data, already before the inflection point has passed, without encountering estimation biases typical for the mixed-influence diffusion model. Using penalized splines, we can draw country-specific diffusion curves, and formally test whether, to what extent and when the diffusion of a new product varies from one country to another at each time t of the diffusion process. As such, it provides marketers with timely information. References: Bass, F.M. (1969). A new product growth for model consumer durables. *Management Science*, 15(5), 215-227. Talukdar, D., Sudhir, K., & Ainslie A. (2002), Investigating new product diffusion across products and countries. *Marketing Science*, 21(1), 97-114.

4 - What Drives the Speed of New Product Diffusion at Early versus Late Stages?

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Prior research has led to conflicting evidence on the drivers of diffusion speed across countries, products and time. The disparity in findings may stem from the fact that different studies used different samples of products and countries, different explanatory variables, or different statistical methods. However, the disparity may also stem from using different conceptualizations of diffusion speed, more specifically, from measuring speed at different stages of the diffusion process. We discern two main stages, early and late diffusion, and for each stage develop an absolute and a relative concept of diffusion speed. We develop an operational measure for each of the four classes of conceptualization of diffusion speed in terms of the mixed-influence ("Bass") diffusion model. The measures are durations and so can be analyzed using duration or hazard modeling. To investigate whether drivers of early diffusion differ from those of late diffusion, we analyze our four measures using use meta-analytic evidence. So, our study links the traditional functional data analysis approach using macro-level model parameters to the more recent approach using duration or hazard modeling, and builds meta-analytically on prior research to analyzes differences in diffusion speed across stages of the diffusion process, using a common set of countries and products, a common set of covariates, and a common statistical model. This allows us to address several issues of managerial and theoretical interest, while at the same time avoiding method variance to affect our findings.

■ SB09

Westmoreland Central

eCommerce VIII: eMarketing

Chair: Siva Balasubramanian, Henry J. Rehn Professor of Marketing, Southern Illinois University Carbondale, 229 Rehn Hall, Carbondale, IL, 62901, United States, sivakbalas@gmail.com

1 - A Critical Review of Online Affiliate Models

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Online affiliate programs are becoming increasingly popular in eCommerce. Online affiliates are web based companies that partner with an online merchant to refer customers to the merchant. There are a myriad of affiliate models currently in use on the web. Most popular models amongst them include (1) cost per view (e.g., CPM), (2) percent of sales, (3) flat referral rate, (4) pay per lead, (5) pay per email, (6) cost per click, and (7) banner exchanges. While each model has its advantages and disadvantages, no previous study has critically evaluated these models based on a common set of criteria. As a result, online merchants have no means to evaluate individual affiliate programs thus leading to a suboptimal selection procedure. We develop a set of criteria to evaluate the popular online affiliate models. Based on our evaluation of these programs, we recommend a set of key success factors for online success factors.

2 - Analyzing Social Influence in Gift-giving Behavior

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When it comes to gifting, one usually makes a series of decisions such as how much to spend, where to buy and what to buy for the receiver. Different from the usual choice decision, in which the purchaser is maximizing her own utility, the gift giving behavior is highly influenced by social factors, since the purpose of gifting is mainly to maintain a good relationship. In this paper we analyze these choices made by gift givers based on a unique gift purchase dataset, and infer the social influence in gift giving behavior. Our results can offer insights for retailers on planning promotion strategies for gift products

3 - Shelf Sequence and Proximity Effects on Online Grocery Choices

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Research on traditional store shelf effects has shown that a product's absolute and relative shelf position may strongly affect consumer choices. In this paper, we examine whether these traditional shelf effects prevail for online grocery choices, and — if so — how they translate to a virtual store context. Results from an online grocery shopping experiment reveal that, despite debates about the ease of searching on the Internet, virtual shelf management remains an important issue for online stores. First, while the allocation of shelf facings to products is no longer important, we find that across screen placement may strongly affect consumer choices. First-screen alternatives are more likely to be selected, as consumers start to acquire and process information on that screen and tend to stop their search process as soon as they find a satisfactory product (primacy-effect). In addition, while traditional "eye-level" placement is no longer predominant, we find that placement relative to other items is. Once consumers focus on a particular section of the shelf — the area containing their favorite item — and find out that this item is out-of-stock, they are more likely to stay within that section, switching to items placed close to the focal product. Our results further demonstrate that consumers are more likely to turn to these shelf-based choice heuristics when assortments are more difficult to evaluate. The latter may depend on the size but also on the composition of the product assortment.

4 - Antecedent and Consequences of Attitudes Against Spam

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Using theories on intrusion and complaint behaviors, we develop, test and validate a structural model that captures the antecedent and consequences of attitudes against spam (unsolicited/unwelcome emails). The model captures the inter-relationships between five latent constructs: sensitivity to intrusiveness, attitude against spam, perceptions about unexpected consequences, behavioral and affective consequences, and damage potential (i.e., damage to computer/privacy). Sensitivity to intrusion is hypothesized to be positively related to attitudes against spam that in turn, positively influences each of the following three constructs: unexpected consequences of spam, behavioral and affective consequences, and damage potential of spam. We randomly split the database from a national telephone survey of 2200 respondents into two parts. The first part (calibration sample) was used to run a confirmatory factor analysis to assure that the indicator items were appropriate for each construct. This exercise was later repeated for the second part of the data (the validation sample). Similarly the structural model was also estimated separately using the calibration and validation samples. The validation runs mirrored the results obtained in the calibration runs. All our results demonstrate excellent model fit. We conclude by elaborating the implications of our model for advancing research discussion on behaviors and perceptions of individuals about spam.

■ SB10

Westmoreland East

Channels VIII: Game Theory

Chair: Nara Youn, Assistant Professor, University of Washington Business School, Marketing and International Business, Box 353200, Seattle, WA, 98195-3200, United States, nyoun@u.washington.edu

1 - Impact of Information Agents on Channel Strategies

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With the explosion of the internet the marketplace has witnessed a proliferation of information agents. One type of agents provide a variety of services to consumers ranging from matching buyers to specific sellers (Autobytel) to informing them about market parameters which were hitherto known only to the sellers. For example, in the automobile industry, consumers can learn the invoice price, that is the transfer price between the car manufacturer and its dealers (Edmunds.com). In addition, they can learn about ongoing incentives provided to the dealer by the manufacturer. Access to such information is likely to influence consumer behavior and have an impact on channel strategies. This is the focus of this study. We consider a durable good market, such as the automobile market, where the transaction price is determined by negotiation between buyer and the dealer. Consumers vary in their willingness to pay that is a function of the value they place on the product, their knowledge of the dealer's cost and their ability to negotiate. The dealer has to spend effort (training of salespeople, salespeople's time) in negotiating a price close to the consumers' value. In the presence of the infomediaries consumers have more precise information of the dealer's costs, which in turn influences their willingness to pay for the product. We characterize the optimal channel strategies in the absence of such infomediaries and contrast it with the case where infomediaries inform consumers about the dealer's costs. We investigate the rationale for the existence of third-parties such as Edmund's, institutions such as Consumer Reports, in participating in the dissemination of transfer price knowledge. Consumer welfare and policy implications are also derived.

2 - Choosing the Best Channel Structure in a Multi-Brand Multi-Outlet Market

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Major channel structure decisions, although made infrequently, usually have a significant impact on the profitability of a firm. This study investigates how a channel member's choice in key strategic areas is linked to profitability of each channel member in a market characterized by competing manufactures and competing retail outlets within various channel structures. To address this issue, we first develop a spatial model that explicitly captures heterogeneous customer preference in terms of product position, physical store location, and virtual (Internet) store. From this spatial model coupled with a stochastic consumer choice model, demand functions are derived for varying degrees of product and outlet differentiation and for various channel structures. Since the parameters of these demand functions are directly linked with the parameters of the underlying spatial model and consumer utility function, this approach assures a consistent market environment when comparing alternative channel structures associated with different demand structures. We use the game theoretic approach to solve for equilibrium prices, quantities and profits for each player under various channel structures. Due to the complexity of the derived demand structure, the model is analyzed numerically for equilibrium solutions. We use the output to develop a general conceptual framework that allows us to identify the key underlying forces that drive optimal channel structure decisions in the multi-brand, multi-outlet market and how these forces are linked with the characteristics of the market environment.

3 - Signaling Ingredient Quality

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Many end-products consumers purchase are assembled by manufacturers using ingredients supplied by outside suppliers. The quality uncertainty can come from either the manufacturer's assembly technology in the making of the end-product or the ingredient's quality incorporated. The end-product manufacturer and the ingredient supplier may find it profitable to signal the ingredient's high quality to consumers. The signaling literature has traditionally emphasized signaling efforts by the manufacturer alone and has treated quality uncertainty as from one single source — namely, the manufacturer's production process — but has not looked at the case where the ingredient is the source of such quality uncertainty and the manufacturer is signaling the ingredient quality. In this research, we study the signaling issue in a supplier-manufacturer supply chain, where the ingredient supplier acts as a Stackelberg leader and sets the price for its ingredient, anticipating the manufacturer's responses as to whether and how to signal the unknown quality. I study the roles of price and advertising as signals of quality and characterize the separating and pooling equilibria in the end-product market. We answer the question how the signaling costs are allocated between the manufacturer and the ingredient supplier. By studying both non-coordinated and coordinated channels, we also attempt to study the benefits of channel coordination under information asymmetry. Finally, if the ingredient is co-branded by the manufacturer, there is no price distortion in communicating quality information to consumers. We can measure benefit of ingredients co-branding from the improvement in signaling efficiency.

4 - Competition and Integration of Digital Content Distribution Channels

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In this paper, we examine the economics of two types of distribution channels: server- and Peer-to-Peer (P2P)- based. A server-based channel (such as iTunes) forms a network that displays negative externality, while P2P (such as KaZaA) is a network with positive externality. When presented with the option of these two channels to obtain digital content, users select one based on its comparative utility. We have derived the equilibrium demands when these two channels are in competition as well as in coordination. In a competitive setting, as the capacity of the server increases, so does the number of users who opt for the server-based channel. However, the quality of service deteriorates with higher capacity. When both channels are integrated, it is preferable to allocate more users to the P2P channel even though it provides a lower utility.

■ SB11

Washington

Services Marketing I

Chair: Ajay Kalra, Associate Professor of Marketing, Carnegie Mellon University, Tepper School of Business, 5000 Forbes Ave, Pittsburgh, PA, 15213, United States, kalra@andrew.cmu.edu

1 - Understanding the Effects of Service Quality on Acquisition, Usage and Retention for a VOD Service

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Offering the appropriate level of service quality is crucial for success in any service industry. Previous literature has investigated the effects of service quality on customer life time values using survey data. Further, previous research accounts only for the direct effect of service quality on existing customer retention and ignores the potential indirect effect on new customer acquisition via word-of-mouth. This paper investigates the effect of service quality accounting for both effects using behavioral data at the individual level. Our data come from the launch of a new high-tech, entertainment product (a video on demand type service). The data contain not only an objective measure of service quality, but also household level information on factors that could influence word-of-mouth effects. We find that service quality plays a bigger role in consumer's actual acquisition, retention and usage behavior than that reported by the same households when they are surveyed.

2 - Development of Team Efficacy in Customer Service : A Longitudinal Examination

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Organizations increasingly restructure their services and sales operations around informal, team-based systems of self-managing teams (SMTs) (Marks et al. 2005). The growing implementation of these empowered multi-team systems, implies that employees should stronger rely on beliefs about their joint competence to perform task activities (de Jong et al. 2005). This suggests the relevance of a better understanding of team efficacy development in order to increase team performance. Though the concept of self-efficacy has got some attention in the marketing literature (Brown et al. 1998), little is know about efficacy development at the team level and how this is contingent on intra- and inter-team processes (Zohar and Luria 2005). Moreover, extant marketing studies on efficacy are cross-sectional in nature, while it requires a longitudinal design to examine the causal mechanisms underlying team efficacy development. We therefore examine a longitudinal model of the antecedents and consequences of team efficacy development, focusing on the moderating role of within-team and between-teams processes. We collected data from 45 service SMTs and their customers at two points in time and find positive effects of individual achievement motivation, team efficacy, management support, and customer-perceived service quality at T1, but a negative effect of sales at T1 on team efficacy at T2. Next, perceived service quality at T1 has a stronger positive impact on team efficacy at T2 when efficacy consensus among employees within the team is high. Finally, if efficacy variability between teams is low, both the negative impact of sales at T1 and the positive impact of team efficacy at T1 on team efficacy at T2 are weaker, while the positive impact of management support at T1 is stronger.

3 - How do Refunds and Payment Depreciation Affect Service Cancellations? Some Experimental Results

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Services are often reserved or purchased long before they are actually performed (e.g., concert tickets). The time span for customers' reservations and purchases may vary from one day to several months

before the service performance. However, due to exogenous influences, customers may decide to cancel a service. Our research question is how customers' likelihood of cancellation varies with partial refunds and different time spans between payment and cancellation. Using experiments, we find that the likelihood of service cancellation is influenced by partial refunds and payment depreciation as well as consumption enthusiasm. Subjects with low consumption enthusiasm are significantly more likely to cancel the service when there is a large time span between payment and consumption than when there is a short time span. The sunk-cost impact on the consumption of pre-purchased services decreases with the time span ("payment depreciation"). We also find that the likelihood of service cancellation increases with partial refunds. Refundable services are cancelled more often than non-refundable services. In contrast to these results, we show that subjects with high consumption enthusiasm are significantly more willing to consume non-refundable services the longer in advance the payment is made. However, for refundable services this effect is the opposite. In addition, we analyze further determinants on the likelihood of service cancellation. Based on these results we derive some managerial implications with respect to service pricing.

4 - Why do Consumers Purchase Extended Warranties?

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Extended warranty programs are an extremely valuable profit generating vehicles for retailers and dealers. For example, they contribute significantly to their bottom line by creating a $15 billion revenue stream every year with 50-60% average profit margin. Therefore understanding the economic functions of extended warranties and their impact in influencing consumers to make extended warranty purchases is important for theoretical and managerial reasons. We examine the insurance and income effects of extended warranties by developing an analytical model and empirically testing it. We investigate how these effects drive consumer purchase decisions. Specifically, we address the following questions: (1) why do consumers buy extended warranties, or more specifically, what are the economic functions served by extended warranties? (2) how do marketing and promotion variables such as inserts, open-box and sales promotions interact with consumer purchases of extended warranty? (3) how does consumer heterogeneity such as information search, risk attitudes and replacement costs impact the purchase decision? Our results provide empirical evidence on why consumers purchase warranties and which consumers are likely to make purchase. We also discuss how to improve the design of extended warranty programs. Keywords: extended warranty; discrete choice model

■ SB12

Fayette

Satisfaction II

Chair: Purushottam Papatla, University of Wisconsin-Milwaukee, P.O. Box 742, 3202 N. Maryland Ave., Milwaukee, WI, 53201, United States, papatla@uwm.edu

1 - Satisfaction and Behavior Intention: The Antecedents of Relationship Share in the Context of CRM

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In today's highly competitive business world, customer relationship management (CRM) is emerging as a core marketing activity. Studies have indicated that it costs six times more to acquire new customers than to retain an existing one (Reichheld 1996). Hence, many firms are devoting more attention to maintain and develop relationships with customers, which is likely to increase the customers' willingness to engage in a relationship (CWER) with the firm and increase the customer relationship share (RS) of that firm. This study offers an in-depth investigation of the factors that influence RS and it empirically tests whether customer satisfaction (SAT) and CWER affect RS. A conceptual model was derived by drawing on theories taken from multi-disciplinary literature, including marketing, management, and social psychology. The model is empirically tested to determine (1) the effect of CWER and SAT on RS; (2) the effect of customers' attitude toward the firm on CWER; and (3) how customers' knowledge and belief about CRM program affect customers' attitude. The results of this study indicate that SAT and CWER are the predictors of RS; at the same time SAT is also the predictor of customers' attitude toward the firm. The findings of the study also indicate that CWER depends on customers' attitude toward the firm and that attitude depends on customer's knowledge and belief about the firm's CRM program.

2 - Financial Payoffs of Customer Satisfaction-Productivity Tradeoffs: The Strategic Role of Mergers

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Building on the dual emphasis perspective (Rust, Moorman and Dickson 2002; Mittal et al 2005)this paper investigates the impact of tradeoffs involving customer satisfaction and firm productivity on a firm's short- and long-term financial performance. The joint impact of changes in customer satisfaction and productivity varies depending on whether or not a firm underwent a merger. We test this hypothesis using a unique database assembled from multiple sources. The dataset consists of 1,100 firms and spans 1996 to 2003. Our findings show that tradeoffs between customer satisfaction and firm productivity result in greater financial performance in a non-merger context whereas a dual emphasis is more important for firms undergoing a merger. Public policy implications and guidelines for firms contepmplating a merger are drawn as well.

3 - Applying the Structural Equation Model to Investigate Customer Values Delivered by Airlines Serving Taiwan

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The concept of customer value analysis (CVA) has been applied in marketing research in that customers choose the brand that gives them the greatest value. The value of a specific good or service is a function of its benefits and costs perceived by customers. The present research employs the structural equation model to conduct a path analysis that addresses the relationships among benefits and costs perceived by passengers. The research results indicate that the quality of a specific product/service has positive influences on its brand image, which in turn positively affects its value perceived by customers. Costs, on the other hand, negatively affect customer values. Specifically, Mandarin Airlines delivers the greatest customer value in Taipei-Kaohsiung route, and Far Eastern Air Transport and TransAsia Airways in Taipei-Kinmen and Taipei-Makung routes, respectively.

4 - An Investigation of the Dynamics of Customer Satisfaction in Multi-stage Services

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Marketers have long realized that customer satisfaction is strongly correlated with retention and positive word of mouth. It is also accepted wisdom in marketing today, that retaining existing customers, and using them to attract new customers, is more profitable than direct acquisition of new customers. Businesses across many industries are therefore paying close attention to customer satisfaction. Marketing researchers have also been exploring this issue for over a decade. The focus, however, has mostly been on a single issue: the use of the gap between what customers expect regarding a product or service, and what they actually experience, to explain satisfaction. Nonetheless, there has been very little research on the dynamics of customer expectations and their effects on eventual satisfaction. This is the issue that we explore in this research. In particular, we examine how, in a multi-stage setting that requires the consumer to progressively experience different parts of the product or service to use it fully, satisfaction with the previous stages affects the consumer's expectations and satisfactions with the subsequent stages. We draw on the household production, human capital and signaling theories from the economics literature to develop our model. The model is specified as a sequential ordinal probit and tested empirically for the delivery of healthcare services. We present our findings and provide directions for additional research in understanding the dynamics of satisfaction in a multi-stage context.

■ SB13

Somerset West

Auctions

Chair: Srinivas Reddy, Robert O. Arnold Professor of Marketing, University of Georgia, 149 Brooks Hall, Athens, GA, 30602, United States, sreddy@terry.uga.edu

1 - Jump Bidding in Online Auctions: A Double-edged Sword

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Jump bidding, i.e. when bidders bid more than the minimum required increment, has been commonly observed in online ascending bid auctions. However, research on the motivations of jump bidding and the effects of jump bidding on auction outcomes are not conclusive. New features of online auctions such as the lengthened bidding process and fixed or soft deadlines make the questions of the motivations of jump bidding and the effects of it more equivocal. In this paper, we develop a conceptual model on the effects of jump bidding in online auctions and propose that jump bidding in online auctions is a double-edged sword to the auction outcome. Jump bidding maybe effective in deterring bidder entry, and hence negatively impact competition due to number of bidders, leading to lower prices. However, jump bidding may also lead to increased competition, as bidders reveal their strategy, and bidders may even be triggered into a bidding frenzy. We also propose that jump bidding's effect is time-contingent during the auction process and moderated by bidders' degree of value certainty of the auctioned product. We fit a recursive model of the effect of jump bidding on the number of bidders and auction outcomes. Data were obtained from a field experiments conducted on a local online auction market. Different from most online auction markets, this auction site allows bidders to place jump bids (where the bid amount instantaneously jumps to amount of the bid), as well as, proxy bids (where the computer bids on behalf of the bidder). Model results provide support for our hypotheses.

2 - A Dynamic Model of Supply and Demand in Online Auctions

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Most previous studies of online auctions have focused either on bidder or seller behavior. This paper investigates supply and demand simultaneously using eBay auctions from multiple product categories. We describe a Bayesian model that measures the effects of following variables on seller and bidder behavior: number of sellers, number of bidders, seller's reputation on eBay, and the reserve price set by competing sellers. We allow these relationships to be time-dependent.

3 - The Impact of Intermediaries in Online Consumer-to-Consumer (C2C) Market: An Empirical Investigation

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This study examines the impact of intermediaries (dealers) on market efficiency in online Consumer-to-Consumer (C2C) market. Online C2C transactions, such as the Internet auctions on eBay, are one of the most successful forms of electronic commerce. It has been suggested by many scholars that the Internet or electronic markets will eliminate the role of intermediaries by lowering search cost and allowing direct and efficient interactions between sellers and buyers. However, a close examination of the market mechanism indicates that many functions provided by intermediaries are indispensable. Specifically, we consider intermediaries' role in price discovery and trust building in electronic markets. Intermediaries provide buffer for temporary misalignment between supply and demand by buying low and selling high. Such actions stabilize market price and provide liquidity to buyers and sellers in online markets. Intermediaries also help build trust by engaging in transactions with risk-averse buyers and sellers who otherwise will not participate in the markets. Using a dataset from eBay, we examine empirically these two functions in online C2C auction markets. We find that the presence of dealers has significant impact on market liquidity, resulting in lower price variation and more successful trades. In addition, we find that dealers are more likely to engage in transactions with less established buyers and sellers. Their presence reduces reputation penalty faced by these players and further improves market liquidity.

