

MARKETING
JUNE 24-26, 2004
SCIENCE
ERASMUS UNIVERSITY ROTTERDAM
CONFERENCE



Rotterdam, June 24 2004.

Dear Marketing Scientists,

In name of the organization committee and the marketing faculty at Erasmus University Rotterdam, I welcome you to the 26th Marketing Science conference in Rotterdam (June 24-26 2004). We hope you will enjoy a great conference, together with many colleagues from all over the world. With 12 tracks and many excellent speakers, it promises to give you lots of new inspiration to embark on innovative and impactful new research projects.

Rotterdam is an excellent location for the Marketing Science Conference. It is a modern city (as it was almost completely destroyed in WW II) with much modern architecture. It is also one of the largest ports in the world and a major gateway to Europe. Major European cities, such as Amsterdam, Brussels, Paris, and Berlin, are within four hours distance by train.

This conference would not have been possible without the financial support of our main sponsor Unilever, VNU (business sponsor), Erasmus Research Institute of Management and Vereniging Trustfonds EUR (both academic sponsors). We also thank special session sponsors, Erasmus Food Management Institute, Brand Science Institute and Teradata Center for Customer Relationship Management.

Thank you for attending this conference. Let's all make this conference an event to remember.

Sincerely,

Stefan Stremersch
(Conference chair)

The Organization Committee:

Stefan Stremersch, Philip Hans Franses, Gerard Tellis, Berend Wierenga, Bas Donkers, Peter Verhoef, and Stefan Wuyts.

Conference venue

The conference is held at the Erasmus Conference and Expo Center. This building is locally known as Building M. The presentations will be held in rooms that are located at the 1st, 2nd and 3rd floor of this building. A map of the campus and a map with the location of all rooms are provided on the next page.

On site facilities:

- Computer facilities.
To access the Internet and read e-mail a room with computers is available. Access to these computers is possible with username: marketing and password: marketing. These computers do not have printing facilities.
The computer room ("M2B2, Terminalzaal 2") is accessible from the corridor at the 2nd floor of the building.
- ATM.
An ATM is available on campus. To go there, exit the conference building and turn right. The ATM is then located on the left, at the back of Building L. See also the campus map.

Registration and information desk

The registration desk is located near the entrance of the conference center.

The registration desk is open:

Thursday	10.00 – 19.00
Friday	7.00 – 17.00
Saturday	7.00 – 16.00

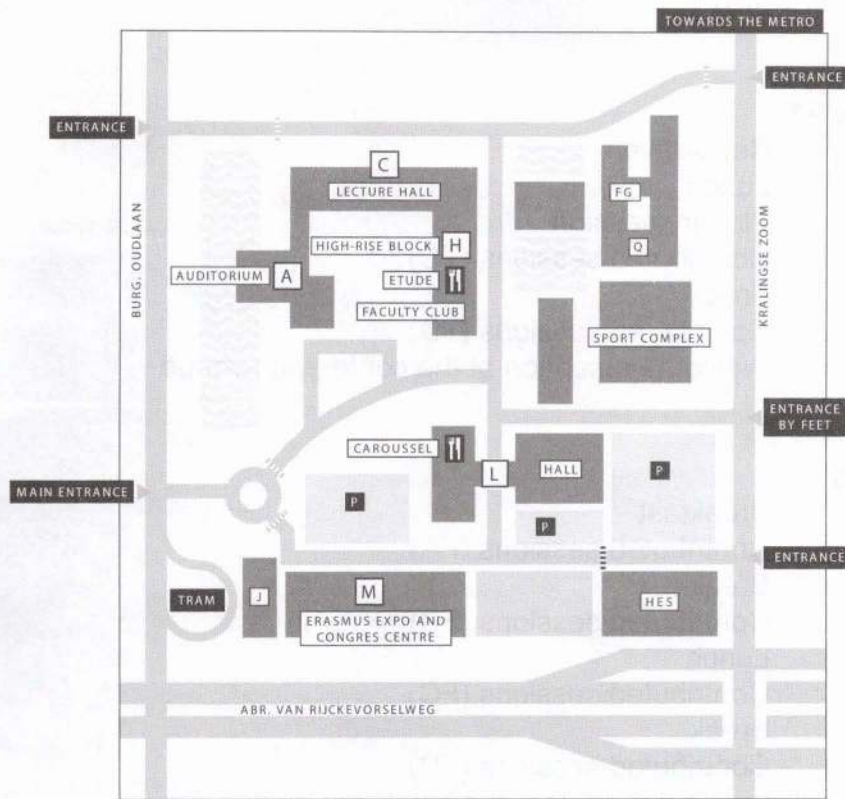
Exhibits

Publishers and software companies will provide you with information on their most recent products in the corridors of the conference building.

Exhibit hours are:

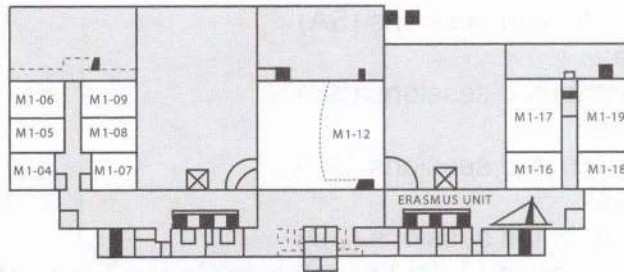
Thursday	12.00 – 17.00
Friday	7.30 – 15.30
Saturday	7.30 – 15.30

Map Campus Woudestein



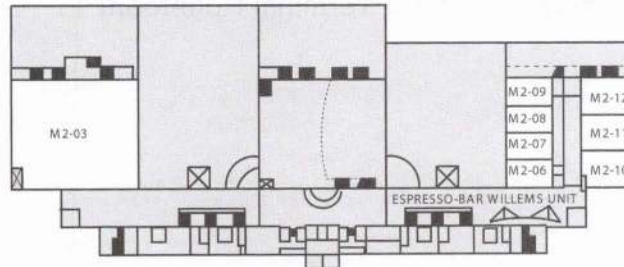
Map Erasmus Expo and Congress centre (M-building)

FIRST FLOOR



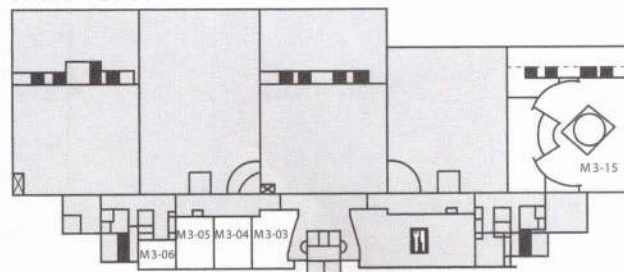
- M1-04 MONTREAL
- M1-05 HULL
- M1-06 BALTIMORE
- M1-07 FRANEKER
- M1-08 LEUVEN
- M1-09 BERGEN
- M1-12 OXFORD
- M1-16 HEIDELBERG
- M1-17 TOKYO
- M1-18 LUND
- M1-19 ATHENE

SECOND FLOOR



- M2-03 SORBONNE
- M2-06 GALWAY
- M2-07 BASEL
- M2-08 HARVARD
- M2-09 MELBOURNE
- M2-10 ROCHESTER
- M2-11 SANTANDER
- M2-12 SHANGHAI

THIRD FLOOR



- M3-15 FORUM
- M3-03 ABERDEEN
- M3-04 AUCLAND
- M3-05 PRAAG
- M3-06 LUXEMBURG

Conference overview

Thursday, June 24

10.00 –	Registration
11.30 – 13.00	Lunch
13.00 – 13.50	Plenary session
14.00 – 15.30	Contributed sessions (TC)
15.30 – 16.00	Break
16.00 – 17.30	Contributed sessions (TD)
17.30 – 19.30	Welcome reception at the conference venue

Friday, June 25

7.30 – 8.30	Breakfast
8.30 – 10.00	Contributed sessions (FA)
10.00 – 10.30	Break
10.30 – 12.00	Contributed sessions (FB)
12.00 – 13.30	Lunch
13.30 – 15.00	Contributed sessions (FC)
15.00 – 15.30	Break
15.30 – 17.00	Contributed sessions (FD)
18.15	Buses depart from the hotels to Gouda
19.00 – 22.00	Dinner at the St Jan Church, Gouda

Saturday, June 26

7.30 – 8.30	Breakfast
8.30 – 10.00	Contributed sessions (SA)
10.00 – 10.30	Break
10.30 – 12.00	Contributed sessions (SB)
12.00 – 13.30	Lunch
13.30 – 15.00	Contributed sessions (SC)
15.00 – 15.30	Break
15.30 – 17.00	Contributed sessions (SD)
18.45	Buses depart from the hotels to Cruise Terminal
19.00 – 23.00	Dinner at the Cruise Terminal Rotterdam

Bus schedule

There is a bus service between the Westin hotel and the university campus. The Hilton hotel is located close to the Westin hotel. For the social events that are off campus, buses will leave from the Westin hotel and the Novotel. The Novotel is at walking distance from the university campus.

Thursday, June 24

11.00 – 12.30	Bus service from Westin hotel to the campus
12.30 – 17.00	Shuttle bus service between campus and hotels
17.00 – 19.30	Bus service from the campus to Westin hotel

Friday, June 25

7.15 – 8.00	Bus service from Westin hotel to the campus
8.00 – 17.00	Shuttle bus service between campus and hotels
17.00 – 17.30	Bus service from the campus to Westin hotel
18.15	Buses depart from hotels to Gouda for conference dinner
22.30	Return from Gouda

Saturday, June 26

7.15 – 8.00	Bus service from Westin hotel to the campus
8.00 – 17.00	Shuttle bus service between campus and hotels
17.00 – 17.30	Bus service from the campus to Westin hotel
18.45	Buses depart from hotels to the Cruise Terminal for conference dinner
22.30 and 24.00	Return to hotels

Social events

Thursday, June 24

Welcome reception at the Erasmus University Rotterdam.

You are all cordially invited to join us for a welcome reception at the conference center of Erasmus University Rotterdam (conference location) to kick off the Marketing Science 2004 Conference. Food and beverages will be served.

Friday, June 25

Dinner at the St. John Church in Gouda

This formal event will be held in the St. John Church located in the center of Gouda. Gouda is a beautiful old city in the West of Holland, not far from Rotterdam. The city has beautiful old trader houses and canals. The famous Dutch Gouda cheese is named after this city. It is also known for its "candle" industry. This reformed St. John church is consecrated to John the Baptist and is famous for its 16th century stained glass windows. It is also the largest church of the Netherlands. There is "a connection" with the Erasmus University, as it is said that the great philosopher Desiderius Erasmus was born in this church.

The event consists of a reception in one of the galleries of the church and a formal dinner in another gallery. During this event the winners of the following awards will be announced:

- John D.C. Little Award
- Frank M. Bass Dissertation Paper Award
- Practice Prize

Saturday, June 26

Dinner at the Cruise Terminal in Rotterdam

We end the conference with an informal event in the Cruise Terminal near the river the Maas that flows through Rotterdam. The Cruise Terminal has a close connection with the USA. From this building ships from the so-called "Holland-America Line" left to New York to transport Dutch immigrants to the USA. Nowadays the terminal is no longer used. It is, however, a fabulous location nearby the center of Rotterdam with a great view of the city and the river Maas.

Information for speakers, session chairs, and participants

Guidelines for speakers

The room and location of your session are listed in these proceedings. Please be in time (15 minutes prior to begin) for your session. In particular, when you use a computer presentation, this presentation should be installed on the laptop in the room before the session starts. In case you show up just before the session starts, the time to install the presentation on the laptop is deducted from your presentation time.

The laptops are equipped with a floppy drive, a CD ROM, and a USB port. Note that connecting the projection equipment to your own laptop is time-consuming and sensitive to all kinds of problems. It will therefore not be possible to use your own laptop. Overhead projectors are also available in each room.

Most sessions include 4 papers. Sessions last one and a half hour. Thus, the total time for each presentation is approximately 22 minutes. Make sure your presentation fits within this time span. This should also include time for questions from the audience.

Guidelines for session chairs

The session chair is the last speaker of the session (unless otherwise indicated in the program). The chair is responsible for a smooth running of the session. It is important that the presentations are held at the designated times. When a speaker does not show up, the subsequent presentations should not be shifted forward.

The session chair introduces each speaker and informs the speaker when time is running short.

Guidelines for participants

It is possible that you find presentations of your interest in different sessions that run at the same time. You might therefore want to switch sessions. When you do so, we would want to request that you leave sessions only at the beginning or ending of a talk (and not during) and leave and enter rooms quietly.

Places to eat

An interesting area to go out for diner is the "Westelijk Handelsterrein". This is an area with a number of small restaurants and pubs that are of good quality. This area can be reached by public transportation, Tram line 5 in direction Willemsplein, (stop Vasteland). It is also about 20 minutes walking from the central train station; just follow the road that starts opposite the central train station.

French Cuisine

- Eten
Nieuwe Binnenweg 153
Tel. 010-436 44 74
- Nul 10
Westerstraat 39a
Tel. 010-213 44 45
- Zink
Calandstraat 12a
Tel. 010-436 65 79
- Zeezout
Westerkade 11b
Tel. 010-436 50 49

Due to the Dutch colonial history there are a number of good Indonesian restaurants in Rotterdam:

- Kantjil & de Tijger
Haringvliet 76
Tel. 010-213 17 60
- Dewi Sri
Westerkade 20
Tel. 010-436 02 63

For those interested in upper class locations:

- Parkheuvel, 3 Michelin stars
Heuvellaan 21
Tel. 010-436 07 66
- La vilette, 1 Michelin star
Westblaak 160,
Tel. 010-414 86 92
- De Engel
Eendrachtsweg 19
Tel. 010-413 82 56
- De Harmonie
Westersingel 95
Tel. 010-436 36 10

Other places of interest are:

- La Stanza (Italian)
Van Vollenhovenstraat 19
Tel. 010-277 14 14
- O'Pazzo (Italian)
Mariniersweg 90
Tel. 010-282 71 07
- De Chinese Muur (Chinese)
West-Kruiskade 1a
Tel. 010-412 56 22
- Fuji (Japanese)
Kruiskade 26/28
Tel. 010-414 33 38

Keynote address by

Anthony Simon

President of Marketing for Unilever Bestfoods.

Following Unilever's acquisition of Bestfoods and the creation of Unilever Bestfoods in October 2000, Anthony Simon was appointed president of marketing for Unilever Bestfoods in January 2001 and member of the Unilever Bestfoods Board. Prior to this appointment, he had been Corporate Vice President of world-wide Strategy and Core Businesses for Bestfoods and a member of the corporation's Corporate Strategy Council or Executive Committee.

Anthony Simon joined Bestfoods in 1968 at its European headquarters in Brussels. He held various marketing positions in Scandinavia before returning to headquarters in 1972 as new business development coordinator. In 1973, he was appointed assistant to the divisional president. In 1980, Anthony Simon was appointed deputy consumer operations manager for Bestfoods in Switzerland and two years later, became general manager of Bestfoods Ireland. In 1985, he became executive assistant to the divisional president and the following year, a divisional vice president and member of the European Executive Committee and the Bestfoods Europe Board. Anthony Simon was named vice president, Northern European Region in 1987 and became senior vice president - business development, planning and operations for Bestfoods Europe in 1991. He was elected a Corporate Vice President of Bestfoods in March 1997 and is a board member of the Huhtamaki, a leading global packaging company.

An academic's perspective on the keynote address by

John D. C. Little

Institute Professor at MIT

Professor Little is best known in OR/MS for his proof of the queuing formula, $L = W$, commonly called Little's Law. He is also considered a founder of marketing science. He graduated from MIT in 1948 with an S.B. in physics. After working two years at GE, he returned for graduate work but gradually switched to operations research, studying with OR pioneer, Philip Morse, and graduating in 1955 as the first Ph.D. in OR. From 1957-62 he taught at Case Western Reserve. Professor Little early recognized the power of combining optimization and computation. His research in marketing encompasses a broad set of modeling and decision support issues that have led naturally to his current interest in e-commerce and marketing automation. Professor Little has long been active in professional societies, having been president of both ORSA and TIMS, and chairing the committee that merged these two organizations, after which he became the first president of INFORMS. He also co-founded a marketing models firm, Management Decision Systems, which was later acquired by Information Resources, and, more recently, an internet company that is now part of Kana Software

Thursday, June 24 2004, Session C: 14:00 pm - 15:30 pm

Special Session: Customer Retention	Diffusion 01	Marketing Research 01: Bayesian Analysis
<p align="center">TC01- FORUM</p> <p>Optimizing Customer Retention and Acquisition over Time <u>Barak Libai</u>, Eitan Muller</p> <p>Profit Maximizing Customer Retention Management <u>Manfred Krafft</u>, Marco Hüppelshäuser</p> <p>Throw a Sprat to Catch a Mackerel! The Influence of Loyalty Rewards on Customer Purchasing <u>Jorna Leenheer</u>, Tammo Bijmolt</p> <p>Modeling the Customer Upgrade Decision: When Satisfaction is not Enough <u>Katherine Lemon</u>, Ruth Bolton, Peter Verhoef</p> <p>Chair: Katherine Lemon</p> <p><i>Sponsored by Teradata Center for Customer Relationship Management</i></p>	<p align="center">TC02- TOKYO</p> <p>The Embedded Model of the Norton-Bass Successive Technology Generations Model <u>Portia Isaacson Bass</u>, Frank Bass</p> <p>The Relationship Between Advertising and Sales: Evidence from a Stock Market Simulation <u>Anita Elberse</u>, Bharat Anand</p> <p>The Role of Market Information in the Diffusion of Competing Technology Standards <u>Demetrios Vakatsas</u>, Vasilis Theoharakis, Veronica Wong</p> <p>Forecasting Adoption Growth for a New Durable Good From Purchase Intent Measures: Model, Estimation and Validation <u>Albert Bemmaor</u></p> <p>Chair: Albert Bemmaor</p>	<p align="center">TC03- ATHENE</p> <p>A Dynamic Spatial Model for Target Search: Covert Task Switching Over Time and Space <u>Ralf van der Lans</u>, Rik Pieters, Michel Wedel</p> <p>Bayesian Analysis of a Multiple Change-Point Regression Model <u>Duncan K. H. Fong</u>, Wayne DeSarbo</p> <p>Comparison of Extended and Bayesian-based Market-Share Models <u>Akihiro Inoue</u></p> <p>Direct Versus Framing Effects: A Structural Model of the Dual Roles of Advertising <u>Om Narasimhan</u>, Xinlei Chen, Nitin Mehta</p> <p>Chair: Om Narasimhan</p>
Pricing 01: Auctions	Channels 01	Special Session: The Practice of Marketing Mix Analysis
<p align="center">TC04- ROCHESTER</p> <p>Outcome Contingent Regret in Ascending and Descending Auctions <u>Amar Cheema</u>, Dipankar Chakravarti, Atanu Sinha</p> <p>Is Information Transparency Good?: The Impact of Information on Past Internet Auctions on Sellers <u>Eric Greenleaf</u>, Teck Ho, Vishal Narayan</p> <p>Bayesian Estimation of Bid Sequences in Internet Auctions Using a Generalized Record Breaking Model <u>Eric Bradlow</u>, Young-Hoon Park</p> <p>Bid Analyzer: A Method for Price Discovery in Online Reverse Auctions <u>Sandy Jap</u>, Prasad Naik</p> <p>Chair: Sandy Jap</p>	<p align="center">TC05- SANTANDER</p> <p>Infomediaries and Channel Strategies <u>Abel Jeuland</u>, Nanda Kumar</p> <p>Determinants of Breadth and Depth in Distribution Channel Usage <u>Rupinder Jindal</u>, Wayne Hoyer, Manfred Krafft, Werner Reinartz</p> <p>Choosing Pricing Decision Variables in Models of Distribution Channels <u>Rajeev Tyagi</u></p> <p>How to Seize a Window of Opportunity: The Entry Strategy of Retail Firms into Transition Economies <u>Katrijn Gielens</u>, Marnik Dekimpe</p> <p>Chair: Katrijn Gielens</p>	<p align="center">TC06- SHANGHAI</p> <p>The Practice of Marketing Mix Analysis <u>Craig Stacey</u></p> <p>Getting Control: Improving the Productivity of the Marketing Mix <u>Richard Cook</u>, Mike Ljubicic, John Porter</p> <p>Category Dynamics <u>Gordon Wyner</u>, Alain Pioche</p> <p>Improving Total Portfolio ROI <u>Debbie Samuels</u></p> <p>Chair: Craig Stacey</p>