4 - Modeling Online Art Auction Dynamics Using Functional Data Analysis

Srinivas Reddy, Robert O. Arnold Professor of Marketing, University of Georgia, 149 Brooks Hall, Athens, GA, 30602, United States, sreddy@terry.uga.edu, Mayukh Dass

In this study, we examine the price dynamics in online art auctions of Modern Indian Art using Functional Data Analysis. This technique provides an opportunity to better understand the dynamics of bidder behavior and prices for heterogeneous or unique products. It allows one not only to visualize the price paths but also to model the impact of explanatory variable on the price dynamics — namely the velocity and acceleration of price movement during the auction. Our analysis suggests that opening bid positively impacts online auction prices of art at the beginning of the auction and its effect declines towards the end of the auction. The order in which the lots appear in an art auction has a negative impact on current prices indicating that the art lots sold earlier in the auction have a current price. Established artists show a positive impact on price at the beginning of the auction. Reputation or popularity of the artists and their investment potential as assessed by previous history of sales have a positive impact on prices at the beginning of the auction. Functional characteristics of art such as size and medium (canvas or paper) did not impact art auction prices.

■ SB14

Somerset East

Mktg. Strategy VII: Advertising

Chair: Norris Bruce, Assistant Professor, Univ of Texas, Dallas, 2601 N. Floyd Road, Richardson, TX, 75080, United States, norris.bruce@utdallas.edu

1 - Autocatalytic Phenomena in IMC

Kalyan Raman, Professor of Marketing, Loughborough University, Business School, Loughborough, LE11 3TU, United Kingdom, K.Raman@lboro.ac.uk, Prasad Naik

Prior research on Integrated Marketing Communications (IMC) shows that managers should act differently in the presence of cross-media synergy, elucidating new qualitative insights into multi-media allocation decisions and new quantitative approach for estimating synergy. In this research, we extend this IMC perspective of synergy-as-catalyst between different media to the one of generating catalytic effect of a medium on itself, i.e. auto-catalysis. To exemplify auto-catalysis, consider modern communications via networks such as the Internet. Each additional node in the network increases the value of the Internet in direct proportion to the square of the number of nodes that are already in place, a result that follows from a combinatorial argument and referred to by economists as positive externality. While this positive externality in networks is important but obvious, the question we ask is, do traditional mass media exhibit such effects? If so, what should managers do differently with respect to resource allocations over time and across media vehicles? Specifically, we study the following issues: (i) optimal budget determination and its optimal allocation to media in the presence of autocatalysis; (ii) the interplay between the effectiveness of a medium and the autocatalytic effect of another medium; and (iii) the effect of autocatalysis on the brand's expected profit. We shall present new results to show that autocatalysis has fundamental implications, both qualitative and quantitative, for planning multimedia communications strategy in IMC.

2 - Toward a Theory of Integrated Marketing Communication (IMC)

Sreedhar Madhavaram, Assistant Professor of Marketing, Cleveland State University, BU 449, Department of Marketing, Cleveland, OH, 44115, United States, s.madhavaram@csuohio.edu, Vishag Badrinarayanan

Integrated Marketing Communication (IMC) has been attracting researchers' attention for more than three decades. While the concept of IMC and its broad scope enjoy considerable awareness, there is little consensus among researchers on the conceptualization of IMC and the corresponding strategic issues. Additionally, with the exception of a few recent publications, few researchers have paid attention to IMC theory development. Consequently, there is a distinct need to synthesize, refine, and extend existing IMC research to identify newer relationships and constructs for the purpose of offering insights on understanding and practicing IMC better. Specifically, there is a need for systematic research that answers the following questions: What are or what should be the underlying assumptions of IMC theory? What are the central tenets of IMC theory? What are the antecedents and consequences of IMC? Furthermore, drawing from the theoretical foundations, it is also important to address the relevant strategic issues. That is, under what specific circumstances, should firms integrate (or not integrate) their marketing communications? How should firms integrate their marketing communications? Toward answering these questions, first, this article reviews IMC research from the last three decades. Second, adding to the current literature, this article provides a theory of IMC including underlying assumptions, central tenets, antecedents, and consequences of IMC. Third, drawing from the proposed theory, this article discusses the specific normative strategic imperatives with reference to firms integrating their marketing communications. Finally, implications of the proposed IMC theory are discussed for both practitioners and researchers.

3 - Optimal Advertising Strategies under Debt Financing

Lu Hsiao, Assistant Professor, National Chung Hsing University, 250, Kuo Kuang Road, Taichung, 402, Taiwan, hsiaolu@dragon.nchu.edu.tw, Shan-Yu Chou, Chyi-Mei Chen

In the previous literature, marketing strategies are derived to maximize firm value. In reality, most entrepreneurs of the firms use both debt and equity to finance production-marketing activities, and they also make important decisions for the firm. When an entrepreneur who owns the firm chooses among different production-marketing strategies, her goal would be to maximize equity value but not firm value. Thus under debt financing, optimal marketing strategy should vary with capital structure. In this paper, we study the interaction between debt financing and advertising strategies. The purpose of this paper is twofold: (i) to study an entrepreneur's optimal advertising strategy under debt financing; (ii) to examine how an entrepreneur's concerns for the effectiveness of advertising strategy in product market influence the financial contract design. To substantiate the above ideas, we establish a game-theoretic model and analyze the equilibria. It is shown that the entrepreneur is more willing to advertise under debt financing. In addition, in order to minimize the entrepreneur's incentives to set high price (and then minimize the expected expense on advertising), it is optimal to ask the entrepreneur to pay back as soon as possible, and thus the concern for the marketing strategy influences the contract design.

4 - Non-Linear Bayesian Tracking of Forgetting and Wearout Effects for Media Schedules

Norris Bruce, Assistant Professor, Univ of Texas, Dallas, 2601 N. Floyd Road, Richardson, TX, 75080, United States, norris.bruce@utdallas.edu

Advertising managers often employ different message themes (for example, price advertisements versus product advertisements) and within each theme use different versions of an advertisement (Bass, Bruce et al, 2005). An important element in creating Ad schedules that incorporate advertising with multiple themes is a clear understanding of the impact of these messages on wear-out and forgetting effects (Pechmann and Stewart, 1990). Bass, Bruce et al 2005 quantified the differential but fixed effects of wear-out and forgetting in the context of advertising campaigns that employed five different themes. The authors specified a linear state space model and estimated the model using the MCMC approach to Kalman filtering, the basic linear filter. (Kalman,1960). But it is well established in advertising repetition studies that wear-out and forgetting rates are time varying features of advertising communication (Pechmann and Stewart, 1990; Percy and Rossiter,1980). In this study, I develop a general state space model that suggests how forgetting and wearout rates may evolve across time in a multi-theme advertising environment. The model can help managers track forgetting and wear-out effects real-time, as well as better manage advertising schedules. Given the resulting model is highly non-linear, the estimation procedure employed combines both sequential importance sampling (SIS, Particle Filtering) and Markov Chain Monte Carlo (MCMC) ideas.

■ SB15

Armstrong

Strategic Marketing II

Chair: Tobias Mann, Doctoral Student, University of Mainz, Jakob Welder-Weg 9, Mainz, 55099, Germany, post@tobiasmann.de

1- Indirect Network Effects in New Product Growth and Takeoff

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Markets exhibit indirect network effects if hardware sales increase as more software becomes available, and software availability, in turn, depends on hardware sales. Indirect network effects are of prime interest to marketers because they affect the growth and takeoff of software availability for, and hardware sales of, a new product. The present study shows, among others, that: (1) indirect network effects are weak in many markets in which they are assumed to exist; (2) software availability affects future software availability (in most cases positively); (3) hardware sales takeoff generally precedes a software availability takeoff; (4) hardware sales may take off without a substantial quantity of software available, and software availability may take off without substantial hardware sales.

2 - Optimal Multi-Tiered Pricing of Products and Services: A Structural Conjoint Approach

Kamel Jedidi, Professor, Columbia Business School, Columbia University, New York, NY, 10027, United States, kj7@columbia.edu, Raghuram Iyengar, Rajeev Kohli

Multi-tiered increasing-block pricing is widely prevalent in many industries such as electricity and water supply, internet usage, and wireless services. In a two-tier pricing scheme, for example, the service provider charges an access fee that includes free units of service and a per-unit price for excess usage. Such pricing structures lead to nonlinear budget sets and create an endogeneity between the applicable per-unit price and consumption - consumption is influenced by the marginal price and the applicable per-unit price, in turn, depends on the level of consumption. This endogeneity presents two modeling challenges. The first involves demand estimation and the second lies in the characterization of the impact of a price change. We propose a structural conjoint model of consumer choice for services under two-tiered tariff pricing that addresses both of these challenges. A primary benefit of the proposed approach is its ability to infer consumer expected consumption from choice data while accounting for individual-level heterogeneity. We illustrate the model using data from a conjoint study of wireless services. We compare our results with those from a reduced-form, choice-based conjoint and derive implications for demand estimation and optimal pricing of wireless services.

3 - Consumers' Extraction of Hidden Information on Product Recommendations

Fabio Caldieraro, Assistant Professor of Marketing, Santa Clara University, 500 El Camino Real, Santa Clara, CA, 95053, United States, fcaldieraro@scu.edu, Marcus Cunha Jr.

This research studies a game-theoretical model in which an individual recommends one product over another based on the relative performance of a product attribute. The focus is on situations in which the recommender cannot make false claims, but may selectively disclose only the information that is most advantageous to her. Given the information received, consumers decide whether to follow the recommendation (and buy the recommended product) or not. The model considers a number of different scenarios regarding the self-interest and expertise of the recommender and identifies ensuing equilibrium strategies for the recommender and the consumers. Results show conditions under which consumers may rationally infer the relative performance of other attributes, and thus extract hidden information from the recommender. An empirical experiment tests the theory and corroborates the analytical findings.

4 - Strategic Marketing: Humor as a Source for Competitive Advantage

Tobias Mann, Doctoral Student, University of Mainz, Jakob Welder-Weg 9, Mainz, 55099, Germany, post@tobiasmann.de, Oliver Heil

Humor as a part of the marketing mix has received controversial attention in literature as its effectiveness keeps being questioned. The construct itself remains ambiguous as humor can quickly become excessive or boring. Yet, it continues to be used and numerous products entered or remained in consumers' evoked sets due to the humorous content of their marketing campaigns. We initially aim to define and operationalize the construct of humor in marketing. Next, we intend to investigate the economic impact of humor in marketing, esp. as it varies by product type and company. Our goal is to identify sources of competitive advantages in being humorous in marketing. We categorize humor into three classes, (a) limited to a just one product, (b) focused on a product category, and (c) applicable to "all" products. A matrix was constructed that balances product involvement and humor compatibility of a product. It allows conclusions about the desirable degree and the character of humor in marketing. Nine cells of the matrix show the (appropriate) kind of humor for different product types, considering their deference and image. A more "edgy" humor may quickly have a bigger or smaller effect as it may polarize. On the other hand, "harmless" humor may not ignite anything and, thus, render a campaign meaningless. Our categorization adheres to the fact that economic humor should not only entertain but also fulfill economic functions - the laughs have to sell. Moreover, we investigate the linkage between humor and corporate identification towards the establishment of a humor-based competitive advantage. Our preliminary results indicate that humorous marketing offers a wide array of opportunities but seemingly entails risks as those surface rather abruptly instead more continuously.

Saturday, 1:30 - 3:00 (Session C)

■ SC02

Crawford East

International Marketing - II

Chair: Eleonora Cattaneo, Professor, SDA Bocconi, Via Balilla 18, Milano, Italy, eleonora.cattaneo@sdabocconi.it

1 - Simultaneous Consumer and Country Segmentation on Direct Marketing Affinities

Kay Peters, University of Muenster, Dept. of Marketing (MCM), Am Stadtgraben 13-15, Muenster, 48143, Germany, kay.peters@uni-muenster.de, Heiko Frenzen

Globalization is a common theme in business today. Although marketing traditionally focuses on local consumer segments, enterprises are looking for economies of scale in marketing activities across countries. Campaigns and media allocation are therefore increasingly designed on a supranational level, as recent examples of Coca Cola, Adidas and P&G show. But is this a good idea? Obviously this requires at least some homogeneous segments across countries concerning media affinities. Our literature research did not yield any representative consumer segmentation on media affinities on a global scale that could indicate the appropriateness of this approach. As direct marketing is a large and fast growing media worldwide, we interviewed 13.191 consumers from 24 countries in the US, Europe and Asia on their direct marketing affinities. Specifically, we were interested in the following questions: 1.If any, how many cross-national consumer segments based on direct marketing media affinity can be identified? How can they be characterized? 2.Are the segments large enough to be addressed by uniform direct marketing campaigns across countries? Which countries can be grouped into country segments based on this analysis? 3.To what extent can the results be explained by theory and other cross country information? 4.What implications can be derived for the management of direct marketing campaigns? Using the multi-level latent class cluster analysis approach, we conducted a simultaneous consumer and country segmentation based on direct marketing affinities. We find interesting answers that support supranational decision making.

2 - Cultural Distance, Entry Timing, and Brand Personality

Wenyu Dou, City University of Hong Kong, 83 Tat Chee Avenue, Koowloon, Hong Kong, mkwydou@cityu.edu.hk, Zhilin Yang

Brand personality enables firms to communicate with their customers about the brand more effectively and it plays a major role in advertising and promotional efforts. However, in the international marketing setting, few studies have investigated how cultural distance and firm's entry timing may influence brand personality perceptions among consumers in the host country. This study investigates the two factors. In particular, it posits that it takes longer for brands from culturally-distant countries to develop positive brand personalities (e.g., sincerity) than for brands from culturally similar countries. A random sample of 1, 200 Chinese car buyers were surveyed to test the main research hypothesis. Each respondent evaluated twelve major car brands with origins in the U.S., Germany, France, Japan, and South Korea, along a list of brand personality dimensions. The respondents also indicated their preferences for each car brand. A nonmetric multidimensional preference analysis was performed using SAS MDPREF procedure. Preliminary results indicates support for the main study hypothesis. In general, it was observed that for car brands from US and Europe to achieve the same high level of positive brand personality scores, they have to enter the China automobile market much earlier than their competitors from Japan or South Korea. Implications for cross-cultural brand building strategies are discussed.

3 - UK Retailers' Perceptions of Manufacturers from LDC's With Negative Image: Case Study Pakistan

Huma Amir, Doctoral Researcher, Warwick Business School, The University of Warwick, Gibbet Hill Road, Coventry, CV4 7AL, United Kingdom, Huma.Amir05@phd.wbs.ac.uk, TC Melewar

UK Retailers' Perceptions of Manufacturers from LDC's With Negative Country Image: Search for Survival Strategies in a Post-WTO Era: Pakistan The concept paper proposes a study of the perceptions of UK retailers about products and exporting organizations from Pakistan — to determine the extent of effects of country image on importers' choice decisions, and of the Pakistani exporters' perceptions of their own organizations, products, and performance — to identify converging and diverging viewpoints. There exists a need to understand the absence/lack of prominence of Pakistani brands on UK retail shelves. Such study will offer insights into the strategies that Pakistani exporters could adopt in order to succeed in the race for global penetration. Pakistan is chosen as the country of study because: 1. No substantive research addresses this issue; 2. Pakistan is one of the countries that are hardest hit by the termination of Agreement on Textile and Clothing (ATC) and more stringent application of the WTO Agreement on Technical Barriers to Trade (TBT Agreement), and Sanitary and Phytosanitary measures (SPS Agreement); 3. Terrorist attacks in the USA and UK have caused a shift in perceptions about many countries which has adversely affected their exports to the West. A need exists to evaluate the emergent international business and determine steps that need to be taken to ascertain the damage caused and to evolve a theory that will guide them in their endeavour to establish themselves in the more lucrative markets. Propositions for the study are set forth and implications of research findings and venues for future research are identified.

4 - The Value of Made in, Brand-identity and Marketing Communication in Italian Enterprise Clusters

Eleonora Cattaneo, Professor, SDA Bocconi, Via Balilla 18, Milano, Italy, eleonora.cattaneo@sdabocconi.it, Carolina Guerini

Although a well-established country image is a powerful marketing tool when doing business abroad, a generic approach to leveraging the made-in effect does not seem universally appropriate. Specifically, for Italy, given the unique structure and clustered location of many enterprises, we feel characteristics and positioning strategies should be emphasized where relevant since they provide additional value to the products' image which may even be distant from the national Made in Italy stereotype (Guerini, 2004). Basing our research on the wealth of published materials relating to Made in Italy and the success it has commanded globally for a series of products, the present paper illustrates the results of field research carried out on two representative enterprise clusters (Prato for textiles and Bergamo for machine tools) aimed at gaining a better understanding of the role and importance of communication when promoting country-of-origin but also area of origin in world markets. Specifically, the hypothesis was that leveraging a specific geography would increase the value proposition from the company's point of view. The discussion focuses on the perceptions that firms display as far as positive attributes and associations of country-of-origin (relating to the specific industry) are concerned and, to what extent these are important as competitive tools in foreign markets with a view to understanding the relative importance of country-of-origin and district of origin in determining customer preferences in foreign markets. In addition, we identify the tools used by district firms to develop and leverage country and local origin with a particular focus on communication.

■ SC03

Crawford West

Marketing Research - II

Chair: Raymond Burke, E.W. Kelley Professor of Business Administration, Indiana University, Kelley School of Business, 1309 East 10th Street, Bloomington, IN, 47405-1701, United States, rayburke@indiana.edu

1 - Cooperative Game Theory Uses in Marketing Research

Ken Powaga, Research Manager, GfK Custom Research, Inc., 8401 Golden Valley Rd., P.O. Box 29700, Minneapolis, MN, 55427, United States, Kpowaga@gfkcustomresearch.com, Shon Magnan,
Stan Lipovetsky

In this paper, we propose an approach to addressing the key objective of almost all marketing research - which strategy, among these many alternatives is the best to choose? For example, within product research a typical question is, "Which flavors, among these many, should we introduce to maximize purchase interest?" Within customer satisfaction we ask, "What actions should I take in order to maximize customer loyalty?" In direct marketing, we ask, "Which characteristics make a customer most likely to respond to our mailing?" Each question has its own set of statistical tools for managers to provide acceptable answers Each tool however, has problems. For our product researcher, Total Unduplicated Reach and Frequency or TURF is the traditional tool for picking the optimal flavor line. TURF results, however, are difficult to interpret and susceptible to niche products. Linear regression procedures are used to answer our customer satisfaction and direct marketing questions. These methodologies have problems with multicollinearity and basic assumptions of linearity. We propose is a new way of solving these problems using cooperative game theory, and specifically the Shapley value. Shapley value is a method for choosing an optimal strategy under uncertainty. It creates a score for each player in a game that represents that player's contribution to the total value of the game. In our example, our flavors and the customer satisfaction or direct marking attributes are the players and the total value of the game is the quality of the regression model or purchase interest of the flavor set. With this tool, we have successfully demonstrated its practicality with hundreds of clients.

2 - An Empirical Test of Six Stated Importance Measures

Keith Chrzan, VP, Marketing Sciences, Maritz Research, 996N 250E, Chesterton, IN, 46304, United States, keith.chrzan@maritz.com, Natalia Golovashkina

Applied marketing researchers employ a variety of stated and derived measures of attribute importance across a wide range of types of research. While derived methods are common in some types of research, survey researchers also use stated importance measures, because they are easy to collect, they have face validity and they provide importance measures at the individual respondent level that may be valuable for subsequent analyses. Despite much evidence calling into question their validity, simple importance ratings find wide use. Some applied researchers use one or more of the many suggested improvements over simple importance ratings, but there have been few rigorous tests of alternative stated importance methods. We use a survey of 1,200 respondents about casual dining restaurant services to collect six more or less common measures of stated importance for a set of 10 attributes: - Simple importance ratings - Constant sum scaling - Magnitude scaling - Maximum difference scaling - Q-sort - Unbounded rating scales We conduct a wide range of empirical tests on these six different ways of eliciting stated importances, including - Length of time to complete the measurement task - Information content - Tests of between-attribute discrimination - Tests of between-groups discrimination - Tests of predictive validity We expect the results of this study to provide concrete guidance for marketing researchers who opt to collect stated attribute importance information.