Thursday, June 24 2004, Session D: 16:00 pm – 17:30pm

Promotion 02	Consumer Behavior 02: Reference Points	Choice 02
<p align="center">TD07- HULL</p> <p>Who is Stockpiling, and Who is Consuming More? —A Study on Decomposition of Price Promotion Effects <u>Qin Zhang</u>, Tat Chan, Chakravarthi Narasimhan</p> <p>The Effects of Free Sample Promotions on Incremental Brand Sales <u>Kapil Bawa</u>, Robert Shoemaker</p> <p>How Do Promotion Programs Affect Consumers' Purchase Decisions: A Behavioral Perspective <u>Yuhuang Zheng</u>, Ran Kivetz</p> <p>To Whom, When, and How Much to Discount? A constrained optimization of customized temporal discounts <u>Joseph Johnson</u>, Eddie Ip, Gerard J. Tellis</p> <p>Chair: Joseph Johnson</p>	<p align="center">TD08- BALTIMORE</p> <p>Understanding Reference Point Strength and its Impact on Consumer Responses <u>H. Onur Bodur</u>, Neeraj Arora, Noreen M. Klein</p> <p>Investigating the Effects of Consumer Characteristics on Loss Aversion using a Bayesian Approach <u>Daniel Klapper</u>, Christine Ebling, Jarg Temme</p> <p>Anchoring and Adjustment in Non-linear Pricing <u>Stephen J. Hoch</u>, Joseph redden</p> <p>Reference Points and the Importance of Attributes in Consumer Judgment and Choice <u>Koert Van Ittersum</u>, Joost M.E. Pennings, Hans C.M. Van Trijp, Brian Wansink</p> <p>Chair: Koert Van Ittersum</p>	<p align="center">TD09- LEUVEN</p> <p>Consumer Dynamic Intertemporal Choice with Reference Point <u>Qiang Lu</u></p> <p>Analyzing the Effect of Past Prices on Reference Price Formation <u>Richard Paap</u>, Rutger van Oest</p> <p>Consumer Choices in One-Stage vs. Two-Stage Markets <u>Vardit Landsman</u></p> <p>Modeling Online Brand Choice Behavior: Exploring the Effects of Some Internet-Specific Attributes <u>Yanan Wang</u></p> <p>Chair: Yanan Wang</p>
CRM 02	Competition & Game Theory 01	Internet 01
<p align="center">TD10- BERGEN</p> <p>Enhancing the Effectiveness of the Customer Relationship Management Effort Through Marketing Network <u>Fabrizio Zerbini</u></p> <p>Moderators of the Relationship Between Third-Party Complaints and Spanish Banking Performance <u>Ana Belen Casado-Diaz</u>, Francisco Jose Mas-Ruiz, Ricardo Sellers-Rubio</p> <p>Linking Team Efficacy and Group Potency to Customer Perceptions and Financial Performance <u>Ad de Jong</u>, Ko de Ruyter, Martin Wetzels</p> <p>Financial Incentives in Promoting Referrals <u>Thorsten Posselt</u>, Dubravko Radic</p> <p>Chair: Thorsten Posselt</p>	<p align="center">TD11- HEIDELBERG</p> <p>A Model of Bargaining in a Vertical Marketing Channel and Positioning of Store Brands <u>Tirtha Dhar</u>, Philippe Bontems, JeanPaul Chavas</p> <p>Sequential R&D and Quality of New Products: The Case of Specialized Equipment Suppliers <u>Sumitro Banerjee</u>, David Soberman</p> <p>Ingredient Branding in Vertically Related Markets <u>Liyuan Wei</u></p> <p>Incentives for Retailer Promotion in a Marketing Channel <u>Sihem Taboubi</u>, Steffen Jorgensen, Georges Zaccour</p> <p>Chair: Sihem Taboubi</p>	<p align="center">TD12- LUND</p> <p>Gauging Consumer Evaluations of Online Knowledge: Ordinary Least Square Versus Ordered Logit Models <u>Ming-Hui Huang</u>, Shihti Yu</p> <p>Customer Co-Production in an E-Service Support Setting: Antecedents and Performance Consequences <u>Vera Blazevic</u>, Annouk Lievens, Steve Muylle</p> <p>Marketing-oriented Information Exchanges through the Internet. The Role of the Environmental Context <u>Despina Karayanni</u></p> <p>The Role of Perceived Usability, Satisfaction and Consumer's Trust on the Loyalty to a Website <u>Raquel Gurreea Sarasa</u>, Carlos Flavián-Blanco, Miguel Guinaliú</p> <p>Chair: Raquel Gurreea Sarasa</p>

Friday, June 25 2004, Session A: 8:30 am – 10:00 am

Special Session: Strategic Innovation	Diffusion 03	Marketing Research 03
<p align="center">FA01- FORUM</p> <p>How Legacy Firms Can Introduce Radical and Disruptive Innovations: Theoretical and Empirical Analyses <u>Praveen Kopalle</u>, Rajesh Chandy</p> <p>Identifying and Using Emergent Customers in Developing Radical Innovations <u>Praveen Kopalle</u>, Donna Hofmann, Thomas Novak, David Porter</p> <p>The Dynamics of Radical Innovation <u>Jaideep Prabhu</u>, Rajesh Chandy</p> <p>Understanding the Seeds of Growth: Technological Evolution and Product Innovation <u>Ashish Sood</u>, Gerard J. Tellis</p> <p>Co-chairs: Rajesh Chandy and Praveen Kopalle</p>	<p align="center">FA02 - TOKYO</p> <p>The Generalized Bass Model: An Empirical Application to Take-Off of Durable Goods in Italy <u>Boris Durisin</u>, Domenico Materia</p> <p>Analyzing Dynamic Relationship of Diffusion of Products <u>Kaz Takada</u>, Kaichi Saito, Takaho Ueda</p> <p>Word-of-Mouth for Movies: Its Determinants, Consequences, and Implications for Advertising Strategy <u>Yong Liu</u>, Dae-Yong Ahn</p> <p>Explaining Lead-/Lag-Effects and Spatial Autocorrelation in Models of International Diffusion <u>Kay Peters</u>, Sönke Albers</p> <p>Chair: Kay Peters</p>	<p align="center">FA03- ATHENE</p> <p>Between-Method Convergent Validity of Four Data Collection Methods in Quantitative Means-End Chain Research <u>Alain De Beuckelaer</u>, Ivo Langbroek</p> <p>Solving and Testing for Endogeneity without having Instrumental Variables at Hand <u>Peter Ebbes</u>, Ulf Bockenholt, Michel Wedel</p> <p>On the Predictive Content of Production Surveys: A Pan-European Study <u>Aurélie Lemmens</u>, Christophe Croux, Marnik Dekimpe</p> <p>Latent Class Analysis of Customer-Mix Distributions <u>Andrea Godfrey</u>, Leigh McAlister, Maytal Saar-Tsechansky,</p> <p>Chair: Andrea Godfrey</p>
Practice Prize 01	Retailing 01	Special Session: Product Portfolios
<p align="center">FA04- ROCHESTER</p> <p>Attribute Drivers:- A Dynamic Factor Analytic SKU Choice Model <u>Ashish Sinha</u>, J. Jeffrey Inman, Yantao Wang</p> <p>CHAN4CAST: A Multi-Channel Multi-Region Forecasting Model and Decision Support System for Consumer Package Goods <u>Brian Ratchford</u>, Suresh Divakar, Venky Shankar</p> <p>Chair: Gary Lilien</p>	<p align="center">FA05- SANTANDER</p> <p>The Choice and Consequences of Using a Category Captain <u>Yusong Wang</u>, Sanjay Dhar, Jagmohan Raju,</p> <p>Are Slotting Allowances due to Manufacturer or Retailer Competition? <u>Dmitri Kuksov</u>, Amit Pazgal</p> <p>An Experimental Analysis on Nonlinear Distribution Contracts <u>Noah Lim</u>, Teck Ho</p> <p>Slotting Allowances: An Empirical Investigation <u>K. Sudhir</u>, Vithala Rao</p> <p>Chair: K. Sudhir</p>	<p align="center">FA06- SHANGHAI</p> <p>Extending Dynamic Segmentation with Lead Generation: A Latent Class Markov Analysis of Financial Products <u>Leo Paas</u>, Tammo Bijmolt, Jeroen Vermunt</p> <p>Cross-Selling Sequentially Ordered Products: An Application to Consumer Banking Services <u>Ron Wilcox</u></p> <p>A Hidden Markov Model of Family Lifecycle <u>Wagner Kamakura</u>, Rex Du</p> <p>Introduction to the Special Session: Investigating Dynamics of Consumer Product-Portfolios in the Financial Services Market <u>Tammo Bijmolt</u>, Leo Paas</p> <p>Database Marketing Research into Consumer Product Portfolios at Postbank <u>Maarten Terpstra</u></p> <p>Co-Chairs: Tammo Bijmolt and Leo Paas</p>

Friday, June 25 2004, Session A: 8:30 am – 10:00 am

Promotion 03	Consumer Behavior 03	Choice 03
<p align="center">FA07- HULL</p> <p>Statistical Inference of Stochastic Switching Model with Time-Varying Price Effects using MCMKF <u>Tadahiko Sato</u>, Tomoyuki Higuchi</p> <p>Semiparametric Support Vector Machines to analyze temporary price deals <u>José-Luis Rojo-Álvarez</u>, Miguel Ángel Gómez-Borja, María Pilar Martínez-Ruiz, Alejandro Mollá-Descals</p> <p>Modeling Purchases as Repeated Events Govert Bijwaard, Philip Hans Franses, Richard Paap</p> <p>Discrimination of Unobserved Display Promotion from POS Data using RBF Network <u>Yoshinori Kawasaki</u>, Tomohiro Ando, Tadahiko Sato</p> <p>Chair: Yoshinori Kawasaki</p>	<p align="center">FA08- BALTIMORE</p> <p>On- and Off-line Cultural Contents Consumers Segmentation in Korea: Pop, Cartoon, Animation, and Game <u>Soyoung Kim</u>, Tag-Jung Kim, Yoonsik Kwak, Youngsik Kwak, Joungwon Shin</p> <p>Dynamic Magazine Cover & Package Design & Optimization in the Internet Era <u>Alex Gofman</u>, Howard Moskowitz</p> <p>Family Influences in the Young Adult Consumer Behaviour: An Integrative Perspective <u>Rafael Bravo</u>, Elena Fraj, Eva Martínez</p> <p>Measuring Decision Strategies <u>Björn Vroomen</u>, Bas Donkers</p> <p>Chair: Björn Vroomen</p>	<p align="center">FA09- LEUVEN</p> <p>Product Design and Suitability to Intended Usages of the Product: Influences on Buyer Behaviour <u>Jaime Romero de la Fuente</u>, María Jesús Yagüe</p> <p>On the Relationship Between First-order Cross Effects and Two-way Interactions <u>James B. Wiley</u>, Damaraju Raghavarao</p> <p>Modeling Consumption Patterns in the Attribute Space: Theory and Evidence of Hybrid Behavior <u>Antonio Ladron de Guevara</u>, Sergi Jimenez</p> <p>Interpersonal Influences on Purchase Incidence <u>Piyush Kumar</u></p> <p>Chair: Piyush Kumar</p>
CRM 03: Datamining	Competition & Game Theory 02	Internet 02
<p align="center">FA10- BERGEN</p> <p>Implementation of "Instant CRM": Building One-to-One Relationship with Loyal Customers <u>Hiroko Sukeda</u>, Youichi Horry, Chiaki Matsumoto, Kazuhiro Oozeki</p> <p>CRM and Database Marketing: An Integrated Approach <u>Demetris Papaiacovou</u></p> <p>Cost-Benefit Analysis of Several Hard-Segmentation Methods for Identifying Target Customers <u>Makoto Mizuno</u>, Akira Saji, Ushio Sumita, Hideo Suzuki</p> <p>Direct Data Applied: A Behavioural Segmentation for Marketing Purposes <u>Philipp E. Otto</u>, Nick Chater, Greg B. Davies, Henry Stott</p> <p>Chair: Philipp Otto</p>	<p align="center">FA11- HEIDELBERG</p> <p>Impact of Intra-format Competition on Retail Formats <u>Trichy V. Krishnan</u>, Kitty Koelemeijer</p> <p>Market Structure Analysis and Cross Category Choice - A Network Analysis <u>Alberto Marcati</u>, Raffaele Corrado, vincenza odorici,</p> <p>When Does Product Information Reduce Market Competition? <u>Bin Gu</u></p> <p>Computing the Levels of the Impulse Response Functions of a Log-Transformed VAR System <u>Csilla Horvath</u>, Jaap Wieringa</p> <p>Chair: Csilla Horvath</p>	<p align="center">FA12- LUND</p> <p>Suboptimal Utilization of the Internet's Distributive Power: A Case of Optimizing P-P Networks <u>Ramana Madupalli</u>, Amit Poddar</p> <p>A Dynamic Model to Assess E-mailing Impacts on Web Visit and Purchase by Using Petri Nets <u>Christine Balagué</u>, Janghyuk Lee</p> <p>Internet Usage and Online Shopping Experience as Predictors of Consumers' Preferences to Shop Online <u>Didier Soopramanien</u>, Robertson Alastair, Robert Fildes</p> <p>E-Tail Brand Equity: The Role of Brand Name on Consumer Choice <u>Arthur Klebanov</u>, Xing Pan</p> <p>Chair: Arthur Klebanov</p>