3 - Coupling PLS and R Square Decomposition Methods for Derived Importance

Kevin Lattery, Director of Marketing Science, Maritz Research, 7701 France Ave, Suite 300, Minneapolis, MN, 55345, United States, kevin.lattery@maritz.com

Two methods have recently been proposed for measuring the relative importance of attributes on an overall measure. Both involve decomposing R2 values by averaging over all possible regressions with and without attributes. For example to measure the relative importance of A when one has three independent attributes (A B C), one compares R2 values of the following regressions on a dependent variable: Null vs A; B vs AB; C vs AC; BC vs ABC. This paper couples these R2 decomposition methods with Partial Least Squares (PLS), showing how they improve PLS. PLS involves two stages: 1) an iterative estimation of weights (mode A or mode B) 2) an estimate of path coefficients. Both stages are regression based in classical PLS. This presentation shows what happens by replacing these regressions with R2 decomposition methods. Mode B estimation of stage 1 PLS weights is multivariate, but can be problematic because of multicollinearity. It often produces negative weights, and sampling error of those weights tends to be much higher than mode A. Replacing mode B with R2 decomposition methods results in positive weights and less sampling error. Mode A estimation of stage 1 avoids issues of collinearity since it is a simplistic bivariate measure. By replacing mode A with the R2 decomposition method, multivariate interaction is taken into account. This improves the R2 values between latent variables and provides weights more consistent with a priori expectations. R2 decomposition may also be used in stage 2 PLS. If there are many blocks, path coefficients in classical PLS may be negative due to multicollinearity. R2 decomposition provides robust estimates of the impact each latent variable has on the others to which it is joined, and reduces sampling error.

4 - Automated Customer Tracking and Behavior Recognition

Raymond Burke, E.W. Kelley Professor of Business Administration, Indiana University, Kelley School of Business, 1309 East 10th Street, Bloomington, IN, 47405-1701, United States, rayburke@indiana.edu, Alex Leykin, Huifang Mao

The retail context has an impact on consumer behavior that goes beyond product assortment, pricing, and promotion issues. It affects the time consumers spend in the store, how they navigate through the aisles, and how they allocate their attention and money across departments and categories. Unfortunately, conventional research techniques provide limited insight into the dynamics of shopper behavior. The presentation will discuss new computational approaches for determining the location, path, and behavior of customers in retail stores using video images collected from ceiling-mounted surveillance cameras. The tracking process involves several stages of analysis: (1) segmenting the moving foreground regions from the relatively static background image using a statistical model based on the codebook approach, (2) estimating the positions of shoppers in the camera view by using a vertical projection histogram, (3) converting these camera coordinates into the x/y locations of shoppers on a store floor plan using a model of the camera's viewpoint, (4) identifying and tracking individual shoppers across frames using a Bayesian particle-filter model, and (5) identifying groups of shoppers by clustering motion trajectories. The authors will discuss data and measurement issues associated with collecting accurate tracking information, classifying customers into shopper groups, analyzing patterns of shopper behavior, and differentiating between sales associates and consumers. Validation results and example applications from two different types of stores will be presented.

■ SC04

Butler West

Brand Management V: Brand Equity

Chair: Sudhir Voleti, Simon School of Business, University of Rochester, Rochester, NY, 14627, United States, voletis1@simon.rochester.edu

1 - Measuring and Managing Brand Image

Andreas Waldeck, Marketing Department University of Mainz, Jakob-Welder-Weg 9, Mainz, D-55099, Germany, waldeck@marketingboard.org, Oliver Heil

Due to different perspectives and objectives no consistent terminology for branding and brand related terms has evolved over time. Especially within brand image there is a strongly divergent set of definitions. Some definitions even exclude each other. The reason for this strong divergence among the definitions can be found in the prevalent compositional method of framing brand image. Researchers have split up branding following their perceptions. In previous literature brand personality has been seen as the differentiating element of brand image and other elements have been excluded. In some definitions this leads to using brand personality and brand image synonymously. This work will show that this does not capture consumer needs at all. Focussing on brand personality by managers rather suggests their lack of imagination. To extend brand image behind brand personality current thinking has to be expanded. The benefit created by a brand image and transported to consumers can be decomposed and this will provide managers a tool to form brand image. In contrast to previous efforts to set up brand image conceptually this work will for the first time aim to fully capture and decompose brand image. To achieve this all relevant top-literature of the past 20 years has been analyzed to derive all potential items related to brand image. Additionally consumers and brand managers have been interviewed regarding various topics related to branding. The distilled items of these 3 groups have been merged into a list of items relevant to brand image. Based on this list consumers have been interviewed in the context of generated benefits for various products. The following factor analysis led to manageable factors.

2 - Measuring a Star Player's Brand Equity

Yupin Yang, PhD Candidate, Rotman School of Management, University of Toronto, 105 St. George Street, Toronto, ON, M5S 3E6, Canada, yupin.yang02@rotman.utoronto.ca, Mengze Shi

In professional sports such as pro basketball, baseball, football, hockey, and soccer, a club's revenue may rely heavily on a few star players. It is not uncommon to hear a team's attendance and jersey sales falling after the departure of its star players. As a team's star players constitute a significant part of the team's identify (brand), in return, teams pay their star players generously. How much should a team pay its star players? The amount should depend on the star player's brand equity, which is defined as the marginal revenue the star player can generate for the team compared with other non-star players. In this paper, we intend to develop a structural model to empirically measure a star player's brand equity based on a unique dataset about NBA collected by the authors. The data includes players' contracts (length and payment, option, contract type, and signed date), team attendance and revenue, team and players' performance data, as well as teams' and players' characteristics. Each contract is a result of matching between a player and a team. When measuring the value of a star player, we consider both demand-side information (e.g. revenue and attendance) and supply-side information (e.g. player's contract). Key words: brand equity, superstar effect, structural model, sports marketing.

3 - Changes of Brand Equity in Brand Extensions

Xin Liu, Kent State University, Marketing Department, Kent, OH, 44240, United States, xliu4@kent.edu

Brand extension is an important strategy to leverage a brand's equity. Studies in this area mainly focus on consumers' evaluation of extension products. And evaluation of the extension product depends on the brand's equity in its original category. In this study, we examined the brand equity of an extension product. First, we reviewed the development of the brand equity measurements in recent years. Then, we are interested to see changes in a brand's equity when it extends to a new product category. Brand equity is measured as the difference of evaluations between a brand name product and a non-brand name product. In our two experiments, we measured brand equity of a strong and a weak brand. For each brand, we compare the brand equity in three different categories; original category, close extension category and far extension category. For a strong brand, brand equity in a far extension category is lower that that in a close extension category. For a weak brand, changes of brand equity from a close extension category to a far extension category are moderate. Therefore, comparing with a weak brand, a strong brand has high risks of extending to a far extension category but has advantages to extend to a close category.

4 - Brand Equity as a Revenue Multiplier

Sudhir Voleti, Simon School of Business, University of Rochester, Rochester, NY, 14627, United States, voletis1@simon.rochester.edu, Sanjog Misra, Paul Nelson

We develop an methodology for the estimation of brand equity of a consumer good that does not require a baseline brand. Our brand equity multiplier measures the revenue outcome that accrues to a generic bundle of observable attributes and marketing mix elements when endowed with a brand name. We look at the revenue generated by a particular item, separate out the impact of its generic components (observable attributes and marketing mix elements) and thereby estimate the impact of brand name on revenue generation. The Bayesian estimation procedure utilizes a random effects specification with an asymmetric error component. We apply the methodology to the empirical analysis of beer brands in a Chicago store chain. We then discuss how our revenue multiplier measure of brand equity is useful for comparisons of brand equity across markets and time periods, and the valuation of specific brands, sub-brands and items.

■ SC05

Butler East

Consumer Learning II

Chair: Ron Goettler, Carnegie Mellon University, Tepper School of Business, Tech and Frew Streets, Pittsburgh, PA, 15213, United States, ronald.goettler@cmu.edu

1 - Investigating the Impact of forgetting on the Informative Effects of Advertising

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Prior research that has attempted to model the informative effects of ads on consumer's brand evaluations and their subsequent purchase behavior has shown that the informative effects have the highest impact on those consumers with the least experience with the brand and the lowest impact for those customers with the highest experience. A key assumption made in these prior models is that on any given purchase occasion, consumers can perfectly recall all the prior information they would have learnt about the brand's quality from past ad exposures and consumption experiences. In this paper, we investigate how forgetting or the imperfect recall of prior information would influence these informative effects of advertising. We conceptualize the imperfect recall by positing that consumers recall their prior information with noise. Based on prior research in the behavioral literature, we characterize the extent of imperfect recall as an increasing and concave function of time. We show that the extent of imperfect recall of prior information is highest for those consumers who have little experience with the brand and is the lowest for those consumers with the highest experience. We show that depending on the extent of imperfect recall of the brand's information, the informative effects of ads can either have a decreasing, increasing or an inverted U shaped relationship with prior brand experience. We calibrate our model using scanner panel data for yogurt. We show that different brands in the yogurt category are associated with different rates of forgetting, which results in the informative effects of the brands to share different relationships with prior brand experience.

2 - An Empirical Study of Cell Phone Service Usage

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Compared to goods, services tend to have higher quality variability and consumer uncertainty about service quality can often be higher. This is especially true for newly introduced services. When there is uncertainty, consumers' preferences and choices are often affected by two important factors. First, consumers may learn from their own past experiences across different services provided by the same service provider. Second, consumer can also be influenced by the choice behavior of others, which would lead to across-people interdependence. In this paper, we study these two important influencers of consumer service usage. In our model of whether to use a specific combination of "non-voice" services provided by a cell phone company in each period, consumers are allowed to learn from their own past experiences and there are learning spillover effects across the services rendered by the same provider. We also allow for the possibility of interdependent preferences and choices that may arise either due to learning from others, network effects other than learning and/or exogenously correlated tastes. We model such interdependent preferences and choices by estimating an autoregressive spatial structure for preferences. We estimate our proposed MVP model on consumer cell phone usage data. We find evidence for learning effects across services, as well as interdependent consumer preferences. We also find that the service entry time affects the degree of consumer uncertainty and consumer preference interdependence. Key Words: Consumer choice under uncertainty, Services, Preference interdependence.

3 - Brand Loyalty, Search Costs, and User Skills

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Building on Wernerfelt (1985) we develop a model where customers develop skills from an online retailer which makes future purchases from that retailer more valuable. A finite number of retailers sell identical goods at prices which are initially unknown to the consumer. We derive conditions under which the consumer should immediately visit her preferred retailer rather than learning the prices all reatilers are charging through a web-based comparison engine.

4 - Price Discrimination with Experience Goods: a Structural Econometric Analysis

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Firms often offer menus of two-part tariffs to price discriminate among consumers with heterogeneous preferences. In this paper, we study the effectiveness of this screening mechanism when consumers are uncertain about the quality of the good and resolve this uncertainty through consumption experiences. We estimate a dynamic structural model of forward-looking consumers with heterogeneous demands, both ex-ante and ex-post, for an experience good sold by a monopolist offering a fixed menu of two-part tariffs. Our analysis highlights four elements that influence consumer behavior and affect pricing strategies: beliefs, switching costs, experiential learning, and (ex-ante) mistakes in tariff choice. Despite consumers having, on average, unbiased beliefs, their beliefs conditional on tariff choice are biased. That is, consumers with optimistic initial beliefs tend to choose tariffs with high ex-ante fees and low ex-post prices, while consumers with pessimistic beliefs tend to choose tariffs with low ex-ante fees and high ex-post prices. Combined with high switching costs, this sorting-induced bias implies that high ex-ante tariffs can yield high profits for the firm even after optimistic consumers revise their beliefs. Regarding tariff choice, our estimates suggest that consumers often choose the wrong tariff given their beliefs. Since mistakes tend to be made by consumers near the belief thresholds where optimal plans change, they only moderately affect consumer surplus and profits. Our estimates also imply that tariff menus yield nearly the same profit as a single two-part tariff.

■ SC06

Cambria West

Decision Research II

Chair: Albert N. Greco, Professor Of Marketing, Fordham University, Graduate School Of Bus. Admin., 113 West 60th Street, New York, NY, 10023, United States, agreco@fordham.edu,

1 - Behavioral Aspects of Trade-ins

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Trading in a used product as a part payment for a new model of the product is frequently observed in durable goods markets. The existing literature has primarily examined trade-ins through the lens of normative economic theories. This paper builds upon a literature in the behavioral and psychological arena that examines consumers' differential sensitivity to gains and losses as an explanation for their differential responsiveness to different types of trade-in offers. Even when a seller keeps the net transaction price the same, she can induce different preferences for consumers by increasing (decreasing) the trade-in allowance for the used product, while increasing (decreasing) the list price for the new model. We describe three studies to investigate the impact of changing the magnitude of the trade-in-allowance. Study 1 shows that even when the net transaction price is the same and the trade-in allowance is relatively small compared to the new model's list price, consumers prefer the higher valued trade-ins compared to lower valued trade-ins. We observe a preference reversal when the trade-in allowance is relatively large for the same the same net transaction value, consumers prefer lower valued trade-ins compared to higher valued trade-ins. The result can be explained with the two key properties of the value function of prospect theory, namely, the loss aversion and diminishing sensitivity. Study 2 shows that when a reference price is provided across conditions for the traded-in product, the preference reversal observed in study 1 disappears. In study 3, we examine the moderating role of consumer goals on trade-ins. Our results show that prevention goals (vs. promotion goals) make preference reversal stronger.

2 - Consumers' Mental Representation of Complex Decisions

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Typically, research on complex consumer decisions to date has analyzed consumer decision making as a choice process based on the evaluation of consequences of different choice alternatives. This shared focus in analysis has lowered the emphasis on other important aspects of consumer decision making that are less deliberative in nature. The contribution of our study is to investigate one such aspect of consumer decision making, namely consumers' subjective construal of mental representations of decision problems. Our theoretical framework proposes that when faced with complex decisions, consumers (consciously or unconsciously) construct a simplified mental representation of the decision that then allows them to interpret the situation with which they are faced and to evaluate alternative courses of action. Part of the construction of the mental representation involves generating an individual-specific mental model that represents the variables of the choice alternatives and the situation that are relevant to the decision. The mental model together with an individual's set of alternative actions and his or her situation-specific selection of required benefits when undertaking these actions constitutes what we refer to as the mental representation of the decision. This mental representation provides the basis for consumers' subsequent evaluations of alternative actions. We empirically test the proposed theoretical structure using data on consumers' mental representations of decisions across four different shopping scenarios. These data were recorded in interviews with 120 individuals based on a semi-structured interview protocol.

3 - Demand-Related Information, Managerial Over-Acting, and Marketing Productivity

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The overall impact of marketing activities on firm performance constitutes one of the most fundamental questions in our discipline. Naturally, marketing's provision of demand-related information (DRI) constitutes a major pillar in this context. Almost "by default" exists the presumption that provision and usage of DRI leads to more satisfied consumers, more products, and, subsequently, higher profits. Remarkably, very little research has investigated the overall effects of DRI. Further, few pieces of research have empirically investigated the impact of DRI on competition. To explore the effects of DRI, we collect primary, experimental data. The results indicate that DRI indeed leads to more products, a higher primary demand and a higher satisfaction of customer preferences. Also, firms provided with DRI set prices which correspond less to a product's quality. Surprisingly and more importantly, however, we do not find significant impacts of DRI on firms' profitability. These findings suggest that managers tend to over-act. By over-acting we mean that managers pursue too many new product activities that only seemingly amount to new product opportunities. Importantly, such over-acting diminishes firm profits and marketing productivity. This occurs even though those new products do have a positive profit. Furthermore, the often applauded ideal of "segment size one" may turn out to be a myth as managers may over-segment and, thus, cause marketing's productivity to decline. The relationship between DRI and competition requires a clear definition and measure of competition. Comparing several alternative measures of competitive intensity, we find ambiguous results regarding the relationship between DRI and competition.

4 - The Scholarly Book Buyer's Decision Process: A National Survey of University Faculty

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This paper reports on a national survey of university faculty regarding the factors that influence their purchase of scholarly books. A total of 233 faculty members from 11 disciplines in over 50 universities were surveyed. The survey gauged the impact of a series of factors that influence scholarly book purchases for research and teaching. In addition sources of information used to locate scholarly books of interest were identified and contrasted across fields of study. The survey also examined trends in the respondent's book buying behavior, their propensity to purchase used books, and their usage frequency of the university library systems for ontaining access to scholarly books.

■ SC07

Cambria East

High Technology - II

Chair: Mrinal Ghosh,m Michigan Business School, 701 Tappan Street, Ann Arbor, MI, 48105, United States, mghosh@umich.edu

1 - The Impact of SFA Systems on Sales Force Activities and CRM Processes

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SFA systems adoption has been a major field for marketing research in the last couple of years since Speier and Venkatesh (2002) study. Much of the research based on information systems adoption models have focused on identifying specific antecedents of system adoption in the Sales Force area. Very few have studied the impact of SFA IS implementation on organizations. The goal of the current study is twofold: (1) to investigate the effect of SFA systems use on sales force activities, and (2) to explore the impact of SFA adoption and linked activities on CRM processes. We predict that SFA use increases activities productivity in different ways and that CRM processes are mainly impacted in the relationship maintenance phase, and less in the initiation and termination phases. We collected data from 48 branch agencies of a BtoB service firm comprising 232 salespeople and 48 sales managers over a 6 months period of time following the SFA IS implementation. The central feature of this database is the set of sales force productivity measures provided for each type of customer-related activity (e.g., informing, call planning, reporting and face-to-face selling activities) conducted by each salesperson. We also collected sales force self-reported data concerning the CRM processes —Relationship initiation, maintenance and termination, as defined by Reinartz, Krafft & Hoyer (2004).The final set of measures covers the different SFA functionalities levels of use. Using a PLS modelling approach, this empirical study produces some interesting findings supporting most of our hypotheses, depending on the type of sales force activity.

2 - Is Internet Use Associated With Different Choice Patterns for Automobiles?

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The Internet has significantly impacted the information search behavior of consumers. Many consumers regularly consult Internet sources for information on product categories, product brands, manufacturers, and retailers, particularly when making a purchase decision about a major durable good. Automobiles are one example of such goods. The Internet has become a major source for information on automobile brands, attributes, and dealers. While much research has been done on the impact of the Internet on automobile information search behavior and search costs, there is limited work on the impact of the Internet on the ultimate automobile choice. This paper attempts to address this gap. It examines whether Internet use is associated with different choice patterns for automobiles. Discrete choice analysis is done on automobile choice data. The results suggest that Internet use shifts choice towards the information that is found online.

3 - Calibrating Consumer Preferences for Large Sets of New Services — An Application of ASEMAP

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As devices, applications, and wireless communications converge, new products and services are being developed and introduced at a rapid rate. The key players developing wireless products and services face a significant challenge - namely, calibrating consumer preferences and using the insights to prioritize investment, R&D, handset and application development, and marketing efforts. While calibrating consumer preferences is a requirement across any product category, the sheer number of emerging new services exacerbates the challenge in wireless. This paper demonstrates the use of an innovative new methodology well-suited for investigating large sets of services. ASEMAP, developed by Srinivasan and Netzer (2005), employs a real-time, dynamic algorithm to structure the particular conjoint tasks presented to an individual. As a result, the approach extracts maximum information while minimizing the research burden on individual respondents. The methodology yields reliable, individual-level preferences (or utilities) for each service. In this paper, we demonstrate how the methodology can be used to (i) predict which services are likely to be most successful; (ii) identify market segments based on the services valued; and (iii) determine bundles of services that naturally "go together." We present results from a recently completed study in N. America that examined some 16 wireless applications, including messaging, LBS, m-payment, mobile entertainment, and others. We describe the approach, predictive validity, and value of insights in selecting and managing rapidly expanding portfolios of new products/services.

4 - An Empirical Investigation Of Restricted Technology License Rights In Marketing Agreements

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Chae Un Lim, Stephen Carson, Mrinal Ghosh, George John

Technology marketing agreements often include licenses that are very different in the extent to which they transfer ownership rights from the originating to the recipient firm. Structuring these agreements properly is plainly important to motivate the recipient firm and to protect the originating firm particularly in international contexts where problems of intellectual property rights are very prominent. We develop governance arguments arising from transaction cost economics to suggest that ownership and usage rights can be structured efficiently so as to protect the upstream firm's property rights while simultaneously motivating the downstream partner. Specifically, we argue that properly devised restrictions simulate an authority relationship. We test our hypotheses using data obtained on 260 contracts between foreign originators and Korean recipients. We find strong support for our governance explanations. Restrictions on ownership and usage are more pronounced as it becomes more difficult for the originating firm (a) to articulate/specify the boundaries of the technology via documentation, (b) to evaluate the recipient's performance with respect to contractual obligations, and (c) to predict the potential applications of the technology. Conversely, greater ownership and usage rights are provided to the recipient when the technology's evolutionary path is more uncertain. Our data provided no support for the viewpoint that ownership and usage restrictions principally reflect the market power of the trading parties. Implications for theory and practice are discussed.

■ SC08

Westmoreland West

Pharmaceutical Marketing I: Empirical I/O

Chair: Harikesh Nair, Assistant Professor of Marketing, Stanford University, 518 Memorial Way, Graduate School of Business, Stanford, CA, 94305, United States, harikesh.nair@stanford.edu

1 - The Role of Free Samples in the Pharmaceutical Industry: An Empirical Analysis

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The pharmaceutical industry spends close to eleven billion dollars on providing free samples to physicians. These free samples are meant to be dispensed to patients, with the expectation that they will lead to long-run usage of that drug. In this study, we investigate the role of sampling in the prescription decision of the physician. In general, there are two reasons why a physician may choose to dispense samples. First, physicians typically are a priori uncertain about the response to a drug for a specific patient. This leads to an incentive to dispense samples to patients to experiment and learn about the efficacy of drugs for that patient. Second, physicians may dispense samples to patients with inadequate coverage i.e., samples in this case are provided as an implicit subsidy. An understanding of the mechanism through which free samples impacts prescription decisions of patients would be useful to firms as well as marketing researchers. From the firm's point of view, the demand side question is whether sampling increases long-run demand and why. From the supply side, the firm needs to develop a sampling plan that includes amount and frequency of sample drops. We empirically investigate these issues using a unique dataset that merges physician prescription and sampling behavior with patient fulfillment records. Our analysis measures the effect of sampling on both short-run and long-run prescription decisions of physicians. We also distinguish between the experimentation and subsidy roles of sampling and to understand the conditions under which these roles come into play.