Friday, June 25 2004, Session B: 10:30 am – 12:00 am

Special Session: Social Networks and Social Contagion	Innovation 01	Marketing Research 04
<p align="center">FB01- FORUM</p> <p>Exploring Connectivity among Marketing Researchers: The 'Kevin Bacon' of Marketing <u>Eitan Muller</u>, Jacob Goldenberg, Barak Libai</p> <p>Firm Created Word of Mouth Communication: A Natural Experiment <u>David Godes</u>, Dina Mayzlin</p> <p>Discriminating Between the Word-of-Mouth Hypothesis Versus the Consumer Heterogeneity-in-Propensity-to-Adopt Hypothesis as Drivers of Diffusion in a New Product Growth Model for Consumer Durables <u>Albert Bemmaor</u></p> <p>Social Contagion and Income Heterogeneity in New Product Diffusion: A Meta-Analytic Test <u>Christophe Van den Bulte</u>, Stefan Stremersch</p> <p>Chair: Christophe Van den Bulte</p>	<p align="center">FB02- TOKYO</p> <p>Strategy of Introducing Next Generation New Product <u>Ben Shaw-Ching Liu</u>, Brian Ratchford, D. Sudharshan,</p> <p>Agent-based Approach to Target Marketing <u>Geonha Kim</u>, Daisuke Takashima, Shingo Takahashi, Takahiro Ohno</p> <p>Inference on Information <u>Joseph Retzer</u>, Ehsan Soofi</p> <p>An Exploration of the NPD Process in a Transition Country <u>Sonja Radas</u></p> <p>Chair: Sonja Radas</p>	<p align="center">FB03- ATHENE</p> <p>Multiple Store Patterns in Grocery Shopping: Antecedents and Consequences <u>Els Gijbrecchts</u>, Katia Campo, Patricia Nisol</p> <p>What Can Store Loyalty Cards Data Tell Us About What the Consumers Buy From the Competition? <u>Marc Vanhuele</u>, Xavier Dreze</p> <p>Designing Sales Promotion Campaigns with Case-Based Reasoning: Do Case-Base Size and Content Matter? <u>Niek Althuizen</u>, Berend Wierenga</p> <p>Weathering Tight Economic Times: The Sales Evolution of Consumer Durables Over the Business Cycle <u>Barbara Deleersnyder</u>, Marnik Dekimpe, Phil Parker, Miklos Sarvary</p> <p>Chair: Barbara Deleersnyder</p>
Practice Prize 02	Branding 01	CRM 04
<p align="center">FB04- ROCHESTER</p> <p>Modeling the Effects of Direct Television Advertising <u>Rajesh Chandy</u>, Deborah MacInnis, Gerard J. Tellis, Pattana Thaivanich</p> <p>Sales Territory Design: 30 Years of Modeling and Implementation <u>Andris Zoltners</u></p> <p>Chair: Gary Lilien</p>	<p align="center">FB05- SANTANDER</p> <p>Positioning Store Brands against National Brands: Get Close or Keep a Distance? <u>Raj Sethuraman</u></p> <p>Analysis of Price Competition Using Measures of Brand Similarity <u>Gary Russell</u>, Suresh Divakar, Ann Petersen</p> <p>The Dynamics of Brand Growth at Customer Level <u>Cullen Habel</u>, Cam Rungie</p> <p>The Compensatory and Non-Compensatory Effects of Corporate Brand Associations <u>Guido Berens</u>, Cees B. M. van Riel</p> <p>Chair: Guido Berens</p>	<p align="center">FB06- SHANGHAI</p> <p>Optimal Prices and Rewards when Customers Generate Autonomous Referrals and When Free Riding Occurs <u>Helge Löbler</u>, Martin Welk</p> <p>Managing Flexibility in Buyer-Seller Relationships by Real Options <u>Ellen Roemer</u></p> <p>RFM Analysis Based on a Consumer Behavior Model: A Hierarchical Bayes Approach <u>Makoto Abe</u></p> <p>Customer Asset Segmentation <u>Florian Wangenheim</u></p> <p>Chair: Florian Wangenheim</p>

Friday, June 25 2004, Session B: 10:30 am – 12:00 am

Pricing 03	Consumer Behavior 04	Choice 04
<p align="center">FB07- HULL</p> <p>Fair Target <u>Tony Cui</u>, Jagmohan Raju, Z. John Zhang</p> <p>Why Do Manufacturers Subsidize Leases?: A Price Discrimination Model of Firm Leasing Behavior <u>Srabana Dasgupta</u>, S Siddarth</p> <p>Determinants of Short-run and Long-run Promotion Elasticities <u>Dennis Fok</u>, Philip Hans Franses, Csilla Horvath, Richard Paap</p> <p>Asymmetric Retailers and Price Promotion Strategies under Segmented Switchers <u>Jonathan Bohlmann</u>, Cenk Kocas</p> <p>Chair: Jonathan Bohlmann</p>	<p align="center">FB08- BALTIMORE</p> <p>How Customer Attributions Influence the Effectiveness of Compensation as a Service Recovery Strategy <u>Anne Roggeveen</u>, Dhruv Grewal, Michael Tsiros</p> <p>Impact of Peripheral Information on Beliefs <u>K. N. Rajendran</u></p> <p>Psychological Factors Underlying the Gambler's Ruin <u>Rajagopal Raghunathan</u>, Frenkel Ter Hofstede</p> <p>The Influence of Product Scarcity on Choice: Snobs and Bandwagons <u>Erica van Herpen</u>, Rik Pieters, Marcel Zeelenberg</p> <p>Chair: Erica Van Herpen</p>	<p align="center">FB09- LEUVEN</p> <p>Two-Stage Choice Process of Foreign Market Entry <u>Felipe Ruiz</u>, Francisco Jose Mas-Ruiz, Juan L. Nicolau</p> <p>Segmentation and Targeting for New Product Development in China: Mixture Regression Model <u>Jaesoon Byun</u>, Yongjun Kim, Youngsik Kwak, Yongsik Nam, Sookyoung Paik</p> <p>The Effect of Brand Similarity and Typicality on Preference <u>Kwanho Suk</u>, Thomas Otter</p> <p>The Positivity Effect in Agent Evaluation: Role of Attribute-Level Variance <u>Ashesh Mukherjee</u>, Andrew Gershoff, Anirban Mukhopadhyay</p> <p>Chair: Ashesh Mukherjee</p>
Marketing Strategy 01	Competition & Game Theory 03	Retailing 02
<p align="center">FB10- BERGEN</p> <p>Outsourcing as a Model of Fast-Growth Entrepreneurial Companies <u>U. N. Umesh</u>, John Cullen, Manjula Salimath</p> <p>A Study on the Region of - and Country of Origin Effect Among Chinese Consumers <u>Sehwan Park</u>, Yong June Kim</p> <p>Vertical Transmission of Innovative Brands - An Empirical Multilevel Analysis <u>Jan Wieseke</u>, Michael Lingenfelder</p> <p>State Space Modeling Approach for Decomposition of Daily Sales of a Restaurant into Multi Factors <u>Rui Yamaguchi</u>, Tomoyuki Higuchi, Eiko Tsuchiya</p> <p>Chair: Rui Yamaguchi</p>	<p align="center">FB11- HEIDELBERG</p> <p>Dynamics of an Auction Marketplace with Forward-Looking Bidders <u>Robert Zeithammer</u></p> <p>Double Uncertainty and Signaling in Internet Auctions <u>Hao Zhao</u>, Sharan Jagpal, Shibo Li</p> <p>Pricing of Information: The Interaction of Competitive Externality and Information Quality <u>Yi Xiang</u>, Miklos Sarvary</p> <p>Timeshare Exchange Mechanisms <u>Yu Wang</u>, Aradhna Krishna</p> <p>Chair: Yu Wang</p>	<p align="center">FB12- LUND</p> <p>Retail Category Management and Store Brand Pricing <u>Murali Mantrala</u>, Suman Basuroy, Sri Beldona, Shailendra Gajanan, Rockney Walters</p> <p>Excess Shelf Space in Retail Stores: An Analytical Model and Empirical Assessment <u>Rob Broekmeulen</u>, Jan Fransoo, Karel van Donselaar, Tom van Woensel</p> <p>Clean Up the Barn: The Impact of Assortment Reductions on Category Sales <u>Laurens M. Sloot</u>, Dennis Fok, Peter Verhoef</p> <p>How Assortment Variety Affects its Attractiveness: The Role of Time Pressure and Product Complexity <u>Eline van Ketel</u>, Gerrit van Bruggen, Ale Smidts</p> <p>Chair: Eline Van Ketel</p>

Friday, June 25 2004, Session C: 13:30 pm – 15:00 pm

Special Session: Virtual Customer Initiative	Innovation 02	Internet 03
<p align="center">FC01- FORUM</p> <p>Improving Choice-Based Polyhedral Methods by Taking Response Error into Account <u>Olivier Toubia</u>, John Hauser</p> <p>The Dream Versus Reality of CRM <u>Glen L. Urban</u>, Eric Bradlow, John Hauser, Mahesh Kumar</p> <p>Information Scoring of Opinions, with Application to Purchase Intent <u>Ray Weaver</u>, Drazen Prelec</p> <p>Non-compensatory Consideration-then-Choice Adaptive Conjoint Analysis <u>Michael Yee</u>, John Hauser, James Orlin</p> <p>Chair: John Hauser</p>	<p align="center">FC02- TOKYO</p> <p>Innovation Effects on Firm Value <u>Dominique Hanssens</u>, Koen Pauwels, Jorge Silva-Risso, Shuba Srinivasan</p> <p>Organizational Capabilities and Firm Survival Strategy in New Product Alliance <u>Fang Wu</u>, Roger Calantone</p> <p>Pricing Mechanisms for Personal Digital Networks <u>Ward Hanson</u></p> <p>The Relationship of Innovativeness of R&D Efforts and Subsequent Marketing Spending The Relationship of Innovativeness of R&D Efforts and Subsequent Marketing Spending <u>Lutz Hildebrandt</u>, Paul Farris</p> <p>Chair: Lutz Hildebrandt</p>	<p align="center">FC03- ATHENE</p> <p>The Impact of Online Opinion Forums on Competition and Marketing Strategies <u>Chrysanthos Dellarocas</u></p> <p>Shopping Cart Abandonment at Retail Websites –A Multi-Stage Model of Online Shopping Behavior <u>Patrali Chatterjee</u>, Shibo Li</p> <p>Who Benefits From Reverse Auctions? <u>Ram Rao</u>, Ernan Haruvy</p> <p>An Investigation of Bid-Timing Decisions in Online Auctions: Single-Item vs. Multiple-Item Formats <u>Kanghyun Yoon</u>, Purushottam Papatla</p> <p>Chair: Kanghyun Yoon</p>
Choice 05	Advertising 01	CRM 05: Satisfaction and Loyalty
<p align="center">FC04- ROCHESTER</p> <p>Estimating Disaggregate Model using Aggregate Data: A Bayesian Data Augmentation Approach <u>Yuxin Chen</u>, Sha Yang</p> <p>Repeated Binary Logit (RBL): A Practical Approach to Modelling Loyalty <u>Gilles Laurent</u>, Cam Rungie</p> <p>Who buys Private Labels? A Cross-Category "Willingness-to-Pay" Analysis <u>Andrew Ainslie</u>, Garrett Sonnier</p> <p>Accounting for Individual Level Demand Shocks in a Structural Analysis of Firm's Pricing Behavior <u>Sha Yang</u>, Yuxin Chen</p> <p>Chair: Sha Yang</p>	<p align="center">FC05- SANTANDER</p> <p>The Consequences of Attention to Branding in TV Commercials <u>Michel Wedel</u>, Rik Pieters, Josephine Woltman Elpers</p> <p>Effects of Pre-Launch Advertising: Why advertise when you have no product to sell? <u>Jason Ho</u>, Tirtha Dhar, Charles Weinberg</p> <p>Are Late Entrants in Television Advertising Markets Breaking News? <u>Marcel Cornelis</u>, Marnik Dekimpe, Peter Leeflang</p> <p>Are Firms Still Over-Advertising? <u>Subrata K. Sen</u>, Arbind Prasad</p> <p>Chair: Subrata Sen</p>	<p align="center">FC06- SHANGHAI</p> <p>The Dynamics of Relationship Satisfaction – A Panel Study Applying a GMM-Estimator <u>Jenny van Doorn</u>, Klaus Backhaus</p> <p>The Satisfaction-Loyalty Link: How Robust are the Findings <u>Sri Devi Deepak</u>, Thomas Gruca, Lopo Rego</p> <p>JUMPing Through Uncertainty in Consumer Trust Judgments <u>Detelina Marinova</u>, Jagdip Singh, Deepak Sirdeshmukh</p> <p>The Impact of Satisfaction Strength on the Satisfaction-Loyalty Link <u>Murali Chandrashekar</u>, Rajdeep Grewal, Kristin Rotte</p> <p>Chair: Murali Chandrashekar</p>

Friday, June 25 2004, Session C: 13:30 pm – 15:00 pm

Pricing 04	Marketing Research 05: Survey Methods	Branding 02
<p align="center">FC07- HULL</p> <p>Market-Structure Effects in Dynamic Markets: Initial/Repeat Choice and Asymmetric Price Competition <u>Timothy Heath</u>, Subimal Chatterjee, Xin He</p> <p>Using a Menu of Geographic Pricing Plans <u>Amiya Basu</u>, Charles Ingene, Tridib Mazumdar</p> <p>Buy Now or Bid: Why do Sellers and Bidders use Fixed Price Options in Auctions? <u>Chun Qiu</u>, Yongfu He, Peter Popkowski Leszczyc</p> <p>Searching Hard or Hardly Searching: Insights into Consumers' Patterns of and Returns to Price Search <u>Dinesh K. Gauri</u>, K. Sudhir, Debabrata Talukdar</p> <p>Chair: Dinesh Gauri</p>	<p align="center">FC08- BALTIMORE</p> <p>A Multilevel Assessment of Response Variation and Stability in Survey Research <u>Kersi Antia</u>, William Browne, John Hullah, Elliot Maltz</p> <p>The Optimal Design of Split Questionnaires <u>Feray Adiguzel</u>, Michel Wedel</p> <p>Response Bias due to Mode of Data Collection: Validation and Application of a SEM model <u>Bert Weijters</u>, Maggie Geuens, Niels Schillewaert</p> <p>An Assessment of Measurement Invariance between Online and Mail Surveys <u>Elisabeth Deutskens</u>, Ko de Ruyter, Martin Wetzels</p> <p>Chair: Elisabeth Deutskens</p>	<p align="center">FC09- LEUVEN</p> <p>A Psycho-Linguistic Approach to Explain Consumer's Inference of Associations From Brand Elements <u>Tobias Langner</u>, Franz-Rudolf Esch, John Rossiter</p> <p>A Brand Value Metric for Balance Sheets <u>Marc Fischer</u></p> <p>Which Brands Gain Share From Which Brands? Inference From Store-Level Scanner Data <u>Rutger van Oest</u>, Philip Hans Franses</p> <p>Product Placements in Movies: More than Advertising <u>Daniele Dalli</u></p> <p>Chair: Daniele Dalli</p>
Marketing Strategy 02	Competition & Game Theory 04	Retailing 03
<p align="center">FC10- BERGEN</p> <p>Understanding the Market Orientation – Customer Satisfaction – Business Performance Chain <u>Siva Balasubramanian</u>, Anand Kumar</p> <p>Market Orientation and Business Performance: A Meta Analysis <u>Zhongqi Jin</u>, Zhu Yi</p> <p>Business Strategy and Market Orientation Relationship: An Analysis of its Performance Implications <u>Ana Fuster-Mur</u>, Carlos Flavián-Blanco, Yolanda Polo-Redondo</p> <p>The Influence of Success and Market Related Beliefs on Radical Product Innovation by Small-Firms <u>Frans Verhees</u></p> <p>Chair: Frans Verhees</p>	<p align="center">FC11- HEIDELBERG</p> <p>The Linkage Between Downstream Demand and Competitive Structure in an Upstream Market <u>Abhik Roy</u>, Jagmohan Raju</p> <p>The Impact of Demand-Related Information on Marketing Decisions and Competitive Interaction <u>Vera Magin</u>, Oliver Heil, Reinhard Selten</p> <p>The Interaction between Consumers, Retailers and Manufacturers: a Multi-Agent Simulation <u>David Midgley</u>, Robert Marks</p> <p>Duopoly Pricing under Risk Aversion and Parameter Uncertainty <u>S. Chan Choi</u>, Sharan Jagpal</p> <p>Chair: Chan Choi</p>	<p align="center">FC12- LUND</p> <p>A Model of Multichannel Retailing <u>Xubing Zhang</u></p> <p>Contending With Demand Fluctuation and Missed Appointments: A Source of EOS in Service Industries <u>Scott Fay</u>, Deb Mitra</p> <p>Something About Franchises Nobody Noticed <u>Roger Betancourt</u></p> <p>Geodemographic Market Analysis Methods for Niche Marketing Strategies <u>Dan Putler</u>, Kirthi Kalyanam</p> <p>Chair: Dan Putler</p>

Friday, June 25 2004, Session D: 15:30 pm – 17:00 pm

Special Session: The Immediate and Longer Term Impact of Different Promotion Tools	Innovation 03	Internet 04
<p align="center">FD01- FORUM</p> <p>How Promotion Profitability Varies: Role of Promotion, Brand, Category, and Market Characteristics <u>Kusum Ailawadi</u>, Bari Harlam</p> <p>Are Consumer Spoiled by Promotions? An Assessment of Time-Varying Promotion Sensitivities <u>Baohong Sun</u>, Wooseong Kang, Bill Putsis</p> <p>Price Cut Proxy or Consideration Set Screening: How Promotions Affect Consumers' Brand Choice <u>Jie Zhang</u></p> <p>The Effect of Multi-Item Promotions on Brand Choice and Purchase Quantity <u>Karen Gedenk</u>, Uta Mahler</p> <p>Co-chairs: Kusum Ailawadi and Karen Gedenk</p> <p><i>Sponsored by Erasmus Food Management Institute</i></p>	<p align="center">FD02- TOKYO</p> <p>The Economics of Self Destruction: Radical Bets and Strategic Hedging in Network Industries <u>Chander Velu</u>, Rajesh Chandy, Jaideep Prabhu</p> <p>Product Newness Characteristics and their Effects on Market Success over Time <u>Anne Michaut</u>, Hans C.M. Van Trijp</p> <p>Disentangling the Dimensions of Radical Innovation <u>Stefan Wuyts</u>, Shantanu Dutta</p> <p>A Model of the Emergence and Evolution of Dominant Designs in Networked Markets <u>Arvind Rangaswamy</u>, Gary Lilien, Raji Srinivasan</p> <p>Chair: Arvind Rangaswamy</p>	<p align="center">FD03- ATHENE</p> <p>Automatic Construction of Personalized Customer Interfaces <u>Bob Price</u>, Russell Greiner, Gerald Häubl</p> <p>Market Experimentation and Adaptive Design of Sites <u>Mahesh Kumar</u>, Iakov Bart, Fareena Sultan, Glen L. Urban</p> <p>Newspaper Readership in a Multichannel Environment: Reader's Motivations, Behavior and Channel Choices <u>Raquel Gurrea Sarasa</u>, Carlos Flavián-Blanco</p> <p>Customizing the Marketing Mix in a Digital Environment <u>Romana Khan</u>, Mike Lewis, Vishal Singh</p> <p>Chair: Romana Khan</p>
Choice 06	Advertising 02	CRM 06
<p align="center">FD04- ROCHESTER</p> <p>Linking Marketing and Engineering Product Design Decisions via Analytical Target Cascading <u>Fred Feinberg</u>, Jeremy Michalek, Panos Papalambros</p> <p>How to do Better than Recommending the k-Highest Expected Utility Items <u>Paul Messinger</u>, Bob Price</p> <p>Decomposing Brand Equity into its Breadth and Depth Dimensions <u>John Roberts</u>, Murali Chandrashekar, Alistair Gordon, Pamela Morrison</p> <p>Analyzing Consumers' Perceptions Of Genetically Modified v. Non-Genetically Modified Foods <u>William Putsis</u>, Siva Balasubramanian, Wanki Moon</p> <p>Chair: William Putsis</p>	<p align="center">FD05- SANTANDER</p> <p>Informative Advertising in U.S. Pharmaceuticals <u>Paris Cleanthous</u></p> <p>The Role of Sales Effort in Physician Learning and Drug Prescription Behavior <u>Deanna Wang</u>, Tolga Akcura, Manohar Kalwani</p> <p>Estimating the Effects of Direct-to-Consumer Advertising for Prescription Drugs: A Natural Experiment <u>Prokriti Mukherji</u>, Shantanu Dutta, Surendra Rajiv</p> <p>Multi-Category Prescription Behavior: A Brand-level Analysis <u>Puneet Manchanda</u>, Pradeep Chintagunta, Xiaojing Dong</p> <p>Chair: Puneet Manchanda</p>	<p align="center">FD06- SHANGHAI</p> <p>A Multi-Level Model of the ROI of Relationship Marketing Investments <u>Robert Palmatier</u>, Srinath Gopalakrishna</p> <p>Evaluating the Impact of Sales Channels on Customer Profitability <u>Sonja Gensler</u>, Martin Böhm, Bernd Skiera</p> <p>Investments in Customer Relationships and Product Competition <u>Nanda Kumar</u>, Niladri Syam</p> <p>Service Escape: Profit from Customer Cancellations <u>Eitan Gerstner</u>, Jinhong Xie</p> <p>Chair: Eitan Gerstner</p>