2 - The Dynamics of Drug Detailing

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In the marketing of ethical drugs, the role of detailing visits is to educate physicians about the quality of drugs as well as to build brand goodwill. Physicians also learn about drug quality from their own prescription experiences. The impact of detailing expenditures therefore spills-over beyond the current period. We expect forward looking firms to adopt a dynamic approach to determine optimal detailing levels and maximize long-term profits. In this study we develop a structural model of dynamic oligopoly competition to explain the scheduling of detailing by competing brands of drugs through time and across physicians. We assume that the observed data are consistent with Markov perfect equilibrium (MPE). The model is estimated using a two stage estimation method proposed by Bajari, Benkard, and Levin (2005). In the first stage, physician-level demands are recovered using a hierarchical Bayesian structure model, and physician-level policy functions are estimated given each firm's observed actions. In the second stage, the remaining structural parameters are estimated using the optimality conditions for equilibrium. The parameters are then used to evaluate profits of detailing under various scenarios through policy simulations.

3 - First-Mover Advantage In Generic Drug Entry

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Historically, pharmaceutical markets have attracted numerous generic firms to enter upon expiration of the brand firm's patent. In this paper, we take a close look at competition in the generic market during the first three years after patent expiration. Specifically, we examine whether the first generic entrant gains a market share and profit advantage due to its early entry. Such an advantage may arise due to the sales channel occupation, which comes from switching costs of pharmacists and patients, and firms' endogenous abilities. We specify a random effect nested logit model of competition that allows for competition between the brand drug and generics, and within multiple generic drugs. The model accommodates the effects of prices, detailing, sampling, journal advertising, time in the market since generic entry, and molecule-specific characteristics. The model is estimated on cross-section time-series data for about 60 molecules in which the brand drug loses patent exclusivity during the period of the data.

4 - Asymmetric Peer Effects in Physician Prescription Behavior: The Role of Opinion Leaders

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Social interactions play a role in prescription drug-choice by facilitating information transfer about changes in the therapeutic environment. Anecdotal evidence exist that non-specialists rely on prominent physicians, called "opinion leaders", to help reduce the uncertainty around their prescription choices. Our main empirical question is to test for, and to measure the extent of the peer effect of an opinion leader on the prescription behavior of other physicians. Peer effects manifest themselves as correlations in prescription patterns. Past literature studying social interactions in this context has typically ignored the fact that correlated prescriptions could be generated by correlated marketing activity. Past literature has also lacked access to precise data on a physician's social network and used a variety of geographical proxy measures. This approach confounds a true peer effect with unobserved geography-specific shocks. Finally, past research has also assumed that peer effects are symmetric between two physicians. We overcome these limitations by using a new dataset that contains detailed prescription and detailing information, and self-reported social networks. These data help us identify each physician's social network and control for the marketing activity at the physician level. We use a difference-in-difference approach, using the prescription behavior of other physicians at the location of the focal physician and the opinion leader as a control for unobserved shocks. Our estimates indicate important peer effects in prescription choice. We use our estimates to explore the implications for targeted detailing of opinion leaders.

■ SC09

Westmoreland Central

eCommerce IX: Channels

Chair: Anita Elberse, Assistant Professor, Harvard Business School, Soldiers Field, Boston, MA, 02163, United States, aelberse@hbs.edu

1 - Third Party Distributor in the Hotel Industry: An Analytical Study of their Contract Design

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Nowadays many hotels are selling their rooms through third party discount websites, such as expedia.com/hotels.com, orbitz.com, and Travelocity.com, etc. Using third party vendors is like a double-edged swore. The hotels benefit from an enlarged potential market by reaching price sensitive consumers. However, hotels also face the competition from those third party vendors and hotels need to pay a markup fee to the discount websites because of those services. InterContinental Hotels Group (the hotel giant owns Holiday Inn) recently terminated the contract with expedia.com because of all those conflicts. On the other hand, the third party discount websites try to increase their enrolled hotels so that they could benefit from the Network Externality effect. The author uses a game theoretical approach to study the contract design between hotel chains and third party vendors. The research incorporates two characteristics of this industry, differentiated pricing strategy and network externality effect, into a standard Stackleberg model. Analytical results and managerial implications are presented.

2 - How Does Location Shape Consumer Use of Online Channels?

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We examine how changes in the local supply of goods and services in the offline world changes consumer behavior online. For example, retail markets for consumer products such as books, music, and electronics have traditionally been predominantly local. As local markets increase in size from small towns to large cities, consumers are affected in two ways. First, holding product offerings among retailers fixed, an increase in the size of a location encourages new firm entry that in turn lowers prices and improves service levels. Moreover, larger markets also allow retailers to provide a wider array of product offerings targeted to market segments that would be infeasible in smaller market settings. The emergence of new online retailing channels may act as a substitute for the benefits of urban concentration both by offering lower prices and by providing increased product differentiation for rural consumers. The open question is, which of these phenomena are more important: how do consumers use online channels to substitute for offline supply deficiencies, and how does this vary by location? We explore this problem using data from Amazon on the top twenty books, CDs, DVDs, and electronics for over 8626 unique locations over 10 months. In addition to this, we have information on changes in local retail competition as measured by openings and closings of Wal-Mart, Barnes and Noble, Target, Best Buy, Blockbuster, and Tower Records stores. We also look at the stock of local retail competition through the US census county business patterns data. We show that, even controlling for local preferences, local competition and online purchases are related.

3 - Electronic Markets, Physical Markets, and Hybrid Markets: An Empirical Comparison in a B2B Context

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The extent and inevitability of the migration from physical to electronic markets is a controversial topic, with some contending that electronic markets will supplant physical markets because of access and efficiency improvements and others contending that physical markets will continue to prosper despite the potential of information technology to make them anachronisms. This research investigates this issue by analyzing over 17,000 transactions in the wholesale automotive market conducted in physical, electronic, and hybrid market formats over a 15-month time span. The unusual design of the study helps to overcome many of the limitations of past research that has compared physical markets to electronic markets, such as uncontrolled heterogeneity in market participants, products, and policies, thereby improving our ability to isolate the strengths and weaknesses of different market formats. The results indicate that products have higher prices and are more likely to sell in the physical market format than in the electronic or hybrid formats, but that product condition and certification play important moderating roles. There is some evidence that outcomes in different market formats converge over time due to participant learning effects, but this is apparent in only one of the hybrid formats.

4 - Entertainment Products in Online and Offline Channels: An Examination of the "Long Tail"

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The rise of online channels facilitates the distribution of a wide range of products and services. As exemplified by the success of leading online retailers such as Amazon (which started out selling books), Apple (with its iTunes music store) and Netflix (a DVD rental business), entertainment products are among the most heavily traded goods online. Many industry insiders believe that digital distribution will have a profound impact on the media and entertainment industry. One phenomenon that is drawing particular attention is the seemingly sharp increase in the variety of products offered and consumed through online channels. Dubbed the "long tail" theory, it mostly follows from the idea that, on the supply side, online retailers are able to catalog and provide a much larger number of products than bricks-and-mortar stores in a cost-efficient manner and, on the demand side, that consumers are subject to lower transaction and search costs to discover obscure products using online search and filtering tools. In this study, we use econometric modeling techniques and a comprehensive data set covering home video sales and rentals at an aggregate and individual level obtained from Rentrak, Nielsen VideoScan, and Netflix to investigate the variety of online and offline offerings and the distribution of revenues across titles. Among other things, we assess whether the availability of obscure "niche" products increases overall demand or merely substitutes the demand for more mainstream "hit" products. Our findings shed light on effective product portfolio strategies for entertainment companies as well as the valuation of content libraries.

■ SC10

Westmoreland East

Channels IX: Relationships

Chair: Tarun Dewan, Associate Professor, Ryerson University, 350 Victoria Street, Toronto, ON, M5B 2K3, Canada, tdewan@ryerson.ca

1 - Performance Implications of Relationship Sub-networks in Channel Agency Relationships

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The paper focuses on examining how multiple channel agency relationships affect a channel member's market performance. Through incorporating organizational fairness theory with transaction cost analysis and agency theory, a relationship sub-network typology is developed to categorize a channel principal's different structural relational configurations of agency relationships. Four categories of relationship sub-networks are identified through establishing a contingency table based on two variables at the sub-network level: (1) the diversity of a channel principal's dependence levels on its agents, and (2) the configural pattern of agents' fairness perceptions. Drawing on a relational embeddedness perspective, it is predicted that these four relationship sub-networks have differential effects on a channel principal's economic effectiveness. The predicted effects are first examined through analytical models and simulations. Then survey data will be collected from the farm industry and multiple statistical tools, including cluster analysis, moderated structural equation modeling and MANOVA, will be used to analyze the hypothesized relationships. The paper offers important theoretical and managerial implications by highlighting the fact that relationship outcome is the result of choices and interest alignment of both channel principals and channel agents. The market success of a principal firm depends on its maintenance of a set of balanced relationships with multiple agents and its managerial practices to motivate agents to work in its best interest through the fair distribution of relationship outcomes, task allocation procedures, and interpersonal interactions.

2 - What Leads to Long-term Relationships? An Event Study of Inter-firm Asymmetries and Benevolence

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Although much has been written about the characteristics and benefits of long-term buyer-supplier relationships, little is known about the antecedents to long-term buyer-supplier relationships. In this study, we empirically assess the impact of inter-firm benevolence on the performance of buyer-supplier relationships by using the event study technique, which measures the abnormal stock returns in the time windows surrounding the announcements of buyer-supplier relationship formations to evaluate the stock market's expectations for these particular events. Inter-firm benevolence is defined as the degree to which one firm is concerned about the other firm's welfare in a buyer-supplier relationship. A stock market-based measure of inter-firm benevolence is developed and applied in this study. We hold that both buyer and supplier's incremental market values incorporate expectations regarding future cash flows that result from the formation of this relationship. More interestingly, prior research suggests that asymmetrical relationships are inherently unstable because the high power firm, acting in its self-interest, takes advantage of the low power firm. In this study, we investigate the impacts of inter-firm asymmetries on the performance of buyer-supplier relationships, and suspect that asymmetric buyer-supplier relationships would sustain in the long-term if inter-firm benevolence presents. Furthermore, we calculate total inter-firm benevolence and total power and test their long-term impacts on different types of buyer-supplier relationships. Thus, based on the data and modeling, we propose and empirically examine whether inter-firm benevolence may determine buyer-supplier relationships, especially asymmetrical buyer-supplier relationships, to pay off in the long-term.

3 - Collaboration Behavior and Interorganizational Governance: An Integrative Approach

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The focus on compliance and cooperation as the primary governance mechanism for understanding interorganizational relationships is increasingly less reflective of today's supply chain networks. We develop a framework that integrates dyadic and network level collaboration strategies for buyer-seller networks in a supply chain. At the dyadic level, we analyze the choice that a channel stakeholder faces in collaborating with its partner between; cooperation (e.g., idiosyncratic investment and close coordination for mutual or its partner's interest) and compliance (e.g., minimal investment and coordination for self-interest while complying with its partner's request). Similarly, we analyze two aspects of network level collaboration: competition (e.g., implementing a proprietary information system among sub-network members against other channel stakeholders) and cooperation (e.g., forming an industry association to establish network-wide open standards). Based on the proposed integrative framework, we examine the impact of different collaboration strategies for stakeholders involved in an enterprise wide technology adoption decision. Specifically, we develop an Agent-Based Model to simulate costs and benefits for alternative collaboration strategies a stakeholder might utilize in determining the firm's technology adoption strategy. We show that dyadic collaboration is embedded in the network level collaboration and the outcome of dyadic collaboration is conditioned by network level collaboration. Our study contributes to our understanding of interorganizational collaboration behavior among channel stakeholders and interorganizational technology adoption behavior.

4 - Cooperative Advertising within Distribution Channels

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Manufacturers and Retailers are both known to advertise. Though channel members are independent decision makers, their advertising decisions are usually interdependent — moreover, we frequently observe manufacturers and their downstream firms collaborate in so-called "cooperative advertising" programs. We look at the interactions between channel members advertising decisions both with monopoly retailers and competing retailers. We determine conditions for retailer participation as well as conditions for the manufacturer to induce one or more retailers to join.

■ SC11

Washington

Services Marketing II

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1 - A Model of Active Learning for University Students

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In this paper, we examine the phenomenon of treating students as "active learners" in the context of university-level undergraduate marketing education. We propose and test a 2-stage model that attempts to explain how the amount of work students perform in a course ("student input") affects "student attitudes" (satisfaction, commitment, and perceived support for students), which in turn determine "student voluntary performance" (student involvement, performance, participation, and complaining behavior). With a sample size of 257 undergraduate business students in the marketing concentration in an east coast university, we perform the analysis using structural equation modeling, and find significant relationships for 12 out of 18 hypotheses. An important implication that emerges concerns how educators could transform students into active learners.

2 - Intellectual Structure of Marketing Discipline for 1983-2003: An Author Co citation Analysis

Vivek Natarajan, Graduate Teaching Associate, Department of Marketing, University of Texas, Arlington, 701 South West St #234 Box #19469, Arlington, TX, 76010, United States, viveksn@uta.edu, Xueming Luo, Sridhar Nerur

This study investigates the intellectual structure of the marketing field through author co-citation analysis. Authors/marketing scholars are the units of analysis and all the citations from Science Citation Index and the Social Science Citation Index are included. We trace the evolution of the intellectual structure of the field during the period 1983-2003. The analysis provides insights about the influence of individual authors as well as changes in their influence over time. This study also enables us to discern paradigm shifts (e.g., service logic; relationship marketing) during the course of evolution of the discipline. Keywords: author co-citation analysis; pathfinder analysis; information theory; marketing history; bibliometrics

3 - MSc in Marketing vs. MBA: What Marketing Skill Development Priorities?

Scott Dacko, Lecturer in Marketing and Strategic Management, Marketing and Strategic Management Group, Warwick Business School, University of Warwick, Coventry, CV4 7AL, United Kingdom, S.G.Dacko@warwick.ac.uk

Growing worldwide interest in specialist master's programs in marketing has led some business schools to now offer MSc programs in marketing as an alternative to their traditional MBA programs. While it is known that MBA students seek to develop key marketing skills in addition to their acquiring marketing knowledge, little is known about the extent that MSc program students are motivated to develop marketing skills. This study examines MSc program student priorities for marketing skill development, focusing on five key skills considered to be important for marketing careers as identified in the extant literature: leadership, decision-making, analytical, communication, and interpersonal skills. Data from a new MSc program at a major business school are analysed and assessed to provide insight into skill development motivations. The findings are discussed relative to the literature on marketing skills and implications for the design of specialist masters programs in marketing are raised. Another aim of the research is to enable comparisons with the motivations for skill development found in traditional MBA programs. Consequently, the results of the MSc program study are compared and contrasted with findings for a full-time MBA program, where the focus is on the relative extent that five key marketing skills are sought to be developed by the programs' participants. Strategic and pedagogical implications for marketing educators involved in both the MSc and MBA programs are discussed.

■ SC12

Fayette

CRM III

Chair: Mike Lewis, Assistant Professor, University of Florida, 204 Bryan Hall - Marketing Dept., Gainesville, FL, 32611, United States, mike.lewis@cba.ufl.edu

1 - Estimating Complaint Management Efficiency

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Complaints are an everyday reality for firms that encounter consumers in service settings. Such complaints are almost always a product of negative service encounters and the failure of the service infrastructure within the firm. It is not surprising then that firms invest large amounts of resources in the management of complaints. Complaint management as a process includes all responsibilities, activities and organizational relationships pertaining to the mitigation and elimination of consumer complaints and dissatisfaction. This paper introduces a novel methodology to assess and quantify the efficiency of complaint management systems in marketing organizations. The basic idea behind our framework is to measure the ability of the firm to filter out negative experiences before they turn into actual complaints. We term this measure complaint management efficiency (CME). Our methodology uses data on negative customer experiences and consequent complaints to calibrate an empirical model that obtains a clear measure of this efficiency. In particular, we exploit the hierarchical nature of customer complaining behavior to derive our measure of CME using sophisticated econometric methods. As an illustrative case study we focus on the airlines industry during the period 1998-2001. This period also contains a natural structural shift in the commitment of major airlines to improve service and better manage negative service encounters. We use our framework to compare complaint management efficiency before and after the airlines' voluntary public commitment to improve the quality of service. Our results demonstrate some interesting inter-temporal patterns in this industry.

2 - Understanding Customer Commitment and its Impact on Customer Value

Gina Pingitore, Dir-Chief Research, J.D. Power and Associates, 2625 Towngate Road, Westlake Village, CA, 91361, United States, pingitore.gina@jdpa.com, Jay Meyers, Adriana Gigliotti

How can a brand engender loyalty from its customers? Typically, loyalty is measured as the intent to repurchase or recommend a product to a friend or colleague. These measures, while important, only describe the outcome of feeling loyal, not the reasons for being loyal. We explore the factors that create a loyal customer base. A review of the commitment literature in both Marketing and Psychology demonstrates that when a customer is emotionally attached and committed to a brand or product they have the greatest likelihood of behaving loyally. We leveraged these theoretical models of attachment and combined them with our earlier work in customer satisfaction to develop and test our Customer Commitment Model. Customer Commitment, defined as the level of emotional attachment to a brand's product or service, is formed by the combination of four primary drivers: the customer's experience with the product/service; their image of the brand; market conditions such as ease of switching and number of alternative options; and the customer's individual propensity toward loyalty. We tested our model in industries hypothesized to elicit varying degrees of commitment: banking, investment services, wireless services, airline travel, rental car, and restaurants. Sample sizes were robust ranging from 3,000 to 58,000 observations. Using structural equation modeling, we tested the direct and indirect impact of each of these factors on Customer Commitment and Customer Value. In this presentation, we will show that Customer Commitment is a better predictor of Customer Value (e.g., they spend more, stay longer, use more services, and recommend the product more often) than satisfaction or image alone.

3 - Brand Building and Customer Relationship Management: An Analysis of Alumni Giving Patterns

Younghan Bae, Phd. Student, University of Florida, Bryan Hall, Gainesville, FL, United States, young.bae@cba.ufl.edu, Mike Lewis

There is substantial variation in the degree to which marketing mix elements are included in customer relationship and customer lifetime value models. In much research there are implicit assumptions that the marketing mix is unchanging or endogenously determined. As a consequence of these assumptions, customer lifetime duration and value can be evaluated without direct consideration of marketing policies. In our research we consider the effects of non-direct marketing interventions on customer metrics. Specifically we evaluate the gift giving behavior of alumni of a large southern university as a function of covariates related to athletic success and academic rankings. The analysis is conducted using a Bayesian Tobit model to estimate individual level parameters In addition to demonstrating the importance of non-direct marketing interventions on customer assets the results yield findings about the relationship between athletic success and alumni giving.

■ SC13

Somerset West

Pricing VII

Chair: Bernd Skiera, University of Frankfurt, Mertonstrasse 17, Frankfurt, D, 60054, Germany, skiera@wiwi.uni-frankfurt.de

1 - Signaling and Sacrifice Effects of Price

Franziska Voelckner, Assistant Professor, University of Hamburg, Von-Melle-Park 5, Hamburg, 20146, Germany, voelckne@econ.uni-hamburg.de, Henrik Sattler

Price plays two distinct roles in consumers' evaluation of product alternatives. At a minimum, price represents the amount of money that must be sacrificed to satisfy consumption needs (sacrifice effect of price). However, many consumers perceive price in a broader sense than strictly as an outlay of economic resources. For example, consumers use the price cue as a signal to indicate product quality and therefore perceive price as playing a positive role (signaling effect of price). The objective of this research is to enhance the understanding of the dual role of price by empirically studying the variables that drive the two price effects and the association of these drivers with several consumer characteristics. We model the sacrifice and signaling effects of price within a choice-based utility-formation framework. We employ a structural equation model to analyze the relationships between the separately measured price effects and their underlying drivers and to analyze the association of these drivers with several consumer characteristics. The analyses show that the signaling effect is significantly driven by price-quality-beliefs, the prestige value of high-priced products and hedonistic effects. The sacrifice effect of price is strongly associated with pure allocative effects and transaction utility. Furthermore, the five drivers of the signaling and sacrifice effects of price are associated with different consumer characteristics. The differences in the psychographic and demographic characteristics form the basis for designing and implementing communication and pricing programs.

2 - Price Skimming Paradoxes

Gary Gebhardt, Assistant Professor, University of South Florida, 4202 E. Fowler Avenue, BSN3403, Tampa, FL, 33620, United States, ggebhard@coba.usf.edu

Managers in new and growing markets often use price skimming to maximize firm profits. Relying on conceptions of distributive and procedural justice, I suggest price skimming can create consumer perceptions of unfairness, negatively affecting satisfaction and behavioral intentions. Existing customer pricing policies may moderate these effects, depending on whether policies are distributively and/or procedurally just. Four experimental studies support these assertions. This research reveals a managerial paradox: price skimming, thought to maximize firm profits, may be a suboptimal strategy in some markets. Instead, most-favored customer pricing policies are jointly optimal for consumers and firms, revealing a consumer welfare paradox.