Friday, June 25 2004, Session D: 15:30 pm – 17:00 pm

Pricing 05	Marketing Research 06	Branding 03
<p align="center">FD07- HULL</p> <p>Separating Informational and Allocative Effects of Price <u>Franziska Voelckner</u>, Felix Eggers, Henrik Sattler,</p> <p>A Cross European Comparison of Price Levels and Price Dispersion Among Bricks-and-Clicks, Pure Play and Multichannel Retailers <u>Fabio Ancarani</u>, Frederic Jallat, venkatesh shankar</p> <p>The Differences in Price Elasticity among Segments using Two-Part Tariff <u>Ho Jang</u>, Wan-woo Cho, Chi-woo Han, JeaWeon Hong, Yun Kyung Lee</p> <p>Pricing a Bundled Menu: Is More Consumer Choice Profitable ? <u>Tarun Dewan</u></p> <p>Chair: Tarun Dewan</p>	<p align="center">FD08- BALTIMORE</p> <p>Who is Afraid of Changes? - Risk Attitude, International Market Orientation & Export Performance - <u>Liane Voerman</u></p> <p>Learning from Self and Learning from Others: A Case of Inter- and Intra-firm Diffusion <u>Sanjib Mohanty</u></p> <p>Formative Measurement Models under Multicollinearity Conditions - The Case of Service Quality <u>Jörg Henseler</u>, Kai Adolphs</p> <p>Chair: Jörg Henseler</p>	<p align="center">FD09- LEUVEN</p> <p>Brand Architecture – A View of Practitioners <u>Marina Dabic</u>, Guenter Schweiger, Andreas Strebing</p> <p>A Measure of Asymmetries in Brand Dominance: Correspondence Analysis of Matched Matrices. <u>Anna Torres</u></p> <p>Dynamic Brand-Image-Based Production Location Decisions <u>Gila Fruchter</u>, Eugene D. Jaffe, Israel D. Nebenzahl</p> <p>Consumer's Evaluation of Brand Extensions May Not be Extensive After All: An Empirical Test Among Consumers in India <u>Lawrence L. Garber</u>, Jr, Bibek Banerjee, Shobha Ganapathy</p> <p>Chair: Lawrence L. Garber</p>
Marketing Strategy 03	Competition & Game Theory 05	Retailing 04
<p align="center">FD10- BERGEN</p> <p>Integrating Segmentation, Positioning and Managerial Applicability <u>Udo Wagner</u>, Martin Natter</p> <p>Competitive Crisis Management and Pricing Leading to "Crisis-in-Crisis" Constellations <u>Dierk Luetje</u>, Ronny A. Fuerst, Oliver Heil</p> <p>Externalities of Targeting <u>Luc Wathieu</u></p> <p>Incomplete Mix and Match in Systems Markets: Theory and Test <u>Sourav Ray</u>, Mark E. Bergen, George John</p> <p>Chair: Sourav Ray</p>	<p align="center">FD11- HEIDELBERG</p> <p>Passthrough Timing <u>Sergio Meza</u>, K. Sudhir</p> <p>Do Store-brands Create Store-Loyalty? An Empirical Investigation <u>Karsten Hansen</u>, Vishal Singh</p> <p>The Effect of Product Line Renewal and Proliferation on Competitors <u>Marion Debruyne</u>, David Reibstein, Karl Ulrich</p> <p>Entry Order, Marketing Capabilities and Performance: Evidence from Broadband Internet service market <u>Sungsoo Han</u>, Sungho Choi, Chuhwan Park</p> <p>Chair: Sungsoo Han</p>	<p align="center">FD12- LUND</p> <p>Stores as Learning Places: An Experiment of Category Management <u>Chiara Mauri</u></p> <p>Let's Make it Virtual: Developing Modular Prototypes for Store Environments' Experimental Research. <u>Francesco Massara</u>, Giovanni Pelloso</p> <p>A Model for Brand Assessment in a Category <u>Takuya Satomura</u></p> <p>Understanding Family Members' Influence in Grocery Shopping Decisions: The Case of Chilean Consumers <u>Sindy Chapa</u></p> <p>Chair: Sindy Chapa</p>

Saturday, June 26 2004, Session A: 08:30 am - 10:00 am

Special Session: The Post-Purchase Effects of Promotion	Innovation 04	Internet 05
<p align="center">SA01- FORUM</p> <p>An Integrated Household-Level Model for the Decomposition of Sales Promotion Effects <u>Harald van Heerde</u>, Sachin Gupta</p> <p>Market-Source Decompositions of Demand <u>Thomas Steenburgh</u>, Dick Wittink</p> <p>The Impact of Promotion Induced Stockpiling <u>Christian Lutzky</u>, Kusum Ailawadi, Karen Gedenk, Scott Neslin</p> <p>Dynamic Price Competition Between Firms in the Presence of Consumer Switching and Inventory Costs <u>Seethu Seetharaman</u>, Tat Chan, Gautam Gowrisankaran</p> <p>Co-Chairs: Kusum Ailawadi and Scott Neslin</p> <p><i>Sponsored by Erasmus Food Management Institute</i></p>	<p align="center">SA02- TOKYO</p> <p>Optimal Timing of Introduction of New Car Models: A Dynamic Model of Temporal Cannibalization <u>Tulikaa Khunnah</u>, Lakshman Krishnamurthi</p> <p>The Feedback Effects of Innovation: What can lead to 'Innovation Momentum'? <u>Amit Joshi</u>, Dominique Hanssens</p> <p>A Predictive Model of Movie Sequels <u>Vanitha Swaminathan</u>, Carol Motley, Srinivas Reddy</p> <p>New Products, Product Reviews and Marketing Strategy: An Analysis for Movies and Automobiles <u>Steven Shugan</u>, Larry Winner</p> <p>Chair: Steven Shugan</p>	<p align="center">SA03- ATHENE</p> <p>Factors Affecting Website Visit Duration <u>Peter Danaher</u>, Skander Essegaier</p> <p>An Etic Measure of Website Interactivity <u>Dana-Nicoleta Lascu</u></p> <p>The Digitization of Firm Capabilities <u>Sundar Bharadwaj</u>, Devon Johnson</p> <p>Consumer Attitudes and Behavior When the Alternative is Free: Insights from the Music Industry <u>Arvind Rangaswamy</u>, Michel Clement, Srikant Vadali</p> <p>Chair: Arvind Rangaswamy</p>
Choice 07	Technology Marketing	CRM 07: Datamining
<p align="center">SA04- ROCHESTER</p> <p>Optimization Conjoint Models for Consumer Heterogeneity <u>Theodoros Evgeniou</u></p> <p>Learning from Self and Others: An Empirical Study on Cell Phone Service Usage <u>Ying Zhao</u>, Tulin Erdem, Sha Yang, Yue Zhao</p> <p>Analysis of WOM Effects on the Consumer Product Choice Using Hierarchical Bayesian Probit Model <u>Youngchan Kim</u>, Jaihak Chung</p> <p>Descriptive Models of Buyer Behaviour: Evidence from Chinese Panel Data <u>Mark Uncles</u>, Simon Kwok</p> <p>Chair: Mark Uncles</p>	<p align="center">SA05- SANTANDER</p> <p>Moore's Law and the Experience Curve: The Economics of Bits and Chips <u>Frank Bass</u>, Portia Bass</p> <p>Differentiation via Technology: Strategic Positioning of Services Following an Influx of Technological Innovation <u>Dan Padgett</u>, Michael S. Mulvey</p> <p>Modeling the Marketing and Sales Process of High-tech Start-ups <u>Dragana R. Popovic</u>, Fritz Fahrni</p> <p>Marketing of Digital Products: Product Form Bundling <u>Nevena Koukova</u>, PK Kannan, Brian Ratchford</p> <p>Chair: Nevena Koukova</p>	<p align="center">SA06- SHANGHAI</p> <p>Value-based Customer Relationship Management using Decision Trees <u>Giuliano Tirenni</u>, Andreas Herrmann</p> <p>Evaluating CHAID <u>Merel van Diepen</u>, Philip Hans Franses</p> <p>Automobile Customer Profiling: An Application of GIS and Data-Mining Techniques <u>Lihua Zhao</u>, Gary Gregory, Alan Mann, Mark Uncles</p> <p>Data Mining and Marketing Strategy: What's the Connection? <u>Edward Malthouse</u>, Bobby Calder</p> <p>Chair: Edward Malthouse</p>

Saturday, June 26 2004, Session A: 08:30 am - 10:00 am

Pricing 06: Consumer Behavior	Marketing Research 07	Branding 04
<p align="center">SA07- HULL</p> <p>Consumers' Relative Price Preference Effect on Choice Behavior <u>Oded Lowengart</u></p> <p>Integrating Gains and Losses: Valence vs. Value Accounting <u>Rongrong Zhou</u>, Weiyin Hong, Dilip Soman</p> <p>The Impact of Price Differentials on Consumer Aspirations <u>Luc Wathieu</u>, Marco Bertini</p> <p>Penny Wise and Pound Foolish: The Left Digit Effect in Price Cognition <u>Vicki Morwitz</u>, Manoj Thomas</p> <p>Chair: Vicki Morwitz</p>	<p align="center">SA08- BALTIMORE</p> <p>Development of Network Effects: Measurement of Consumer Utility <u>Marcus Liehr</u>, Markus Voeth</p> <p>Perceived Convenience of Meal Situations: A Conjoint Study with Military Rations <u>Sara R Jaeger</u>, Armand V Cardello</p> <p>On the Latent Class Model for Metric Conjoint Analysis. <u>Cor Bioch</u></p> <p>A Market Dynamics Model for Third Generation Mobile Multimedia Services <u>Margherita Pagani</u></p> <p>Chair: Margherita Pagani</p>	<p align="center">SA09- LEUVEN</p> <p>The Importance of Brand Personality: An Empirical Investigation <u>Harmen Oppewal</u>, Yuksel Ekinci, Tae-Hwan Yoon</p> <p>Measuring Brand Equity Using the New Empirical Industrial Organization <u>Avi Goldfarb</u>, Qiang Lu, Sridhar Moorthy</p> <p>Measurement Factors Influencing the Stability of Brand-attribute Associations <u>Sara Dolnicar</u>, John R. Rossiter</p> <p>Brand Relevance for Business-to-Business-Markets – A Cross-Market Study <u>Tatjana Sabel</u>, Klaus Backhaus</p> <p>Chair: Tatjana Sabel</p>
Marketing Strategy 04	Advertising 03	Channels 03
<p align="center">SA10- BERGEN</p> <p>How Intangibility Affects Perceived Risk Regarding the Degree of Service Knowledge and Service Use? <u>Frederic Bielen</u>, Sempels Christophe</p> <p>Organisational Culture Difference and University-Industry Relationships: An exploratory study <u>Carolin Plewa</u>, Pascale Quester</p> <p>Responsible Marketing: Why It Should Be Difficult For Coca Cola and Pepsi In India? <u>Makarand Gulawani</u></p> <p>New Product Development Decisions: A Systematic Review of the Literature Empirically-based Literature <u>Boris Durisin</u>, Giulia Calabretta</p> <p>Chair: Boris Durisin</p>	<p align="center">SA11- HEIDELBERG</p> <p>Ad Appeals in Print Advertising: Case of Poland <u>Elzbieta Lepkowska-White</u></p> <p>Profits Sensitivity to Competitive, Dynamic Advertising: The Flat Maximum Principle Revisited <u>Dung Nguyen</u>, Lei Shi</p> <p>Regularities in Consumers' Scanning of Marketing Communication Material and Language Experience <u>Shun Yin Lam</u>, Albert Wai-Lap Chau, John Tsun-Hin Wong</p> <p>The Control of Commercials Targeting Children: An Experimental Approach to Investigate Context Effectiveness <u>Ingrid Poncin</u>, Christian Derbaix, Claude Pecheux</p> <p>Chair: Ingrid Poncin</p>	<p align="center">SA12- LUND</p> <p>Examining the Role of Informational Advantages and Opportunism on Transaction Costs in Plural Forms <u>Humaira Mahi</u>, Carol Finnegan</p> <p>Asymmetric Information and Manufacturer-Optimal Wholesale Pricing <u>Charles Ingene</u>, Mark Parry</p> <p>Antecedents and Consequences of Retailer-Supplier Market Information Sharing <u>Willem Smit</u>, Gerrit van Bruggen, Berend Wierenga</p> <p>Bargaining and Information Integration in Distribution Channel <u>Jane Z. Gu</u>, Yuxin Chen</p> <p>Chair: Jane Z. Gu</p>