3 - Measuring Willingness-to-Pay with Choice-Based Conjoint Analysis

Sven Theysohn, University of Frankfurt, Mertonstrasse 17, Frankfurt, D, 60054, Germany, theysohn@wiwi.uni-frankfurt.de, Sonja Gensler, Bernd Skiera

Determining optimal prices for bundles or different versions of products requires knowledge about consumers' willingness-to-pay (WTP) for bundles and products. Although conjoint analysis has proven to be a very valid instrument for measuring consumers' preferences for a bundle or product, its ability to estimate consumers' WTP is limited. The reason is that preferences estimated by traditional Conjoint Analysis cannot be transformed into WTP unless no-purchase options are considered. The latter, however, is usually not the case. Choice-Based Conjoint Analysis mimics much closer consumers' purchase decision process and could also consider consumers' decision not to buy. Yet, traditional Choice-Based Conjoint Analysis does not estimate part-worths at an individual level, which is essential to obtain individual WTP. Nowadays, Hierarchical Bayes and Finite Mixture Models allow estimating part-worths at an individual level in Choice-Based Conjoint settings. Based on those developments, we propose a new method to transform the resulting product utilities into WTP. In two large empirical studies, we analyze the feasibility and the validity of our method to measure WTP and compare our results to the measurement of WTP via contingent valuation. Our results show that the proposed method has a high validity, but requires a design so that consumers choose the no-purchase option at least once. Keywords: Willingness-to-Pay, Choice-Based Conjoint Analysis

4 - Enhancing Conjoint-analysis to Estimate Willingness-to-pay Function

Agnieszka Prokopowicz, University of Frankfurt, Mertonstraße 17, Frankfurt, Germany, prokopow@wiwi.uni-frankfurt.de, Bernd Skiera

Willingness to pay is one of the most important concepts in marketing. Various methods have been developed in order to elicit willingness to pay (e.g., contingent valuations, experimental auctions, or conjoint analysis). Whereas research has so far focused on the single unit case applicable in the product area, e.g., notebook (Jedidi and Zhang 2002), variable unit case applicable in services (e.g., Internet connection) has not been investigated yet. As opposite to single unit case, in variable unit case we no longer talk about willingness to pay defined as a maximum price a buyer is willing to pay for a given quantity of a good but about willingness-to-pay function which describes the amount that a consumer is willing to pay for the quantity q. The importance of willingness-to-pay function is very pronounced in the nonlinear pricing where the average per-unit price varies with the quantity being purchased. The advantage of being able to estimate willingness-to-pay function stems from the possibility to predict simultaneously tariff choice and usage choice decisions. Therefore, our objective is to develop a methodology that will allow for willingness-to-pay function estimation. Conjoint analysis that has proven to be a very valid measurement instrument to estimate individual utility functions will be used. In an empirical study, we apply and test the validity of our approach and analyze which functional forms are most appropriate for the willingness-to-pay function. We also show that our approach allows to estimate the effects of different nonlinear pricing schedules on market shares and market size, split up into the number of market participants as well as the quantity being consumed by every individual market participant.

■ SC14

Somerset East

Mktg. Strategy VIII: Firm Performance

Chair: Denish Shah, University of Connecticut, 2100 Hillside Road Unit 1041, Storrs, CT, 06269, United States, dshah@business.uconn.edu

1 - Return on Marketing Investment: Integrating Tactical and Strategic Actions

Ashish Sinha, Victoria University of Wellington, 1103 Rutherford House, SMIB, Wellington, New Zealand, ashish.sinha@vuw.ac.nz, Rajendra K. Srivastava, Mukesh Bhargava

Two independent but important developments provide the impetus for the convergence about marketing's role in an organization. The first is the need for greater accountability of marketing expenses in view of the shrinking resource base, cost-cutting environment and controversial and dismal results (Clancy and Stone 2005). The second theme is based on linking marketing activity to the overall financial measures (including intangible assets) (Srivatava, Shervani and Fahey 1998; Doyle 2000). In this research, we clarify and operationalize and test some of the linkages between the marketing mix decisions and the financial outcomes that these activities create. We model the Net Present Value (NPVs) of future cash flows for marketing mix activities for a portfolio of brands based on a unique data set that includes both price and cost data (in addition to marketing mix variables, such as feature, display, distribution and advertising stock) for a period of two years. A distinguishing feature of this research is that this research will attempt to quantify both negative and positive impact of marketing mix activities on enhancing and accelerating cash flows as well as on residual (long-term, carryover) cash flows. The depth of both sales and financial information allows us to calculate the NPVs at different levels of product (brand and portfolio) and geographical aggregation, therefore providing managerial insights for investment decisions of these marketing mix variables.

2 - Myopic Marketing Management:The Phenomenon and Its Long-Term Performance Consequences

Natalie Mizik, Columbia U, 3022 Broadway, Uris Hall, Room 513, New York, NY, 10027, United States, nm2079@columbia.edu, Robert Jacobson

We present evidence that firms engage in myopic marketing management. In an effort to inflate current-term earnings to give the appearance of improved long-term business prospects (and thereby enhance stock price) managers tend to reduce marketing expenditures. We show that the financial markets are aware that earnings inflation is being practiced, but that they are not fully distinguishing between firms engaging in myopic marketing management versus those that do not. Our results indicate that while myopic firms are able to temporarily inflate their stock market valuation, in the long-run, as the consequences of cutting marketing spending become manifest, they have inferior stock market performance. We propose some actions that might be taken to reduce the incentives for myopic behavior.

3 - An Empirical Study on Marketing for Stock Investors : Segmentation and Advertising Effect

HwaYeon Lee, lecture of School of Management, Sungkyunkwan University, Myungrundong, jongrogu, Seoul, South Korea, yeon1220@hotmail.com, PilHwa Yoo

Until recently, the investors have not received much attention in the marketing literature, since stock markets were thought to be efficient and investors were assumed to be rational in their investment decision. The primary purpose of this paper is to show that marketing actions (particularly advertising) for stock investors can improve investor's investment decisions and then to find out how effective the investor advertising can be. This paper used an experiment design on the basis of investor type (risk averter, risk neutralist, risk taker) and advertising type (risk averter, risk neutralist, risk taker), and then measured investors's stock allocation decisions (stable stock, growth stock, high-return stock) after exposure to experimental ads. The results of the study indicated that each investor advertising can not only influence investors's specific stock allocation, but also bring about significant differences within and among investor segments. The role of advertising in enhancing consumers's awareness and then influencing their choice behavior was confirmed by the relationship between advertising and each investor type's stock allocation. In addition, the increases in stock allocation had significant differences among investor type, which can be explained by the advertising's risk reduction role in reducing the consumer's perceived risk and uncertainty associated with the advertised stock. From a managerial perspective, the findings of this paper imply that if a firm is interested in acquiring competitive advantage in the capital markets, marketing activity for investor may be useful because it has the potential to influence investor's investment behavior, and increase stock trading volume.

4 - Linking Marketing-Mix Variables to Firm's Performance

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One of the biggest challenges facing managers today is to make marketing accountable. The gravity of this issue was revealed in AMA's recently concluded "Marketing Accountability" study and continues to be one of MSI's top research priority areas for 2004-2006. However, there are but a handful of studies that have attempted to analyze the financial consequences of a firm's marketing actions. Moreover, these studies have been constrained by the non-availability of complete marketing-mix data such as Sampling and PR (public relations) and/or marketing cost and budget data. In this study, we seek to address the financial consequences of the firm by employing a complete set of marketing-mix variables for the primary firm and the competing firms, as well as the actual marketing cost and budget information for the primary firm. The study seeks to answer the following substantive questions: (a) how does marketing influence a firm's performance when we account for all possible marketing-mix variables and effects (including main, interaction, lead and lag effects)? (b) do the effects change over time and/or across geographical sub-markets? (c) how can a firm allocate resources to maximize sales revenue and/or profitability (d) how do the two maximization strategies differ? (e) how dominant are the interaction effects and what are its implications for budget allocation? The answers lead to valuable managerial insights and ROI implications for the marketing function in general.

Saturday, 3:30 - 5:00pm (Session D)

■ SD02

Crawford East

International Marketing - III

Chair: Meng Zhu, Georgia State University, 35 Broad Street, Suite 1344, Atlanta, GA, 30303, United States, mzhu1@gsu.edu

1 - The Influence of Internet on Export Marketing Performance: A Knowledge-based Perspective

Ingrid Beckers, PhD Student, Maastricht University, FDEWB/Department of Marketing, P.O. Box 616, Maastricht, 6200 MD, Netherlands, i.beckers@mw.unimaas.nl, Ko J.C. de Ruyter, Martin G.M. Wetzels, Pieter Pauwels, Luis F. Lages

Although the effect of a firm's Internet usage on its international marketing performance seems straightforward, no academic research has sorted out the importance of this impact. One reason why academic literature remains surprisingly silent on Internet usage and international performance is that this relation is less trivial than intuitively assumed (e.g., Parasuraman & Zinkhan, 2002). Internet usage as such does not ensure sustainable competitive advantage because these technologies are available to competitors as well. Thus, the focus of the current study is not on Internet usage, but on Internet capabilities and the relationship between Internet capabilities, other market-related capabilities, and export marketing performance. The authors offer a conceptual model in which they examine the role of export marketing strategy from a knowledge-based perspective on the firm. Data of 207 Dutch and 115 Portuguese companies were collected, pooled, and subsequently analyzed by means of structural equation modeling. Confirmatory factor analysis and cross-country measurement invariance tests verified the appropriateness of the scales. Results largely support the theoretical model. Export marketing strategy leads to better export marketing performance and it is critical to transform both export marketing knowledge and export marketing capabilities into export marketing performance. However, whereas the effect of Internet capabilities on export marketing strategy is mediated by export marketing capabilities for Dutch firms, export marketing knowledge serves as a mediator for Portuguese firms. Country-level variability of Internet penetration and resource availability are discussed to explain these differences.

2 - Exploring Environmental Consciousness Among Egyptian Consumers

Khaled Gad, Dr., ARAB Academy, College of Management, Technology, Alexandria, 1029, Egypt, khalid.gad@gmail.com

Green marketing and environmental issues are emerging in Egypt and increasing through governmental programs and policies. The aim of this paper is to enable better understanding of some environmental problems in Egypt, Egyptian consumers' awareness and perception of these environmental issues and the green concept. Finally, investigating their willingness to demand and buy environmentally friendly products. Having this aim in mind, two consecutive focus groups were conducted with Egyptian consumers. Results showed that Egyptian consumers' perception of environment is limited to pollution and the negative contribution of human beings against the environment. Nevertheless, Egyptian consumers are increasingly missing the green cover over their lands and the green culture. Analysis indicated that there are some factors which affect Egyptian consumers' knowledge about preserving the environment and their green consciousness. These factors are mainly non-environmental-oriented educational and pedagogical systems, lack of; governmental support and strict system, and incentives and motivation, a gap between knowledge and practice of religion, distrust, low availability of green products, economic pressures in Egypt and passiveness among Egyptian consumers. This paper may offer rich insights about the green context in Egypt, how consumers perceive the Egyptian environment and green products. These insights can induce manufactures to better understand the importance of going green and the necessity of making green products available in Egypt. In addition, it can help the Egyptian government to establish short and long-term plans for environmental management, coordinate local, regional and national environmental protection efforts.

3 - Strategic Brand Management of International Fashion Retailers

Hasan Gilani, Warwick business School, 112, St. Nicholas Street, Coventry, CV1 4BT, United Kingdom, Chicogil@yahoo.com, TC Melewar

The following research paper undertakes the subject of brand management of international retailers and explores different aspects of brand management and identifies the level of brand consistency towards the international markets. This paper starts by examining the different motives and reasons for a fashion retailer to go international and how this process takes place. The literature review would analyse and support the motivation for a fashion retailer going international and expanding its operations in the global market. The focus then dwells onto the marketing strategies of these fashion retailers and in identifying different aspects of branding strategies that position an international fashion retailer in the new global competitive market. Three distinct areas of brand management have been identified to be concentrated upon, whilst devising brand strategy for a fashion retailer. These are brand premium, brand positioning and corporate identity. Although there is much to analyse and determine while discussing these three themes of brand management, yet a general concept can be developed to assess the impact of a fashion retail brand in the international market. The broad research question would be: RQ1: What strategic brand management measures would a fashion retailer take, while entering and competing in an international world? In other words, what measures of retail mix, market positioning, and corporate identity would a fashion retailer take, while entering or operating in an international market. This gives rise to another research question: RQ2: What affects does internationalisation have on the brand management of a fashion retailer?

4 - A Latent Interaction Approach: Assess the Effectiveness of Influence Strategies in Export Channel

Meng Zhu, Georgia State University, 35 Broad Street, Suite 1344, Atlanta, GA, 30303, United States, mzhu1@gsu.edu, Cristian Chelariu, Daniel Bello

Influence strategies are of significant importance to channel performance because desirable behaviors from interdependent channel partners can only be achieved through effective communication and influence tactics. The construct "influence strategy" has been given regular conceptual and empirical attention in the area of marketing channel for several decades. In spite of a rich literature, several fundamental gaps remain. First, researchers tend to assume linear relationships between influence strategies and the channel outcomes, and largely overlooked the interaction effects between influence strategies, and other relevant latent constructs. Second, extant channel literature have centered upon the investigation of the effect of influence strategies on relational outcomes, and mainly ignored the effectiveness of influence strategy in accomplishing firm's market development objectives, such as sales goals, profit goals and growth goals. Third, an overwhelming majority of past studies have been conducted in domestic channel settings. Cross-border macro-environmental forces that may moderate the relationships between influence strategies and channel outcomes have been given little attention. The purpose of this article is to develop a conceptual model that incorporates influence strategies, dyadic dependency, regulatory environment and economic performance in an export channel setting. Using the survey data from a sample of 177 export managers of US industrial manufacturers, we employ an unconstrained SEM latent interaction approach to assess the proposed latent interaction effects of dependency and law enforceability on the effectiveness of various influence strategies. Besides being theoretically insightful, the article also provides rich managerial implications.

■ SD03

Crawford West

Marketing Research - III

Chair: Arnaud De Bruyn, ESSEC Business School, Avenue Bernard Hirsch, Cergy-Pontoise, fr, 95000, France, debruyn@essec.fr

1 - Validating the Relative Importance of Consumer Contacts in Any Category using the Bootstrap Method

Marek Winiarz, Managing Director, MeTHOD-MC, Inc., 14798 Wild Mustang Pl., San Diego, CA, 91935, United States, mwiniarz@method-mc.com, Gordon Wade

Today's fragmented marketing environment has changed the way consumers receive and process information about brands. As traditional means of engaging consumers lose their effectiveness, marketers are responding by spreading their expenditures across a myriad of channels in a frantic attempt to engage the consumer. The result is kaleidoscopic marketing plans with multiple contact points attempting to seize the consumer's attention at some critical touch point. Now marketers must answer new questions such as : Which of these multiple contact points truly engages the consumer? Does the engagement value of a channel vary from category to category? How do I measure the engagement value so that I may prioritize expenditures across all the contact points? Answering these questions in any category requires a rigorous, statistically reliable, yet practical, inexpensive methodology for validating the relative consumer effectiveness of all significant consumer engagement options. This is precisely the methodology we propose to demonstrate. The output of this methodology is category and geographically unique indices of the relative effectiveness of marketing channels. We call these indices "category clout factors" (CCF) To validate the CCF we use the Efron Bootstrap approach because this permits high levels of statistical validity (average contact clout factor +/-2% at 90% alpha) using relatively small samples on a one time basis. This obviates the need for expensive, time consuming computation across multiple audit samples required by classical statistical methods. The practical effect of this approach is to enable a battery of new communication planning tools and techniques heretofore unavailable.

2 - Assessing Pharmaceutical Marketing Effectiveness Using State Space Models

Ernst Osinga, PhD Student, University of Groningen, P.O. Box 800, Groningen, 9700 AV, Netherlands, e.c.osinga@rug.nl, Peter Leeflang, Jaap Wieringa

In this paper we determine the short and long run effects of pharmaceutical marketing on demand. We employ a state space model at the brand-level that accounts for endogeneity and allows for time-varying parameters. Time-varying parameters are needed as experience in model building on pharmaceutical markets has learned that the effects of marketing instruments strongly fluctuate over time. This may explain the way managers allocate marketing expenditures over the brand's life cycle. In the first year, in which sales are increasing rapidly, the expenditures are high. When the sales start to level off, they are reduced. Consequently, relations exist between sales and marketing expenditures, inducing the need for an approach that accommodates endogeneity. We estimate the model using monthly data of several drugs from many categories. We have data on sales, marketing expenditures and competition. The results of the model indicate that the long-term effects of marketing aimed at physicians are different from those of marketing aimed at consumers. In addition, we find that the short-run marketing effects depend on the product's stage in the life cycle.

3 - Advertising over the Business Cycle: A Cross-country Investigation

Barbara Deleersnyder, RSM Erasmus University, Burgemeester Oudlaan 50, Rotterdam, 3062 PA, Netherlands, BDeleersnyder@rsm.nl, Marnik Dekimpe, Jan Benedict Steenkamp, Peter Leeflang

The advertising industry is hit particularly hard during economic contractions. Cutting advertising budgets has traditionally been a very popular reaction by companies around the globe to struggle their way out of the recession. Yet, anecdotal evidence suggests the presence of considerable cross-country variability in the cyclical sensitivity of advertising expenditures. We conduct a systematic investigation of advertising expenditures across 18 countries, which include 15 European countries along with Canada, Japan and the United States. Our findings not only indicate that advertising moves in the same direction as the general economic activity, advertising is also shown to be considerably more sensitive to business-cycle fluctuations than the overall economy. Moreover, both cultural (e.g. uncertainty avoidance, power distance), and economic (e.g. income inequality, share of SMEs) variables are found to be responsible for cross-country differences in advertising's cyclical dependence.

4 - Short Term Impact, Long Term Doom: Optimizing Direct Marketing Fundraising

Arnaud De Bruyn, ESSEC Business School, Avenue Bernard Hirsch, Cergy-Pontoise, FR, 95000, France, debruyn@essec.fr

We first discuss the apparent contradiction between the short-term and long-term impact of changes in solicitation strategy (number of solicitations sent per year) on charities' economic performance. While to increase the number of solicitations per year has significant impact on a charity's resources, such relationship does not seem to be as strong in the longer term as it is in the short term. We suggest that this phenomenon might partly be due to donors' over-reacting to changes in solicitation strategy in the short term, while adjusting their donating behavior in the long term. We present the foundation for a reconciling theoretical model, and conclude with managerial implications (and warnings) for nonprofit marketing managers.

■ SD04

Butler West

Personal Selling II

Chair: Amiya Basu, Professor, Whitman Shool of Management, 721 University Avenue, Syracuse University, Syracuse, NY, 13244, United States, abasu@som.syr.edu

1 - Risk, Incentives and Selection in Salesforce Compensation Contracts

Ho-Fu Desmond Lo, Doctoral Student, Michigan Business School, 701 Tappan Street, Ann Arbor, MI, 48105, United States, hofulo@umich.edu, Mrinal Ghosh, Francine Lafontaine

Empirical research in the area of salesforce compensation has not been supportive of the uncertainty-insurance prediction issued from agency theoretic arguments. One potential reason for this lack of support, as noted by Ackerberg and Botticinni (2002), is that reduced form tests that match task or environmental characteristics with contract form ignore unobservable agent characteristics (e.g., the salesperson's innate abilities) and hence the prospect of an endogenous match between agent and task. Another potential reason arises from the endogenous decisions of agents which themselves affect the measurement of uncertainty. In this paper, we use compensation data at the individual salesperson level to show that firms indeed discriminatingly select salespeople with certain abilities to deal with certain tasks, as per the endogenous matching argument, and use appropriate pay-for-performance compensation plans to provide incentives to those salespeople. Consistent with Lazear's (2000) study of the effect of piece rates in manufacturing, our research demonstrates that both selection and incentive issues are addressed simultaneously in the design of salesforce compensation plans. Implications for research and practice are drawn.

2 - Understanding The Role of Salesperson in Customer Profitability in Business-to-Business Markets

Tae-kyun Kim, Ph.d. student, University of Southern California, Department of Marketing, ACC B1F, Marshall School of Business, Los Angeles, CA, 90089, United States, Tae-Kyun.Kim.2009@marshall.usc.edu, Shantanu Dutta, Kenneth Wilbur, Ji Sook Hong

In many B2B markets the role of sales force is very important in influencing customer purchase decisions and profitability. Further, firms often expend marketing resources that are customer specific and are geared towards informing and/or persuading their customers. Despite a rich literature on sales force management, there is limited understanding how salesperson characteristics and customer specific marketing resources independently and jointly impact customer profitability. Interestingly, the role of sales person in customer profitability, has also been relatively ignored in the customer profitability literature. Our study combines sales force management and customer profitability literature to shed light on this important marketing phenomenon. We investigate this phenomenon, using a proprietary data set from a pharmaceutical company in Korea that manages its customers (i.e. hospitals) by relying on salespersons and customer specific marketing resources. Our results speak directly to how B2B firms should hire salespeople; how they should initially assign salespeople to customers; and how they should manage salesperson/customer relationships as they mature. Our work also has implications for the customer profitability literature, since the discrete assignment of available salespeople is a variable that has not been considered in the analysis of how best firm and customer relationships can be monetized.

3 - Salesforce Control Systems and Salesperson Knowledge Development

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This research elaborates on the effects of salesforce control systems on salesperson knowledge using a cognitive sales paradigm. The thesis of the present research is that salesforce control systems have an impact on both the quantitative and qualitative aspects of salesperson knowledge. Specifically, behavior-based, rather than outcome-based, control systems are hypothesized to be conducive to the practice of adaptive selling, which further facilitates the development of an elaborate knowledge structure. Knowledge regarding customer categories is also proposed to be affected by salesforce control systems. In addition, the characteristics of declarative and script knowledge, respectively, between salespeople in the different types of control systems, are compared. That is, the more a salesforce control system is behavior-based rather than outcome-based, the more likely salespeople will emphasize diagnostic evaluation cues, have high reference values for evaluation cues, and have a skewed distribution of assigned importance weights. Further, the scripts of salespeople in behavior (vs. outcome)-based control systems are more distinctive, contingent, and hypothetical. Together, this research sheds light on the process of salesperson knowledge development, which has been found to be related to salesperson performance. While previous research has examined knowledge differences between effective and ineffective salespeople, this research contributes to the sales management literature by highlighting knowledge differences between salespeople in different types of control systems. This is an important step to establishing a convincing argument that certain management activities or systems create knowledge differences in salespeople, which, in turn, affect selling effectiveness.

4 - Multi-tasking, Effort Interaction and Compensation

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We analyze the optimal incentive schemes of a risk-averse agent in a multi-tasking environment where performing one task can have positive or negative impact on the other task. We derive the optimal mix of short term and long term incentives using the principal agent framework when the agent performs both short-term and long-term tasks. We do the analysis for both risk neutral principal and risk averse principal.We first show that the uncertainty in one period has an inverse relation with the optimal incentives of the same period — i.e., long-term (short-term) incentive deceases with an increase in long-term (short-term) uncertainty. In addition, we show that the uncertainty in one period has an impact on the other period's incentive as well. The precise relationship between one period's uncertainties on the other period's incentive depends on whether these tasks are complementary or substitutive. With complementary tasks, short-term (long-term) incentive increases with the long-term (short-term) uncertainty, i.e., there is a positive relationship between uncertainty in one period and incentive in the other period. On the other hand, when the tasks are substitutive, this relationship gets reversed. Now the short-term (long-term) incentives decrease with an increase in the long-term (short-term) uncertainties. It is immediately evident that if we ignore the implications of across-period interactions, the incentive design will be sub-optimal.These results are completely new and provide important guidelines to the firm concerned about designing appropriate incentive schemes for its sales-force. Finally, we test the theoretical predictions of our aforementioned model on the compensation database of the executives available through COMPUSTAT.

■ SD05

Butler East

Attribute Effects

Chair: Sanjay Puligadda, Pennsylvania State University, 421A Business Building, University Park, 16892, United States, pus117@psu.edu

1 - Attribute-Value Functions and the Importance of Attributes

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Attribute-value functions reflect the idiosyncratic valuation of an attribute at different attribute levels, relative to consumers' reference points (Tversky and Kahneman 1991). The role of attribute-value functions in decision-making and choice is well-known and widely investigated. For managers involved in the new product development process it is critical to be able to identify those attributes that consumers deem important. However, a lack of validity and reliability exists among methods for identifying important attributes (e.g., Jaccard et al. 1986). More specifically, the validity and reliability of attribute-importance measurement is highly method-dependent. To evade this method-dependency and gain valid and reliable insights into the importance of attributes, the authors investigate if and how the global (i.e., S-shape, convex, concave) and local shape (i.e., measures of reference points, loss aversion, and diminishing sensitivity) of attribute-value functions relate to the global and local importance of attributes. The global importance of attributes is a stable characteristic that depends on an individual's values and needs. The local importance is a volatile characteristic that depends on the stimulus set in a judgment task. The authors find that the global importance of attributes relates to the global shape of value functions. Furthermore, local measures of the shape of value functions are found to relate to the local importance of attributes. Finally, they examine if and how the global and local shape of attribute-value functions predict intentional behavior. The results provide a basis for efficient attribute-importance measurement.

2 - A Study on Relative Importance of Product Attributes in New Telecommunication Service

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In the contemporary literatures, it has been demonstrated that product attributes have had influence over consumers' purchase behavior. Especially, it has been already known through the prior study that there has been a tendency for consumers to determine whether they purchase products by deducing product attributes and their benefits(yang, 2002). However, it has not been studied which attributes would have an impact on the buying decision among the attributes of newly launched services. Besides, there have been few studies on the change of relative importance among attributes in the case of telecommunication service and the importance in each attribute with regards to the characteristics of customer groups. So, this study tried to figure out the relative importance of product attributes for Portable Internet Service(WiBro in Korea) that has been recognized as wire & wireless converged service as well as newly launched services with no experience of using them. In doing so, a survey was conducted for 1,000 people who were recognized as prospective customers. The results were as follows: First, it has been demonstrated that non-functional attributes such as price were considered more important than functional attributes such as speed in the case of the newly launched services. Second, it has been shown that there were some differences in the attributes that were emphasized corresponding to the characteristic differences among customer groups. The results demonstrated that the appeal strategy that emphasized the non-functional attributes would be more effective than others in the case of newly launched services and it has been required to establish the differentiated appeal strategy corresponding to the characteristics of customers for each segmented market.

3 - Driving Inferences for Umbrella Brands Using Claims Involving Narrow versus Diverse Product Samples

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Two experiments were conducted to study how consumers generalize a shared attribute from a sample of products made by a company to its overall product line. Under conditions specified by the Similarity-Coverage Model (Osherson, Wilkie, Smith, Lopez and Shafir, 1990), Experiment 1 found that a shared attribute generalizes to more products when items represent a diverse as opposed to narrow sample of members in the company's products. Furthermore, the "diversity effect" is moderated by the perceived typicality of the sample items to the overall category. Experiment 2 replaced the attribute from Experiment 1 with a shared rating of high quality from a reputable consumer products magazine. Essentially the same pattern of results obtained as in Experiment 1. Implications for firms attempting to build quality associations to an umbrella brand are discussed, in addition to directions for future research.

4 - Universally and Variably Evaluated Attributes: A Study of Consumer Evaluation of Mass Customization

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With the growing use of mass customization in various product categories (e.g., candy, sports shoes, apparel, and automobiles), it is becoming increasingly important to understand consumer decision making behavior in such contexts. As a first step, we categorize product attributes as being universally evaluated or variably evaluated. We propose that universally-evaluated attributes, such as battery life in cell phones, would have a common and widely accepted evaluation schemes across the target population, whereas the evaluation schemes for variably-evaluated attributes, such as color of cell phones, would be more consumer-specific. We further propose that two aspects of knowledge, namely, objective knowledge of the product attributes, which is associated with consumer-ability , and knowledge function of attitudes, which is a motivational construct, moderate the effects of the type of product attributes (universally or. variably evaluated) on consumer evaluations of a mass customization platform. Results from three experiments demonstrate that consumers differentially process information for universally and variably-evaluated attributes. The results also support the moderating role of the two knowledge constructs, such that the positive effect on consumer satisfaction arising from the number of options offered for the variably-evaluated attributes is higher for (1) novices than for experts, and (2) when product performs the knowledge function of attitudes as opposed to when the product does not perform the knowledge function of attitudes. We conclude by elaborating on the theoretical and practice implications of our research, and potential areas of future research.

■ SD06

Cambria West

Choice VI: State Dependence

Chair: Sharon Hodge, Assistant Professor of Business Administration, Elon University, 2075 Campus Box, Elon, NC, 27244, United States, shodge@elon.edu

1 - Explaining Cognitive Lock-In: The Role of Skill-Based Habits of Use in Consumer Choice

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We introduce and test a theory of how the choices consumers make are influenced by skill-based habits of use — i.e., goal-activated automated behaviors that develop through the repeated consumption or use of a particular product. Such habits can explain how consumers become locked in to an incumbent product. The proposed theory characterizes how the amount of experience with the incumbent product, the occurrence of usage errors while learning to use that product, and the goal that is activated at the time a choice is made interrelate to influence consumer preference. The results of three experiments support the theory's predictions.

2 - An Experimental Test of Line Extensions Up and Down in Quality: Effects on Initial Choice and Subsequent Switching

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Five experiments compared choice shares, switching tendencies, and brand/line images across novel names (e.g., Magnifico pasta sauce) and line extensions up in quality (e.g., Formaggio's Magnifico) and down (e.g., Formaggio's Basique). Relative to novel names, Experiment 1's higher-quality line extensions failed to increase choice of higher-quality products, but did (1) increase choice of within-family middle-quality products (e.g., Formaggio's regular), (2) steal more share, when discounting, from competitors, and (3) increase loyalty to (reduce switching away from) higher-quality products when competitors discounted. Experiment 2, however, failed to find any corresponding negative effects of lower-quality extensions. Experiment 3 found the same asymmetry in brand-image measures, where the positive effects of upward extensions were significantly larger than the null effects of downward extensions, a pattern directly opposite that expected from negativity biases and loss aversion. Experiment 4 explicated by suggesting that the negative effects of lower-quality extensions are somewhat offset by the positive effects of offering more products within the line. Experiment 5 partially replicated this pattern and demonstrated limits to how low in quality line extensions can go before damaging line image. In addition to the obvious branding implications, the results suggest that researchers can increase test sensitivity by assessing not only choice, but switching, where (1) switching rates away from target alternatives reflect the same type of resistance-to-persuasion measures popular in attitude research, and (2) switching rates to target alternatives reflect persuasion potential, a brand-equity dimension that might otherwise go undetected.

3 - Modeling Latent Effects in Scanner Panel Data

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Studies applying choice models to scanner panel data have shown that it is very difficult to distinguish parameter heterogeneity, state dependence, and choice set effects since these unobserved effects are often confounded. Models specified with multiple components to account for these constructs do not recover them well, perhaps just as regression models specified with multiple collinear variables do not perform well. Instead of specifying a model with a single utility function and additional components to explain various unobserved effects, as is customary, this study proposes a finite mixture model with different submodels describing different choice behaviors. The primary objective of the study is to determine whether the confounding of unobserved effects would be lessened with the specification of sub-models describing different decision strategies. Submodels describing the following behaviors are specified: (i) "no purchase" behavior; (ii) hard-core loyalty; (iii) switching behavior, which involves households choosing from the full set of available brands on the basis of preferences and responses to marketing mix variables; (iv) switching within a static choice set, in which households make choices on the basis of preferences and marketing mix variables, but only among a reduced set of brands; and (v) state dependent behavior, in which households make purchases solely on the basis of past purchase behavior but are not loyal to any single brand. Results from an application to scanner panel data show significant improvements in fit and forecasting accuracy relative to a fully-specified benchmark model. Estimates suggest that 21% of households are hard-core loyal, 38% are switchers, 6% switch within a reduced consideration set, and 35% are state dependent.

4 - Mental Accounting and Subsequent Purchases: The Impact of Savings and Losses on Consumer Spending Decisions

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This research explores how aspects of initial purchases affect subsequent purchase decisions. Most past research focused on single purchases—typically selecting a single alternative from a choice set. In contrast, we focus on how consumers' responses to savings and losses on an initial purchase impact a subsequent purchase. Four experiments examine how responses are moderated by consumer control, product relatedness, and savings magnitude. Study 1 shows consumers respond asymmetrically to savings and losses when spending on a subsequent purchase, but not significantly in either direction. Qualitative data revealed directionality of asymmetric responses depends on whether the buyer was quality-, savings-, or "product interest"-driven. Study 2 shows subjects were more responsive to savings from sources outside their control, but more sensitive to losses inside their control.

Qualitative data for savings suggest buyers allocate an amount to spend before they shop to a mental "spend account," facilitating transfer of unanticipated savings to subsequent purchases. Losses inside their control make buyers likely to sacrifice quality or consumption to atone for their mistake. Losses outside their control make buyers less likely to need to reduce subsequent spending. Study 3 shows more savings were spent when a subsequent purchase was related to the initial purchase. Qualitative data suggest savings for related products tend to be viewed in the same mental budget, facilitating transfer of savings on one purchase to the subsequent one. Study 4 shows subjects spent proportionally more of a savings on a subsequent purchase when the savings were small. Data suggest small savings are more available to "spend now," while portions of large savings are stored as assets for future use.

■ SD07

Cambria East

High Technology - III

Chair: Paul Wang, Senior Lecturer, University of Technology, Sydney, Quay Street, Broadway, NS, 2007, Australia, paul.wang@uts.edu.au

1 - Integrating Advertising and Trial: The Moderating Role of Expertise

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This research examines how advertising may affect a subsequent product trial experience, as well as how a product trial may affect response to advertising, under the moderating influences of consumer product expertise. It is hypothesized that respondents exposed to a trial will exhibit stronger (1) belief-strength, (2) belief-confidence, and (3) brand attitudes, than will respondents exposed to advertising, and that these effects should be stronger for experts than for novices. Further, the phenomenon that advertising has a favorable effect on a subsequent trial should be more pronounced for novices than for experts. In contrast, the framing effect of a previous trial experience on advertising responses should be more pronounced for experts than for novices. The patterns of integrating advertising and trial information differ between experts and novices such that experts will generate more evaluative thoughts and more prior knowledge-based thoughts than will novices. Further, the number and contents of cognitive responses are incorporated in the hypotheses to investigate the processes of integrating advertising and trial. Overall, this research contributes to the advertising-trial research stream on two grounds: (1) this research proposes the analysis of cognitive responses to further understand the advertising and trial integration processes and to make useful predictions regarding the impact of one information source on the other, and (2) this research highlights how individual differences in the area of consumer product expertise may affect the integration of advertising and trial, delineating the role of personal factors in information integration.

2 - The Competence of Customer Co-Designers: Empirical Findings of a Cross-Industrial Study

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Mass customization is a strategy that describes the supply of goods and services to meet individual customer needs. The production and provision of the individual solutions takes place with an efficiency that can be compared with the one of mass production. From the customers' perspective, the defining element of a mass customization offering is the interactive sales and co-design process which can take place either online or in a shop environment. It allows customers to express their product requirements and to create an individual product in cooperation with the product provider. Based on research from service marketing, we argue in this paper that the quality of fulfillment of the co-design task is highly depended from the skills and competence of the particular customer performing this task. In service marketing, company-to-customer interaction and cooperation during the co-design process is already discussed intensively. The term "service customer performance" is used for the contribution of the customer to the service. Based on this, we argue that inherent knowledge, skills and motivation of customers — their integration competence — are an important factor influencing the perception of the co-design process in the mass customization context, too. We structure customer integration competence in three facets: the customers' product and application competence, social skills and methodological knowledge, and their involvement and personal motivation. Using data (customer surveys) from four different mass customization providers, we show that customer integration competence is an important and not yet recognized antecedent of service quality and customer satisfaction in the mass customization context.

3 - An Attitude-based Theoretical Model to Explore the Consumer Adoption of 3G Mobile TV Services

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Purpose of the paper is to provide an attitude-based theoretical framework that explains the factors influencing the consumer adoption of 3G mobile TV services. The paper aims to demonstrate that the perceived value of a 3G mobile value added service is conditioned by aspects of a rational or functional nature but also by aspects of an emotional and social character. The purpose of this study is therefore to validate the Technology Acceptance Model (Davis, 1989) indicating that it needs to be integrated with the Theory of Consumption Values (Sheth et al., 1991) in order to better understand drivers influencing adoption of 3G mobile value added services. In this study we (1) review Information Technology acceptance literature, (2) propose seven hypotheses relating to factors influencing adoption of 3G mobile TV services; (3) formulate a research model that includes functional components and social and emotional intrinsic factors (4) present the results of an empirical survey designed to test the hypotheses. The results of a confirmatory factor analysis and structural equation modeling provide evidence that the Technology Adoption Model is robust and able to be generalized to a wide range of settings. The study also validates Theory of Consumption Values showing that a new emotional construct (multimedia content) and social elements (interactivity, efficiency, personalization) contribute to user acceptance of mobile TV services. The results obtained give evidence of the importance of functional, emotional and social values that mobile service developers, marketers and handheld device producers need to consider to come to a sophisticated understanding of adoption related decisions.

4 - Consumer Characteristics and Their Influence on New Product Decision States

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A number of studies have suggested that consumers progress through a series of decision states associated with the purchase of "high-involvement" products. These states begin with awareness, eventually resulting in decisions to purchase or not. An understanding of the various decision states and the factors that influence them are, therefore, vital for the understanding of consumer choice. This study will propose a hierarchy of states defined as: Aware; Search; Knowledge; Purchase Intention; and Trial. As decision states are associated with the purchase of "high-involvement" products, it was decided to investigate how consumer characteristics influence the decision states in the purchase of DVD recorders. The seven consumer characteristics were developed using multi-item scales based on previous studies: (1) Consumer Novelty Seeking; (2) Consumer Independent Judgment Making; (3) Social Innovativeness; (4) Dispositional Innovativeness; (5) Consumer Susceptibility to Normative Influence; and (6) Expert in Technology. The data for this study was collected from a random sample of panel members of a nation-wide on-line panel in Australia. Over one thousand respondents completed the survey, which included questions measuring decision states and a battery of attitudinal scales and demographic questions. The responses were analysed using exploratory factor analysis and reliability analysis for each multi-item measure, and then confirmatory factor analysis. The results indicate that there were significant relationships between particular consumer characteristics and the decision states, and this will provide a better understanding of consumer choice and raises important implications for new product marketers.

■ SD08

Westmoreland West

Pharmaceutical Marketing II: Marketing Mix Decisions

Chair: Marta Wosinska, Assistant Professor, Harvard Business School, Soldiers Field Rd, Boston, MA, 02163, United States, mwosinska@hbs.edu

1 - Understanding the Role of Sampling in Physician Prescription Behavior

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In pharmaceutical industry, sampling is an important but least understood promotion instrument. Current literature evaluates the role of sampling either using projected brand level data (from IMS or Scott-Levin) or physician level sample drop data (from individual company) without competitive information. Previous research treats sampling similar to detailing without considering sampling's unique roles. Sampling has different effects from detailing. It may encourage trials, build brand loyalty, fend off competitions, enhance physician-patient relationship, subsidize to the poor, or be wasted. As a result, sample may induce or cannibalize new prescriptions. Understanding the role of sampling is the fundamental step for designing better and effective sampling strategy. In this paper, we address the following issues: (1) how competitive promotions and patient factors (diagnosis, disease conditions, payment types and demographics) affect physician sample usage; (2) how competitive sampling affect physician brand choices while controlling detail effects; (3) did sample increase or reduce detail effectiveness? The analysis will be based on the PPI market, one of the most sampled classes in the U.S. pharmaceutical industry. For the empirical analysis, we use a data set from ImpactRx, a pharmaceutical marketing research and consulting company. This data set complies promotion, diagnosis and treatment information from a longitudinal high prescribing physician panel. Sample usage is one of the unique variables captured in the data set, which includes sample-only treatment, sample given to patients with either new or renewal prescription, and sample day of therapy for all branded and generic drugs.

2 - An Analysis of Detailing Intensity and Presentation Order in the Pharmaceutical Industry

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When pharmaceutical sales representatives detail drugs to doctors the important decisions are how often to call on each doctor and the order in which to detail each drug. One important issue to pharmaceutical companies is the strategic detailing response by competitive drug manufacturers to changes in the company's own detailing. This strategic interaction will affect the product lifecycles of drugs. Recent papers (Roberts and Samuelson, 1988, Krishnamoorthy, 2000, 2001, Dearden and Lilien, 2001, and Bass et. al., 2005) investigate strategic interaction where advertising affects overall category market demand and market shares. The results indicate that if the advertising affects overall category demand, then the firms' advertising intensities are strategic substitutes (i.e., if one firm increases its advertising, then the others respond by decreasing theirs). Alternatively, if advertising affects market shares, then the advertising intensities are strategic complements (i.e., if one firm increases its advertising, then the others do also). The issue of detailing is fundamentally different from that of advertising in that representatives are constrained by being able to detail three drugs (and the order of detailing matters in the first slot is better than the second, which in turn is better than the third). So, we can examine strategic complements and substitutes not only in detailing intensity but also in the order of detailing presentation. With a rich data set of pharmaceutical detailing order, intensity and doctor's prescription intensity, we can measure the competitive interactions among pharmaceutical representatives. In doing so, we can characterize whether and why detailing exhibits strategic complements or substitutes.