Saturday, June 26 2004, Session B: 10:30 am - 12:00 am

Special Session: Models of Service and Satisfaction	Innovation 05	Internet 06
<p align="center">SB01- FORUM</p> <p>The Impact of Capacity Constraints on Customer Service <u>Steven Shugan</u>, Sonja Radas</p> <p>Customer Satisfaction and Consumer Spending <u>Roland Rust</u>, Claes Fornell</p> <p>Modeling Brand and Dealer Loyalty in the Market for New Cars <u>Peter Verhoef</u>, Fred Langerak</p> <p>Dynamic Targeted Promotions <u>John Zhang</u>, Gila Fruchter</p> <p>Chair: Roland Rust</p>	<p align="center">SB02- TOKYO</p> <p>Mere Newness and The Consumption of New Products <u>Jennifer Chang</u>, Robert Krider</p> <p>How to Save More: Tools for Self-Control <u>Greg B. Davies</u>, Nick Chater, Philipp E. Otto, Henry Stott</p> <p>Successful Brand Implementation in Service Settings - The Influence of Customers' and Employees' Perceptions of Price-Performance-Relation and Quality on Brand Attitude and Behavioural Intention <u>Sebastian Pattberg</u>, Michael Lingenfelder, Jan Wieseke</p> <p>Determinants of Consumer Innovation Adoption: A Meta-Analysis of Three Decades of Research in Market <u>Joep Arts</u>, Tammo Bijmolt, Ruud Frambach</p> <p>Chair: Joep Arts</p>	<p align="center">SB03- ATHENE</p> <p>Shopbot Market Representativeness and Internet Price Dispersion <u>Jianan Wu</u>, Xia Chen</p> <p>A Proposed Framework for Consumers' Experience in Online Shopping Environment <u>Jun Chen</u>, Sally Dibb</p> <p>Developing a Comprehensive Model of Online-Offline Shopping Preferences <u>Irwin Levin</u>, Marco Lauriola, Aron Levin, Joshua A. Weller</p> <p>Customer Fit and Customer Retention at an Internet Recommendation Site <u>Zainab Jamal</u>, Randy Bucklin, Michael Trusov</p> <p>Chair: Zainab Jamal</p>
Choice 08	Competition & Game Theory 06	CRM 08: Customer Churn
<p align="center">SB04- ROCHESTER</p> <p>A Discrete/Continuous Model for Multi-Category Purchase Behavior of Households <u>Inseong Song</u>, Pradeep Chintagunta</p> <p>Semiparametric Bayesian Thurstonian Models for Choice <u>Raghuram Iyengar</u>, Asim Ansari</p> <p>A Market Basket Analysis Based on the Multivariate MNL Model <u>Yasemin Boztug</u>, Lutz Hildebrandt</p> <p>Using Store Loyalty Data for Target Marketing: Impact of Limited Purchase Information <u>Rakesh Niraj</u>, S Siddarth</p> <p>Chair: Rakesh Niraj</p>	<p align="center">SB05- SANTANDER</p> <p>Timing of Competitive Actions <u>Vincent Nijs</u>, Peter Bouman</p> <p>Strategic Integration in Product Systems Markets <u>Wooseong Kang</u>, Sridhar Balasubramanian, Barry Bayus</p> <p>Demand, Cost and Firm Behavior with Competitive Product Line Influences <u>Sanjog Misra</u>, Dan Horsky, Paul Nelson</p> <p>Did the Internet Kill the Business for Travel Agents? <u>Rajiv Lal</u>, Ozge Turut</p> <p>Chair: Rajiv Lal</p>	<p align="center">SB06- SHANGHAI</p> <p>Modeling and Predicting IAP Customer Churn - An International Comparison <u>Marco Hüppelshäuser</u>, Heiko Frenzen, Manfred Krafft, Kay Peters, Edith Rueger</p> <p>The Integrated CRM approach to Repurchase Prediction <u>Jungwhan Choi</u>, Hyongjae Rhee</p> <p>Using the Mere-Measurement Effect to Reduce Customer Churn <u>Dirk Van den Poel</u>, Jonathan Burez</p> <p>A Hidden Markov Model of Customer Relationship Dynamics <u>Oded Netzer</u></p> <p>Chair: Oded Netzer</p>

Saturday, June 26 2004, Session B: 10:30 am – 12:00 am

Pricing 07: Bundling	Marketing Research 08	Networks
<p align="center">SB07- HULL</p> <p>When is it Profitable to Auction Multiple Items as a Bundle? <u>Michael Shen</u>, Gerald Häubl, Paul Messinger, Peter Popkowski Leszczyc</p> <p>The Impact of Promotional Bundles on Consumers' Incidence, Quantity and Choice Decisions <u>Bram Foubert</u>, Els Gijbrecchts</p> <p>Paying More for Less: Super-Subadditivity in Consumer Evaluation of Product Bundles <u>John Pracejus</u>, Peter Popkowski Leszczyc, Michael Shen</p> <p>An Empirical Analysis of the Effectiveness of Bundling Strategies in Auctions <u>Peter Popkowski Leszczyc</u>, Gerald Häubl, Michael Shen</p> <p>Chair: Peter Popkowski Leszczyc</p>	<p align="center">SB08- BALTIMORE</p> <p>Consumer Reaction to Social Issues: A Six Country Study Using Archetype Analysis <u>Patrice Auger</u>, Timothy Devinney, Jordan Louviere</p> <p>Weak Sensitivity to Reputation-building in An Ultimatum Scenario <u>Rami Zwick</u>, Ching Chyi Lee, Eythan Weg</p> <p>The Influence of Opinion Leaders on the Success of Hedonic Goods <u>Michel Clement</u>, Dennis Proppe</p> <p>Effects of Product Quality Information on Consumer Choice for Perishables <u>Kitty Koelemeijer</u>, Harmen Oppewal</p> <p>Chair: Kitty Koelemeijer</p>	<p align="center">SB09- LEUVEN</p> <p>Positioning Via Affiliation: The Ability of Strategic Alliances to Enhance Image Perceptions <u>Michael Musante</u></p> <p>Modeling Experience Intentions in a Consumer Network: Access Structure and Word-of-Mouth Dynamics <u>Venkat Ramaswamy</u>, Kerimcan Ozcan</p> <p>Effects of Relational and Non-Relational Constructs on Alliance Partner Performance <u>Joel Van Durme</u>, Roderick Brodie</p> <p>Beyond the Transaction: A Supplier Choice Model Within Long-term Buyer-seller Relationships <u>Frédéric Dalsace</u></p> <p>Chair: Frédéric Dalsace</p>
Marketing Strategy 05	Advertising 04	Channels 04
<p align="center">SB10- BERGEN</p> <p>Price-Elasticity Decomposition in the New Brazilian Retail Environment <u>Delane Botelho</u></p> <p>The Role of Perceived Value in the Satisfaction Framework: An Initial Assessment in the 'High Touch' Industry <u>Rosidah Musa</u>, John Pallister, Matthew Robson</p> <p>Explaining Temporal Differences in National Technology Launches <u>Tomi Haapaniemi</u>, Saku Mäkinen</p> <p>Compatibility of Determinants of Franchisor Choice by Franchisee and Franchisee Success Factors <u>Sharmila Chatterjee</u>, Paul Fouts, Dong Ho Lee</p> <p>Chair: Sharmila Chatterjee</p>	<p align="center">SB11- HEIDELBERG</p> <p>Markov Perfect Equilibrium Advertising Strategies of Lanchester Duopoly Model <u>Ramla Jarrar</u>, Guiomar Martin-Herran, Georges Zaccour</p> <p>An Empirical Analysis of Strategic Pricing and Advertising for Differentiated Products <u>Shinn-Shyr Wang</u>, Tirtha Dhar, Kyle Stiegert</p> <p>The Effect of Competitive Advertising Interference on Sales for Packaged Goods <u>Andre Bonfrer</u>, Peter Danaher, Sanjay Dhar,</p> <p>On the Econometrics of the Koyck Model <u>Philip Hans Franses</u>, Rutger van Oest</p> <p>Chair: Philip Hans Franses</p>	<p align="center">SB12-LUND</p> <p>A Member & Market-Oriented Structure of Marketing Co-operatives: An Experimental Study <u>Nikos Kalogeras</u>, Joost M.E. Pennings, Ivo van der Lans, Gert van Dijk</p> <p>Governance Forms, Relational Exchanges and E-Procurement Models: Implications & Performance measures <u>Ramana Madupalli</u></p> <p>Lead-Time, Uncertainty, and Channel Decision Making <u>Eyal Biyalogorsky</u>, Oded Konigsberg</p> <p>Transformations and Risk Shifting in Food Marketing Channels <u>John K.M Kuwornu</u>, Erno Kuiper, Joost M.E Pennings</p> <p>Chair: John K.M Kuwornu</p>