3 - Pharmaceutical Marketing and the PBM(Pharmacy Benefit Manager)

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There is a growing body of work on understanding and assessing effectiveness of "direct-to-the physician" (DTP) promotion and "direct-to-the-consumer" (DTC) advertising programs of pharmaceutical firms. Pharmaceutical marketing, however, is a complex effort with multiple decision-makers between production and consumption of Rx drugs and payments to producers. In particular, a key player in the pharmaceutical marketing is the pharmacy benefit manager (PBM). In the US, PBMs play an influential role, especially in the era of Medicare drug benefit. So far, however, research examining the objectives, motives and response behaviors of PBMs and their implications for optimal pharmaceutical marketing mix strategies is limited. The PBMs manage the pharmacy benefits of patients on behalf of the final payer - typically the employer or the government. They also reduce costs by getting discounts on pharmacy transactions, increasing generics use, and negotiating rebates (volume discounts) from branded drug manufacturers in exchange for equal or preferential treatment vs. other drugs. Such rebates, after pass-through to the final payer, are a large revenue source for the PBMs and a critical component of the pharmaceutical company marketing mix. An integrated view of the effects of rebate offers along with the firm's DTP and DTC marketing efforts on PBM response is needed to develop optimal strategies. In this paper, we explicitly model and analyze the interactions between the patient, the physician and the PBM, as they respond to pharmaceutical marketing efforts and discount offers. Our analyses shed light on how DTP and DTC efforts impact PBM response and provide directions for the allocation of pharmaceutical company's marketing efforts between patients, physicians and PBMs.

4 - Direct-to-Consumer Advertising, Media Publicity and Demand for Prescription Drugs

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Ever since pharmaceutical companies began to communicate directly with consumers, direct-to-consumer advertising (DTCA) has been under great scrutiny from policymakers, consumer groups and health plans. A small but growing literature has found that DTCA tends to increase category demand for pharmaceuticals. At the same time, another important source of information for consumers and physicians about prescription drugs - news and popular media stories (media coverage) - has not been explored. Studying the effects of media coverage on the utilization of advertised prescription drugs is important for many reasons. First, if media coverage is correlated with DTCA expenditures, then current estimates of DTCA effects may overstate the ability of DTCA to affect demand. Second, since media coverage is not subject to regulatory oversight (and may be perceived by consumers as more objective than DTCA), the relative effectiveness of DTCA and media coverage is also important. Third, from a marketing perspective it is also possible to assign a monetary value to the firm from media coverage by assessing what advertising spending would be necessary to get the same boost in utilization that is observed from, say, one positive front page story in a national magazine on a drug. To address these issues, we combine visit, prescription, and demographic data on nearly 18,000 osteoarthritis patients in over 60 markets with DTCA expenditures and media coverage in those markets during 1998-2003. We model changes to the flow of patients into the practices and changes in physician prescribing patterns as a function of DTCA, as well as quantity and quality of media coverage.

■ SD09

Westmoreland Central

eCommerce X: Choice Processes

Chair: Tammo Bijmolt, University of Groningen, P.O. Box 800, Groningen, GR, 9747 AD, Netherlands, T.H.A.Bijmolt@rug.nl

1 - When Decisions need to be Made for Future -An Empirical Investigation of Consumer Choice of Services

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The pricing structure adopted by the booming online DVD rental industry features a fixed monthly rate and a maximum number of outstanding DVDs, which implies an upper limit on the monthly consumption rate. Consumers need to choose a service plan to secure future consumption. Although there are studies examining consumer choices between flat rate and two-parts tariff in the telecommunication industry (e.g. Danaher 2002), there is almost no empirical research evaluating how consumers make choices among alternative flat rates with varying quotas. In this paper, we propose a dynamic model with learning that is consistent with customer decision process to study how the choice of service plan is driven by uncertainty of future consumption needs. With realized usage rates being endogenously driven by the quota associated with each service plan, forward looking consumers learn about their exogenous future consumption needs, tradeoff paying a lower price (by purchasing a lower priced service plan with lower quota) with higher risk of running into stock out situations in the future, and make optimal choice decisions to maximize long-term utility. Applying the proposed model to a rental history data, we provide empirical answers to the following issues: (1) How do consumers make choice among service plans with flat fee and quota? (2) What is the role of quota in consumer decision process? (3) How does uncertainty of future consumption needs drive choice of service plan? (4) How and to what extent do consumers differ in their forward planning behavior? (5) Given consumers' decision process, what is the optimal pricing structure that maximizes profit?

2 - Which Car to Consider? The Impact of Online Search on Consumer Choice

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Internet has become an important tool for consumers to search for product information prior to their purchases. Armed with abundant information, consumers seem to have changed the way they shop. For example, evidences suggest that they may have become more price-sensitive because the pricing information has become readily available and transparent via Internet. However, we are not so clear as to how non-pricing information affects consumer choice behavior, especially on consideration set formation. In this paper, we examine the format of information conveyed in a website and investigate how it may affect the formation of consideration set. We then examine the implications on the competition structure. We apply a Multivariate Probit model to the consideration set decision problem. Using JD Power New Vehicle Shopping Survey data, we find that a consumer who relies more on Internet to search for car information has a larger number of cars considered prior to the purchase and has a more diverse consideration set in terms of segments, countries of origin and makes. We also find that these effects are more pronounced for American car owners than non-American car owners. This may partly explains why American car manufacturers are losing market shares to their counterparts in Asia and Europe.

3 - Predictors of E-Satisfaction in Tourism Industry

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Due to the continuous growth in the use of internet, tourism organizations are motivated to offer their services on-line. Being online is so important that if a tourist service does not be on the web it may well be ignored by the millions of people who now have access to the internet and expect every tourism service have a comprehensive presence on the web (WTO, 2000). Unlike durable goods, due to the nature of services, intangible tourism services can not be physically displayed or inspected at the point of sale before the trip. Therefore tourism products are thoroughly dependent on different aspects of the representations and offerings by the tourism firms (Buhalis, 1996). As information is the life-blood of the travel industry (Sheldon, 1994), utilizing and managing a suitable Information Technology is essential for tourism organizations to satisfy their customers. Some factors play key roles as the predictors of tourists' satisfaction in e-tourism, but yet there has not been enough research on the topic, i.e. tourists' judgment and satisfaction while purchasing from tourism websites. This research reveals different predictors of tourists' satisfaction in on-line tourism. Current study has replicated the initial examination of e-satisfaction which was formerly conducted in on-line retailing by Szymansky and Hise (2000), to the context of consumer satisfaction in on-line tourism in a sample drown from European tourists who had experienced e-tourism. To this end, factor analysis was performed to ascertain whether the five-factor measurement model introduced by Szymansky and Hise (2000) reflects consumers' underling mental model. However, the obtained results confirm the model. This research yields rich insights for managers of e-tourism firms, by introducing the factors site design, convenience, product information and product offering and financial security, which are the predictors of e-satisfaction in the tourism industry.

4 - On the Hierarchy of Website Goals

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The expansion of the internet into a vast interactive communication medium of global proportions has made it a vital marketing and sales medium for many firms. These new circumstances have forced managers to seek guidelines on how to act effectively in the electronic marketplace. Once a company decides to use the internet as a marketing tool, the next step is to decide what type of internet usage is best. Management can utilize the company website for different goals, for example to inform customers or to conduct transactions. Identification of the order in which companies pursue website goals has important implications for web development. In this study, we derive possible website goals based on the customer purchase process model by Engel et al. (1995). Our main objectives are to determine whether and how the website goals form a hierarchy; that means companies pursue them in a fixed order. Moreover, we explore whether the degree of website sophistication differs depending on various company characteristics. We combine latent class models and item response models to assess the hierarchy of website goals and the relation with covariates. A key feature of the methodology is its ability to predict which direction website improvement could take given information on current pursuing of other goals. Our theory and methodology is tested in an empirical study. We collected survey data for 380 companies. Our conclusions feature implications, both academic and managerial, and directions for future research.

■ SD10

Westmoreland East

Channels X

Chair: Els Gijsbrechts, University of Tilburg, P.O. Box 90153, Tilburg, 5000 LE, Netherlands, E.Gijsbrechts@uvt.nl

1 - Consumer Perceptions and Performance of Store Brands

Romana Khan, Assistant Professor, McCombs - U.T. Austin, Dept of Marketing, 1 University Station B6700, Austin, TX, 78712, United States, romana.khan@mccombs.utexas.edu, Vishal Singh, Karsten Hansen

One of the most important activities for supermarket retailers is the creation and maintenance of their private label brands. A well-developed private label program could not only contribute directly to retailer profitability but also have positive indirect effects such as better bargaining power with the manufacturer or building store loyalty. In this paper we investigate how positioning of store brands vis-á-vis other competitors in the category impacts its market share and overall category profitability. Unlike previous research on the issue (Sayman, Hoch, and Raju 2002),
we use micro consumer panel data from two competing retailers in the Chicago market. Building on the internal market structure literature, we develop a two-stage model of store choice followed by brand choice to construct "brand maps" that pictorially depict the locations of brands in multi-attribute space. The approach allows us to study consumer perceptions of store brands at each retailer after controlling for the short-term marketing mix activities and self-selection of households that frequent a particular retail chain. Implications for store managers are discussed.

2 - Big Retailers' Globalization and E-Commerce Strategies: Is There a Link?

Ralitza Nikolaeva, Assistant Professor, University of Wisconsin Milwaukee, P.O. Box 742, Milwaukee, WI, 53201, United States, nikolar@uwm.edu

The top 250 global retailers generated a total of $2.84 trillion in 2004 — an 8.9% increase over the prior year and almost one third of the estimated $9 trillion global retail market. What are global retailers' vehicles of growth and what determines their strategies? Prior research has pointed out the need of a new conceptual paradigm of global retailing in the presence of e-tailing. So far, the literature has explored retailers' global expansion strategies as a separate stream and another stream has looked at technology adoption as a vehicle of improving profitability and growth. This study takes a first step towards an integrative perspective on the subject of growth strategy development. As such, its main objective is to investigate the relationship between the two strategic expansion options. In particular, the study attempts to explore the relationship between retailers' global presence and the adoption of the Internet channel. Both strategic actions — foreign market entry and Internet channel adoption — require significant resource commitment by the retailer in the face of uncertainty. Moreover, prior studies have indicated that developing Internet as a transactional channel has been largely a reaction to other industry players and that foreign expansion can be random. In response, the current study uses data on the top 250 global retailers gathered from public sources to find answers to the following questions: How are globalization and e-tailing imbedded in top retailers' strategies? Are industry effects local or global? Would retailers with better risk management experience through their global presence be more responsive to the risks involved in adoption of the new channel? The paper presents and discusses the empirical findings and managerial implications.

3 - Predicting Large-surface Store Choice: A Trade-off Between Complexity and Computational Feasibility

Sébastien Markley, Doctoral student, Institut BVA, 5, Rue du Poids de l'Huile, Toulouse, 31000, France, sebastien.markley@bva.fr

This paper presents the development of a method of predicting which large-surface food store a household will select for its regular alimentary purchases. Our aims are not only theoretical rigour, but practicality, computational efficiency, and ease of use. We use a conditional logit model for our predictions. We define a set of alternatives for each household, and to each, we assign a probability using the model equations. The explanatory variables used in the model represent the characteristics of each store and the geographic relationship between the store and the household's home. We use data from a survey of consumer behaviour in the Centre Region of France to estimate the parameters of this model, and to evaluate the model's predictive quality. This paper presents the results of these calculations, and discusses some areas where the model selection cannot be done a priori, since there are trade-offs of model qualities. In such cases, we select our model empirically, comparing the results of various model estimations, with computer run times an important factor to note. For instance, if we include too many stores within the set from which we assume our household purchases its food, computation time becomes infeasible, yet we must assure ourselves that reducing the size of these choice sets will not lead to biased model results. We investigate alternatively the construction of choice sets based on random sampling, and rules based on economic suppositions. Another issue we discuss is variable selection. If our procedure is too strict, our model may suffer from underfit, yet if we allow too many variables we risk colinearity.

4 - Private Label Diversity: How Introducing Economy And Premium Private Labels Influences Brand Choice

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Private labels (PLs) constitute a growing portion of the FMCG market. Retailers' standard private labels, which are in general perceived to be of lower quality than top-tier national brands, have been around since long. In the 90s, many retailers started offering economy private labels (no-frills bottom-of-the-market-quality private labels) in addition to their standard private labels. A new development for retailers is to move up the quality ladder by introducing premium private labels that deliver quality equal to that of national brands. This three-tier PL portfolio strategy (low-quality tier: economy range; middle-quality tier: standard range; top-quality tier: premium range) is gaining in popularity around the world. An intriguing question is how these PL extensions affect the position of incumbent brands in the category. Extant research has considered PLs as a single good, perceived to be of lower quality than national brands. The effects of more upscale (premium) and more downscale (economy) PL introductions have never been examined. The contribution of our paper is twofold. First, we distinguish between different PL tiers to provide a more comprehensive picture of the effects of PL entry on incumbent national brands. Second, we study competition among PL tiers. Building upon the literature on context effects, we postulate how the introduction of economy and premium PLs affects choice of top-tier and second-tier national brands and of the retailer's existing PL offering. We test our hypotheses using data covering 11 years of household shopping trips in the breakfast cereals category in the U.K, using brand choice models that accommodate context (similarity, compromise, cluster and attraction) effects along both the brand type and the quality tier dimension.

■ SD11

Washington

Services Marketing III

Chair: William T. Ross, Jr., Pennsylvania State University, 443 Business, University Park, PA, United States, wrt2@psu.edu

1 - Measuring the Dynamic Asymmetric Effects of Usage within a Multiple Service Lifetime Value Model

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In this paper, we propose a multiple service lifetime value model which allows for multiple contractual spells between the firm and the customer. Data from an online content provider is used to calibrate a Semi-Markov model and measure the dynamic asymmetric effects of usage on customer's purchase and cancellation decisions. It is shown that Usage variables, including the dynamic change in usage, operate as valuable discriminate variables for the competing risks of transition between higher and lower profitability states with the Semi-Markov model. The model proves useful in both computing customer lifetime value as well as signaling which customers to target for retention, acquisition, and cross-selling activities.

2 - Propensity of Passengers to Switch Airlines

Makarand Gulawani, Assistant Professor, Audencia Nantes School of Management, 8, route de la Joneliere, BP - 31222, Nantes, 44312, France, mgulawani@audencia.com, Jean-Louis Nicolas, Uday Salunkhe

Kayank and Kucukemiroglu (1993) found that the airline industry is in a stage of rapid transformation. In this process, passenger satisfaction and repeat purchase is of prime concern to the airlines. Whyte (2004) confirmed, while airlines applying loyalty schemes, there are problems with it. He found that it is wrong to assume repeat purchase for earning loyalty points can be a measure of passenger loyalty. Passenger loyalty is a complex issue. We examine this issue with passengers of Indian domestic airlines. In India, domestic airlines face stiff competition. In 2005, two new domestic airlines Kingfisher Airlines and SpiceJet began their operations. These new airlines are in addition to four major Indian domestic airlines, Indian Airlines, Jet Airways, Sahara and Air Deccan. India has growing number of first time travelers. With economic growth and fare war among airlines, number of domestic airline passengers in India is on rise. Why passengers choose a particular airline? Which important attributes determine their choice of an airline? How different are the choices and expectations of first time travelers and regular travelers of domestic airlines in India? How much is the propensity of passengers to switch airline or to stay with their current airline according to service offered by an airline and fare levels? We analyze complex relationship of passenger profile and passenger expectations in relation to propensity of passengers to switch airline. We examine 10 important attributes of domestic air travel in India. Result of this research provides better understanding of profile and preferences of domestic passengers in India in order to provide passenger satisfaction. This research is based on primary and secondary data.

3 - Employees' Readiness for Change and Commitment to Change: The Missing Links to CRM Success

Philip Shum, University of Melbourne, Department of Management, Parkville, VIC 3010, Australia, ShumP@unimelb.edu.au

A majority of companies which implement Customer Relationship Management (CRM) as their core strategy report disappointing results from their investment. This shortfall has been attributed to too much emphasis being placed on technology without due consideration to organizational and human factors. Drawing from Armenakis et al.'s (1999) research on readiness for change and Herscovitch and Meyer's (2002) framework on commitment to organizational change, this paper presents a conceptual model which highlights the importance of both employees' readiness for change and their commitment to change for successful CRM implementation. More specifically, answers to the following three questions are sought: (1) To what extent does employees' commitment to change positively influence the desired strategic outcomes of CRM implementation? (2) How does readiness and commitment link together? (3) To what extent is employees' readiness for change facilitated by people, process, and technology?

4 - Value Co-creation: How Managing Customers' Expectations Makes Them Work Harder and Get More Value

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William T. Ross, Jr., Hans Baumgartner

Firms are increasingly co-creating value with their customers, and are increasingly competing on that co-created value (Prahalad and Ramaswamy 2004). With the emphasis on collaborative business relationships and the increasing pressure on firms to reduce their costs, sharing the creation of value is becoming an important topic in strategy and marketing. Examples abound of such value co-creation. Successfully installing enterprise software (e.g. SAP), providing a valuable strategy consultation (e.g., McKinsey), a physician helping a patient feel better, and providing individually customized but affordable furniture (e.g., IKEA) all require customers to exert effort. However, what is largely unknown is how a firm can induce customers to put the appropriate amount and kind of effort into the co-creation process to ensure that they are satisfied. In this paper, we seek to answer this question by developing a formal model of the value co-creation process. Our model, based on expected utility theory, incorporates the customer's effort, the extent to which that effort is substitutable by the firm, the distribution of customer expectations of firm quality, and Bayesian updating of expectations. We find that a firm can induce its customers to exert value-maximizing effort by strategically managing their quality expectations. The main implication is that the optimal quality expectation is always an overstatement, but that the extent of overstatement depends on the substitutability of effort and the uncertainty of the expectations. We also discuss an empirical test of the model.

■ SD12

Fayette

Customer Loyalty II

Chair: Vishal Singh, Assistant Professor, Carnegie Mellon University, 244, Posner Hall, 5000, Forbes Ave, Pittsburgh, PA, 15213, United States, vsingh@andrew.cmu.edu

1 - Higher Repeat Purchasing by Older Consumers: Impact of Aging or Cohort Effect?

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Older consumers more frequently repurchase the previous brand. However, is this difference due to an aging effect or to a cohort effect? Do consumers become more loyal as they grow older? Or do more recent cohorts tend to be less brand loyal than cohorts born a long time ago? Answering this question poses an econometric challenge: there is a perfect colinearity between the three explanatory variables measuring consumer age, consumer birth year, and the date when purchase behavior is observed. Consider a matrix X of explanatory indicator variables, describing the values of age, birth year and observation date. Clearly, (X T X), is singular, because of the relationships between these three variables. However, only one dimension is missing to have a matrix X with full column rank. In other words, only one eigenvalue takes value zero, the null space has only one dimension. This will be the basis for our estimation strategy. A traditional approach, proposed by Fienberg & Mason (1985), consists in imposing at least one equality constraint on neighboring age, period or cohort groups to identify the model. However, in practice, unfortunately, coefficients estimated with this method vary markedly, up to the point of providing trend estimates with opposite signs. This is why Yang, Fu and Land (2004) have proposed a direct method, the intrinsic estimator method (IE), which does not require prior information. As demonstrated by Fu and Hall (under review), this estimation method leads to a diminution of the finite-time-period bias, a relative statistical efficiency, and a better consistency as the number of periods increases. This method has never been applied to marketing problems.

2 - Asymmetric Offering of Frequency Reward Programs

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Frequency reward programs have become a common practice in many industries. Despite its popularity, empirical studies on benefits and costs of frequency reward programs remain scarce, with a few exceptions including Bell and Lal (2003) and Dreze and Hoch (1998). How does a frequency reward program help a firm acquire new customers and retain existing customers? What are the important factors that determine a firm's benefit from offering a frequency reward program? What type of firms will be more likely to adopt frequency reward programs? How should a firm's decision to offer a frequency reward program affect its competitor's decision? In this study, we address these problems by exploring the empirical evidences from a duopoly gasoline retail market in a large Asian city. Our data contains rich information about the competing firms' retail prices, wholesale prices, and retail sales over a four-year time period. During the data period, one firm always offered a frequency reward program. In contrast, another firm experimented the offering of a frequency reward program during the data period, specifically, offering a frequency reward program only in the middle of data period, but not either at the beginning or at the end of observation. This unique feature provides a natural experiment based on which we can study the impact of a firm's frequency reward program on the firm's as well as its competitor's sales and profits, and identify the underlying reasons for the asymmetric offering of frequency reward programs in a gasoline retail market.

3 - A Consumer of Many Perspectives

Lygia Rocha, Master Degree in Marketing, Consultant, Rua Jardim Bot,nico, 728/508, Rio, RJ, 22460000, Brazil, lygiarocha@terra.com.br

In the last decades, there was a substantial change in the behavior, particularly of consumption, of people between 50 and 60 years old, due not only to an increase in life expectation but also to an exchange in their lives' styles. Therefore, they cannot be classified as entering the "senior citizenship" anymore, as the old concept would suggest. The explanation is that the increase in life expectation relies not only on the forthcoming of new technologies, but mainly on a change in people's habits — healthier foods and more physical activities, for instance. This generation — boomers between 50 and 60 years old now — has overcome many transitions throughout their lives, like the advent of rock-and-roll, movements like the hippies and the feminism, the contraceptives, the drugs, the computers and the Internet, among others, that made them live in a totally different way, alternating between their parents and their children's requests. However, because of their strong personalities, they lead consumption behavior, influencing both the previous and the next generations. They gave their children an education completely different from the one they received, with much more freedom and responsibilities to be on their own. Women began going to the university, working all day long and earning money. As a result of this new behavior, many marriages were broken and many families started being supported by women. Nowadays, after all the stress caused by excessive work and a huge increase in competition, they are again changing their lives' styles, assuming a "Zen" posture, with natural food and relaxing exercises like "yoga" and "Pilates". These changes are generating a new market with many new perspectives to explore.

4 - The Myths and Realities of 18-49: Consumer Age, Brand Loyalties, and New Product Trial

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A fundamental belief in the advertising industry is that younger consumers have less well-formed brand preferences and can be swayed into becoming loyal to another brand. Older consumers on the other hand are believed to have already settled into buying habits that can't be shifted. As a result, advertising rates are set such that it is much more expensive to advertise on programs geared towards younger audiences. The response by network and cable television to such youth obsession by the advertisers is to create television shows targeted to attract young audiences. However, several industry experts have challenged this practice citing lack of research that shows that younger consumers behave any differently than their older counterparts. In this paper we investigate the differences in purchase behavior of consumers in different age groups in the consumer packaged goods industry. Using data from a large set of food and non-food product categories, we study whether consumers in different age groups exhibit differences in brand loyalties or their propensity to try new products. We estimate brand choice models that accounts for both state dependence and heterogeneity. Consumer's brand switching tendency is measured by examining the degree to which consumers in different age group exhibit "inertia" or "variety-seeking" behavior. Loyalty parameter interactions with age groups as well as cross price elasticities across ages indicate no consistent pattern in brand switching behavior. However, using information on over 900 new product introductions spanning 17 product categories, we find that older consumers are consistently less prone to new product trail than their younger counterparts. Implications for advertisers and other marketing managers are discussed.

■ SD13

Somerset West

Pricing VIII: Psychology

Chair: Vinay Kanetkar, Associate Professor, University of Guelph, Dept of Marketing and Consumer Studies, University of Guelph, Guelph, ON, N1G2W1, Canada, vkanetka@uoguelph.ca

1 - An Empirical Analysis of Price Variability Perception Models

Sangkil Moon, Assistant Professor, NC State University, College of Management, Department of Business Management, Raleigh, NC, 27695-7229, United States, smoon2@ncsu.edu, Glenn Voss

Customers may form different price perceptions according to how they process price information. Existing research demonstrates that internal reference price (IRP) models and external reference price (ERP) models explain a significant amount of the variation in customers' price perceptions and purchase behaviors. This study extends the reference price literature by introducing two new models based on the observed price variability within the purchase category. According to the Range Model, price judgments are based on the range of prices (from highest to lowest) in the purchase category. According to the Price Distinctiveness (PD) model, price judgments are based on a relative comparison of the market price with the mean price for the purchase category. Our empirical results demonstrate that the PD model outperforms the range model and that it is more consistent with some customers' purchase histories in the toilet tissue category than either the IRP or ERP models. We also conduct post-hoc analyses to reveal different response patterns to promotion efforts among customers using different reference price models. Correlation analysis shows that PD customers tend to be less responsive to promotion than IRP customers and as responsive as ERP customers. More specifically, PD customers switch brands less than IRP customers who frequently take advantage of price promotions, especially point of purchase displays. We combine these insights to develop a simulation, which demonstrates that a segment-specific promotion strategy will be more effective than any typical blanket promotion that treats all customers uniformly.

2 - Effect of Missing Attributes on Price Sensitivity: Brand Choice and No-Choice Option Analysis

Vinay Kanetkar, Associate Professor, University of Guelph, Dept of Marketing and Consumer Studies, University of Guelph, Guelph, ON, N1G2W1, Canada, vkanetka@uoguelph.ca, Jordan Louviere, Towhidul Islam

What are the impacts of excluded (or included) attributes on consumer price sensitivity? We propose and test that attributes affect both the likelihood of purchasing in the product category and brand choice. Since price sensitivity is influenced by brand choice probabilities, excluded attributes affect price sensitivity. Although existing consumer behavior literature has not identified this as research topic, we briefly review broader literature about attributes and their role in consumer decision processes. We collected data using a complex experimental design that involved two product categories. We target seven attributes to vary presence/absence in two product categories. The two categories are delivered pizzas (9 attributes) and packaged fruit juices (10 attributes). Each category has core attributes not subject to presence/absence manipulation (i.e., they are present and varied in all conditions). The number of conditions motivated us to use a fractional factorial design to make a smaller number of conditions consistent with our research objectives for an initial study. To do this we chose a fractional design with 32 combinations in which all main effects and two-way interactions are orthogonal to one another. Our data analysis indicated that for both product categories, included attributes decreased price sensitivity and increased choice variances. In addition, included attributes also decreased the likelihood of purchasing in the product category. Finally, category price sensitivity was higher when attributes are excluded. Based on the above findings, provision of more attribute should be considered appropriate managerial choice, even if there is information overload.

■ SD14

Somerset East

Mktg. Strategy IX

Chair: Dung Nguyen, University of Pittsburgh, Katz Grad. Sch. of Business, Pittsburgh, PA, 15260, United States, nguyen@pitt.edu

1 - Disentangling Pioneering Cost Advantages and Disadvantages

Markus Christen, Associate Professor, INSEAD, Boulevard de Constance, Fontainbleau, 77300, France, markus.christen@insead.edu, William Boulding

In a recent study, Boulding and Christen (2003) report a negative long-term effect of pioneering on profitability. This disadvantage is shown to arise over time and is traced to higher average costs for pioneers. However, the exact source or sources of this overall pioneering cost disadvantage is unexplored. From the existing literature, we postulate three different sources of long-term pioneering cost advantage — experience curve effects, preemption of input factors and preemption of ideal market space — and three different sources of pioneering cost disadvantage — imitation, vintage effects and demand orientation (versus an efficiency orientation). We disentangle these different sources of cost advantage and disadvantage first by breaking total cost of a business unit into three different components — purchasing, production, and SG&A costs. Second, we identify conditions that intensify the presence or absence of the proposed theoretical mechanism. This process allows us to specify a series of hypotheses with respect to our six theoretical effects. We test our hypotheses using two samples of business units derived from PIMS data— one for consumer goods and one for industrial goods — by examining a series of factors that should moderate the average effects of pioneering on cost components as well as on total cost. Based on these conditional analyses, we find strong support for all hypothesized pioneering cost advantages and disadvantages. Overall, our unconditional analysis shows a pioneering cost advantage for purchasing cost, but even larger pioneering disadvantages for production and SG&A costs.

2 - Relational Exchange and Relationship Performance: The Role of Innovativeness

Erik Mooi, Research Fellow, Aston Business School, Aston Triangle, Birmingham, b4 7et, United Kingdom, e.a.mooi@aston.ac.uk

Relational exchange is a common way for organizations to govern relationships. However, surprisingly little is known about how relational exchange influence relationship performance. Up to now existing studies on relational exchange have focused only on the positive performance implications of relational exchange and have ignored disadvantages of relational exchange that can reduce relationship performance. The authors study a process by which relational exchange influences relationship performance and take a balanced approach towards relational exchange by considering the effects of potential disadvantages of relational exchange. Based upon theoretical arguments we find empirical evidence that the process by which relational exchange influences relationship performance is mediated by innovativeness, which is defined as a climate to improve upon established work procedures, and to affect performance outcomes. We find that the positive aspects of relational exchange are fully mediated by this innovativeness but that the negative aspects of relational exchange have more mixed effects on performance. Thereby the authors offer insight into how relational exchange influences relationship performance and offer an explanation as to why existing studies may have found mixed effects on relational exchange and relationship performance.

3 - Trick or Treat? An Empirical Analysis of Transaction Profits at Currency Exchange Stores

Dubravko Radic, Assistant Professor, University of Wuppertal, Gauflstrasse 20, Wuppertal, 42097, Germany, radic@wiwi.uni-wuppertal.de, Eitan Gerstner, Thorsten Posselt

Relationship marketing scholars promote the idea of treating customers with loving care to help increase profit in the long run. However, recent theoretical research shows that pursuing relationship profit may not always be optimal, and that sometimes firms benefit from maximizing profits period by period (transaction profit maximization). This paper advances the discussion related to "relationship profit maximization" vs. "transaction profit maximization" by observing currency exchange store practices. Our research shows that currency exchange stores try to improve transaction profits by using a variety of pricing tricks. We also find that customers cannot avoid the pricing tricks by selecting stores on the basis of an appealing store appearance, but rather the savvy customers who negotiate exchange rates are more likely to avoid high currency exchange losses. This means that the currency stores use price tricks as a price discrimination tool. The findings lead us to conclude that the store practices are consistent with transaction profit maximization.

4 - Extending the Lanchester Model to Incorporate Price

Dung Nguyen, University of Pittsburgh, Katz Grad. Sch. of Business, Pittsburgh, PA, 15260, United States, nguyen@pitt.edu, Gila Fruchter

This study seeks to extend the traditional Lanchester model of competition in the context of marketing strategy to include the effect of pricing. Among the most important models in capturing the dynamics of competition, the Lanchester formulation of combat has been extensively studied in the literature, both from a theoretical perspective and empirical implementation. In particular, in all of these models, the sole decision variable is advertising which is of course reasonable for a significant group of product categories where advertising constitutes the dominant form of marketing activity. However, in several situations, firms are faced with decisions with not only advertising but also with price setting for their products/services. Our intention is to develop and analyze a model, which is rooted in the Lanchester tradition and yet allows for the role of pricing in designing a competing firm's overall marketing strategies. To include pricing we assume that the total industry sales depend on both firms' prices. As a result we formulate our problem as a differential game and establish the optimal advertising and pricing policy as a Nash equilibrium feedback strategy depending only on the sales. Our interest is in developing a theory, which may be empirically tested with real data. Finally, we will estimate the parameters of the structural models and devise the competing firm's optimal advertising and price paths with their corresponding managerial implications. Key Words: Lanchester model, pricing, advertising, marketing, differential games, Nash equilibrium.

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SB04 Empirical I/O
SB05 Perceived Quality
SB06 Choice Models V: Multi-Category Choice
SB07 High Technology - I
SB08 Diffusion IV: Competitive/International
SB09 eCommerce VIII: eMarketing
SB10 Channels VIII: Game Theory
SB11 Services Marketing I
SB12 Satisfaction II
SB13 Auctions
SB14 Mktg. Strategy VII: Advertising
SB15 Strategic Marketing II

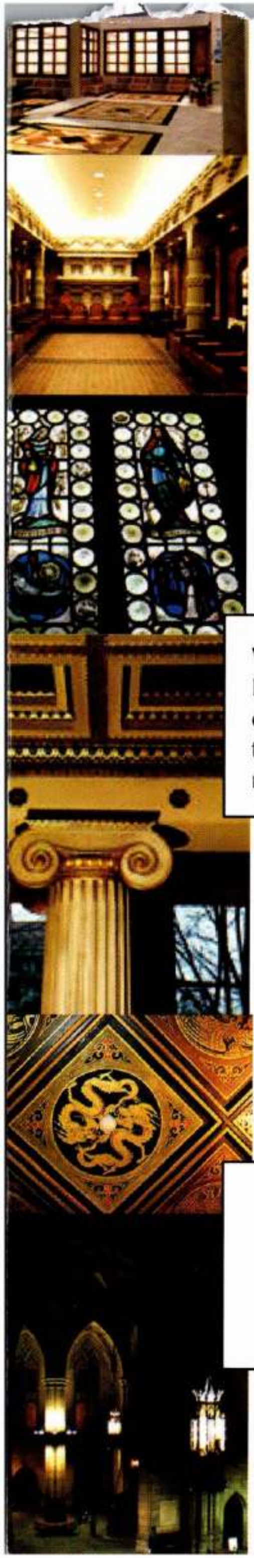
Saturday, 1:30 - 3:00pm (Session SC)

SC02 International Marketing - II
SC03 Marketing Research - II
SC04 Brand Management V: Brand Equity
SC05 Consumer Learning II
SC06 Decision Research II
SC07 High Technology - II
SC08 Pharmaceutical Marketing I: Empirical I/O
SC09 eCommerce IX: Channels
SC10 Channels IX: Relationships
SC11 Services Marketing II
SC12 CRM III
SC13 Pricing VII
SC14 Mktg. Strategy VIII: Firm Performance

Saturday, 3:30 - 5:00pm (Session SD)

SD02 International Marketing - III
SD03 Marketing Research - III
SD04 Personal Selling II
SD05 Attribute Effects
SD06 Choice VI: State Dependence
SD07 High Technology - III
SD08 Pharmaceutical Marketing II: Marketing Mix Decisions
SD09 eCommerce X: Choice Processes
SD10 Channels X
SD11 Services Marketing III
SD12 Customer Loyalty II
SD13 Pricing VIII: Psychology
SD14 Mktg. Strategy IX

NOTES



University of Pittsburgh (PITT) Facts

- Founded in 1787
- 32,000 students and 3,800 faculty members
- 285 degree programs with 187,000 alumni

- 132 acre main campus in Pittsburgh
- Regional Campuses at Bradford, Greensburg,
- Johnstown and Titusville
- The 42-story Cathedral of Learning is the tallest educational building in the USA

- In the top 10 in funding from the National Institute of Health
- In the top 20 in science & engineering funding

Where the Fight Against Polio Began ...
In the mid-1950s, Pitt researcher Jonas Salk and his team developed the first successful polio vaccine. Salk never patented the vaccine, preferring to see it distributed widely. The world is now on the verge of eradicating the epidemic.

Some Notable Pitt Alumni

- Mike Dikta & Dan Marino, Football Hall-of-Famers
- Jagdish Sheth, Marketing Thought Leader
- Gene Kelly, '51 Oscar Winner
- Paul Lauterbur & Wangari Maathai, Recent Nobel Laureates
- Andrew Mellon, Banker & Philanthropist
- Orrin Hatch and Rick Santorum, US Senators

The Nationality Rooms at the Cathedral of Learning are a unique Pitt treasure. The 26 classrooms representing the diverse cultures of the world have been built with the support of local ethnic communities. Guided tours are available. Visit www.pitt.edu/~natrooms/

web: www.katz.pitt.edu/mks2006
email: MKS2006@katz.pitt.edu

Katz Stats

- Business school created in 1923
- 70 full-time faculty members
- 1600 undergraduates and 800 graduate students

Katz offers the

- One and Two-year Full-time MBA,
- Part-time MBA ,
- Executive MBA, and
- a variety of two-year dual degree programs
- International Executive MBA is offered at Manchester, Pittsburgh, Prague and São Paulo

75 students in the doctoral program across eight different majors

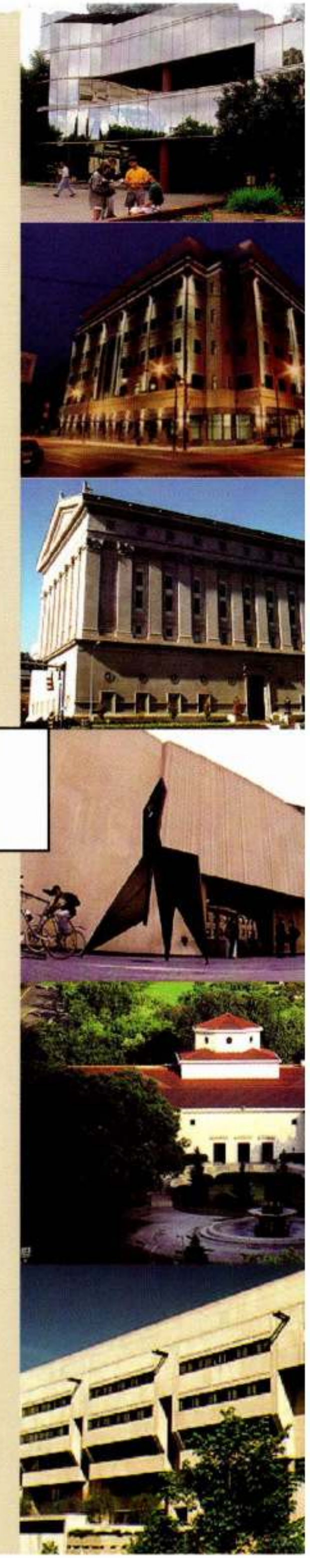
For more on Katz, visit http://www.katz.pitt.edu/

For America's Weekly Business Quiz...
Visit http://www.katzquiz.com/

The Marketing Group at Katz

Faculty	Doctoral Students
Rabikar Chatterjee	Chris Groening
Larry Feick (Interim Dean)	Ryan Luchs
Tansev Geylani	Feisal Murshed
Robert Gilbert	Karen Page
John Hulland	Matt Sarkees
Jeff Inman	Karen Stilley
Vikas Mittal	Rama Subramanian
Vanitha Swaminathan	Gergana Yordanova
R. Venkatesh	
Rick Winter	

JOSEPH M. katz
Graduate School of Business
University of Pittsburgh



2006 INFORMS MARKETING SCIENCE CONFERENCE @ KATZ.PITT

	Room	Allegheny Ballroom I	Crawford East	Crawford West	Butler West	Butler East	Cambria West	Cambria East	Westmore-land W.	Westmore-land Cent.	Westmore-land E.	Washing-ton	Fayette	Somerset West	Somerset East
	Track	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**
Thursday	1-1.30 PM	**Conference Opening**													
	TC: 1.30-3 PM	Prac. Prize Rehearsal (2-4 PM)	Decision Support Systems	Game Theory: Application	Tests of Economic Theory	BDT I	Choice Models I	Product Line Mgmt.	Word of Mouth I: Learning	eCommerce I: Auctions	Channels I: Retailing	Promotions I	CRM I	Pricing I	Mktg. Strategy I: Alliances
	3-3.30 PM	Break													
	TD: 3.30-5 PM	Prac. Prize Rehearsal (4-6 PM)	Public Policy & Marketing	Competition & Response	Location Models	Consumer Behavior I	Choice Models II	Pdt. Design Methods	Word of Mouth II	eCommerce II: Advtg.	Channels II: Retailing	Promotions II	CLV I	Pricing II: Ref. Price Effects	Mktg. Strategy II: Advtg.
	6-9 PM	**Off-site: Pitt – Cathedral of Learning**													
Friday	7.30-8.30 AM	Breakfast													
	FA 8.30-10 AM	Practice Prize I (8.15 - 9.45 AM)	Market Structure Analysis	Market Analysis & Response	Brand Mgmt. I: Portfolios	Consumer Behavior II	Choice Models III	New Product Dev. I	Word of Mouth III: Game Th.	Auctions: Empirics	Channels III: Retailing	—	Satis-faction I	Pricing III: Bundling	Mktg. Strat. III: Welfare
	10-10.30 AM	Break													
	FB 10.30 AM - Noon	Practice Prize II (10-11.30 AM)	Mktg. Dash-boards	Competition Game Theory	Brand Mgmt. II	BDT II	Decision Research I	New Product Dev. II	Word of Mouth IV: Diffusion	eCommerce IV: eTailing	Channels IV: Retailing	—	Loyalty Programs	Pricing IV: Struc. Models	Mktg. Strat. IV: Framewks.
	12 N-1.30 PM	Lunch at Allegheny Ballroom													
	FC 1.30-3 PM	—	Strategic Mktg. I	Latent Variable Models	Brand Mgmt. III: Equity	Consumer Behavior III	Choice Models IV	New Product Dev. III	Diffusion I: Agent-Based	eCommerce V: Click-stream	Channels V: Pricing	Promotions III	Customer Loyalty I	Pricing V	Mktg. Strat. V: Advtg.
	3-3.30 PM	Break													
	FD 3.30-5 PM	Meeting the Editors	Financial Value of Mktg.		Brand Mgmt. IV	Consumer Learning I	Choice Experi-ments	New Product Dev. IV	Diffusion II: Netwrk. Externality	eCommerce VI: Cons. Behavior	Channels VI: Multi Channels	Promotions IV	CRM II	Issues in Remote Retailing	Mktg. Strat. VI
	6-9 PM	**Off-site: Heinz History Center**													
Saturday	7.30-8.30 AM	Breakfast													
	SA 8.30-10 AM	—	Financial Services	Bayesian Methodo-logies	Personal Selling I	BDT III	Mktg. Models	New Product Dev. V	Diffusion III: New Products	eCommerce VII: Mktg. Mix	Channels VII	Promotions V	CLV II	Pricing VI: Dynamics	Multi-channel Mktg.
	10-10.30 AM	Break													
	SB * 10.30 AM - Noon	Practitioner Perspectives	Inter-national Mktg. I	Mktg. Research I	Empirical I/O	Perceived Quality	Choice Models V: Multi-Cat	High Tech. I	Diffusion IV	eCommerce VIII: eMktg.	Channels VIII: Game Th.	Services Mktg. I	Satis-faction II	Auctions	Mktg. Strat. VII
	12 N-1.30 PM	Lunch at Allegheny Ballroom													
	SC 1.30-3 PM	—	Inter-national Mktg. II	Mktg. Research II	Brand Mgmt. V: Equity	Consumer Learning II	Decision Research II	High Tech. II	Pharma Mktg. I: Emp. I/O	eCommerce IX: Channels	Channels IX: Reln.-ships	Services Mktg. II	CRM III	Pricing VII	Mktg. Strat. VIII: Firm Perf.
	3-3.30 PM	Break													
	SD 3.30-5 PM	—	Inter-national Mktg. III	Mktg. Research III	Personal Selling II	Attribute Effects	Choice Mod. VI: State Dep.	High Tech. III	Pharma Mktg. II: Mktg. Mix	eCommerce X: Choice Processes	Channels X	Services Mktg. III	Customer Loyalty	Pricing VIII: Psych.	Mktg. Strat. IX

*During SB 10.30 AM – Noon, an additional session SB15 titled "Strategic Marketing II" is scheduled at Armstrong.