Saturday, June 26 2004, Session C: 13:30 pm - 15:00 pm

Special Session: Drivers and Barriers to Marketing Models Use in Managerial Decision Making I	Innovation 06	Internet 07
<p align="center">SC01- FORUM</p> <p>Building Models for Marketing Decisions: Present and Prospective <u>Dick Wittink</u></p> <p>Use of Models for Marketing Resource Allocation Decisions: Perception Versus Reality <u>Gary Lilien</u></p> <p>Challenges in Model Implementation from an Academic Perspective <u>Manfred Krafft</u></p> <p>Benefits and Impediments to the Use of Marketing Science by Managers <u>Delaine Hampton</u></p> <p>Chair: John Roberts</p>	<p align="center">SC02- TOKYO</p> <p>Joint Research and Development: The Lure of Dominance and the Need to Share Cost <u>Markus Christen</u>, David Soberman</p> <p>Product Diversity versus Technology Diversity: Path Dependence and Cross-effects <u>Shaoming Qu</u>, Shantanu Dutta, Om Narasimhan, Stefan Wuyts</p> <p>New Product Development under Channel Uncertainty <u>Lan Luo</u>, PK Kannan, Brian Ratchford</p> <p>New Products Development Process: From Optimal Pipelines to Optimal Portfolios <u>Min Ding</u>, Jehoshua Eliashberg</p> <p>Chair: Min Ding</p>	<p align="center">SC03- ATHENE</p> <p>Antecedents and Consequences of Customer Satisfaction in Business-to-consumer E-Commerce <u>Anand Kumar Jaiswal</u>, Prithwiraj Nath</p> <p>Upgrading or Downgrading? -- Framing Effects in Online Shopping Environments <u>Nozomi Nakajima</u>, Jian Chen</p> <p>An Empirical Study on the Effect of E-Sales Promotions in the Internet Finance Market <u>Sang Yong Kim</u></p> <p>Online Store Site Quality: Conceptualization and Measurement of eQUAL <u>Boonghee Yoo</u>, Naveen Donthu</p> <p>Chair: Boonghee Yoo</p>
Choice 09	Branding 05	CRM 09: Customer Life Time Value
<p align="center">SC04- ROCHESTER</p> <p>Measuring Context Effects in Choice Data After a New Product Entry <u>Lea Michaelis</u>, Lutz Hildebrandt</p> <p>The Effect of Product Scarcity on Quality Image: Empirical Evidence from the US Car Market <u>Axel Stock</u>, Subramanian Balachander</p> <p>Consumer Decision Making at the Video Store: Renting vs. Buying <u>George Knox</u>, Jehoshua Eliashberg</p> <p>Getting the Picture on Digital Camera Attributes <u>Priyoo Manakote</u>, Siva Balasubramanian</p> <p>Chair: Priyoo Manakote</p>	<p align="center">SC05- SANTANDER</p> <p>Brands as Signals: A Cross-Country Study <u>Tulin Erdem</u>, Joffre Swait, Ana Valenzuela</p> <p>Brand Resilience: An Analysis of the Fragility of Brand Equity <u>Deb Mitra</u></p> <p>Modeling Sustained Superior Brand Performance: A Longitudinal Analysis <u>Douglas Bowman</u>, Sundar Bharadwaj, C.B. Bhattacharya</p> <p>What Does "Branding" Involve? A Model for Effective and Efficient Branding in Marketing Communications <u>John R. Rossiter</u>, Tobias Langner</p> <p>Chair: John Rossiter</p> <p><i>Sponsored by Brand Science Institute</i></p>	<p align="center">SC06- SHANGHAI</p> <p>New Model for Enterprise Valuation by Using Customer Values <u>Thorsten Wiesel</u>, Bernd Skiera</p> <p>How Much is Your Customer Database Worth? A Stochastic, Finite Mixture Model of Lifetime Value <u>Arnaud De Bruyn</u></p> <p>Lifetime Duration and Value of Grocery Retailer Customers <u>Emine Batislam</u>, Meltem Denizel, Alpay Filiztekin</p> <p>"Counting Your Customers" the Easy Way: An Alternative to the Pareto/NBD Model <u>Bruce Hardie</u>, Peter Fader, Ka Lok Lee</p> <p>Chair: Bruce Hardie</p>

Saturday, June 26 2004, Session C: 13:30 pm - 15:00 pm

Pricing 08	Special Session: Multichannel Marketing	
<p align="center">SC07- HULL</p> <p>Price and Relationships: The "Hidden Agenda" <u>Prithwiraj Nath</u>, Shawn Daly</p> <p>Is Customer Value Pricing Always Best Practice? An Empirical Validation <u>Paul Ingenbleek</u>, Ruud Frambach, Theo M.M. Verhallen</p> <p>Consumer Choice of Optional Tariffs: Consequences and Causes of Tariff Choice Biases <u>Anja Lambrecht</u>, Bernd Skiera</p> <p>Retail Category Pricing with Consumer Patronage Effects <u>Edward Fox</u>, Steve Postrel, John Semple</p> <p>Chair: Edward Fox</p>	<p align="center">SC08- BALTIMORE</p> <p>Multichannel Shopping Behavior: Drivers and Behavioral Characteristics <u>V. Kumar</u>, Rajkumar Venkatesan</p> <p>Multichannel Retailing: A Case Study of Early Experiences <u>Ruby Roy Dholakia</u>, Nikhilesh Dholakia, Miao Zhao</p> <p>On the Effect of Acquisition Channels on Customer Retention and Cross-buying: An Exploratory Study <u>Bas Donkers</u>, Peter Verhoef</p> <p>Free-Riding across Retailers' Channels <u>Sebastian van Baal</u>, Christian Dach</p> <p>Co-Chairs: Arvind Rangaswamy and Gerrit Van Bruggen</p>	<p align="center">SC09- LEUVEN</p>
Marketing Strategy 06	Advertising 05	Channels 05
<p align="center">SC10- BERGEN</p> <p>Marketing Theory and Metrics: Research Purpose and the Psychometric Assessment of Marketing Scales <u>Adam Finn</u>, Ujwal Kayande</p> <p>Myopic Management and the Need for Marketing Metrics: The Case of the Seasoned Equity Offerings <u>Natalie Mizik</u>, Robert Jacobson</p> <p>Corporate Reputation and its Coherence: Effects on Persistence and Reliability of Firm Performance <u>Ujwal Kayande</u>, Rajdeep Grewal, Peter W. Roberts</p> <p>New Management Paradigms: Implications for the Future of Marketing and Marketing Science <u>Ralph Kauffman</u>, Markus Mau</p> <p>Chair: Ralph Kauffman</p>	<p align="center">SC11- HEIDELBERG</p> <p>The Demand Chain – Supply Chain Debate. Are the Supply Chain Devotees Beginning to Lose Ground? A Review of the Evidence <u>David Walters</u></p> <p>The Risk Reduction Role of Advertising <u>Ron Shachar</u>, Dmitri Byzalov</p> <p>Vividness Effect: Implications for Judgment and Choice <u>Marcello Tedeschi</u>, Enrico Rubaltelli, Rino Rumiati, Lucia Savadori</p> <p>Ad Agencies' Creative Processes: Can Discipline and Motivation Make Up for a Lack of Creative Skill? <u>Scott Koslow</u>, Edward Riordan, Sheila Sasser</p> <p>Chair: Scott Koslow</p>	<p align="center">SC12- LUND</p> <p>Social Capital and Supply Chain Management <u>Karen Koza</u>, Ming Ling Chuang, Rajiv Dant</p> <p>Investigating Retail Channel Power <u>Jarg Temme</u>, Daniel Klapper</p> <p>Investigating Customer Channel Choice <u>Harmen Oppewal</u>, Panos Louvieris</p> <p>A Hybrid Approach to Measuring Service Differentiation in the British Auto Dealership Market <u>Avinandan Mukherjee</u></p> <p>Chair: Avinandan Mukherjee</p>

Saturday, June 26 2004, Session D: 15:30 pm - 17:00 pm

Special Session: Drivers and Barriers to Marketing Models Use in Managerial Decision Making II	Innovation 07	Conjoint
<p align="center">SD01- FORUM</p> <p>Using Marketing Models for Brand and Marketing Management <u>Stuart Agres</u></p> <p>Radio Frequency Identification: Modeling Beyond the Bar Code <u>Ted Fichuk</u></p> <p>Marketing Science Models in Industry: The Bottom Line <u>Glen Urban</u></p> <p>Making Marketing Models Really Work; Questions and Answers <u>John Roberts</u></p> <p>Chair: John Roberts</p>	<p align="center">SD02- TOKYO</p> <p>Assessing Firms' Receptivity to External Innovation <u>Scott Dacko</u>, Cagla Titiz</p> <p>An Approach to Managing Customer Experience Based on HCI Techniques <u>Velimir Stavljanin</u>, Dusan Starcevic</p> <p>Identification of Lead Users via Virtual Stock Markets <u>Martin Spann</u>, Holger Ernst, Bernd Skiera, Jan Henrik Soll</p> <p>Attribute Improvement Under Market Uncertainty <u>Elie Ofek</u>, Dominique Lauga</p> <p>Chair: Elie Ofek</p>	<p align="center">SD03- ATHENE</p> <p>Comparing Algorithms and Criteria for Designing Efficient Conjoint Choice Experiments <u>Roselinde Kessels</u>, Peter Goos, Martina Vandebroek</p> <p>Adaptive Self-Explicated Approach for Preference Structure Measurement <u>V. Srinivasan</u>, Oded Netzer</p> <p>Hierarchical Bayesian Estimation for Polyhedral Conjoint Analysis <u>Srikant Vadali</u>, John Liechty, Arvind Rangaswamy</p> <p>Optimal Fixed Designs for Choice-Based Conjoint Experiments: A Bayesian Decision-Theoretic Approach <u>Jin Gyo Kim</u></p> <p>Chair: Jin Gyo Kim</p>
		CRM 10: CRM Instruments
<p align="center">SD04- ROCHESTER</p>	<p align="center">SD05- SANTANDER</p>	<p align="center">SD06- SHANGHAI</p> <p>Designing Affinity Programs: Best Prices Reward Levels <u>R Venkatesh</u>, Wagner Kamakura, Vanitha Swaminathan</p> <p>A Three-stage Response Model of Interactive Marketing Communications With Dynamic Effects <u>Srinath Gopalakrishna</u>, Rabikar Chatterjee, Timothy M. Smith</p> <p>Customer Retention Programs - Do They Pay Off? <u>Stefan Piel</u>, Manfred Krafft</p> <p>Buyer Switching in Frequency Programs <u>Serdar Sayman</u>, Stephen J. Hoch</p> <p>Chair: Serdar Sayman</p>

Saturday, June 26 2004, Session D: 15:30 pm - 17:00 pm

SD07- HULL	SD08- BALTIMORE	SD09- LEUVEN
	Advertising 06	Channels 06
SD10- BERGEN	<p align="center">SD11- HEIDELBERG</p> <p>Long-Term Profit Impact of Integrated Marketing Communications Program <u>Kalyan Raman</u>, Prasad Naik</p> <p>Selling Bitter Fruit - Choosing a Communication Strategy for a Debatable Product <u>Ariaen Zimmerman</u>, Paul Breman</p> <p>An Application Study of the Situation Marketing on Station Billboard Advertisements <u>Hiroshi Onishi</u></p> <p>Image and Information Effects on Consumers' Evaluations of Symbol-Intensive Products <u>Boris Durisin</u>, Giulia Calabretta, Domenico Materia, Mario Venturi</p> <p>Chair: Boris Durisin</p>	<p align="center">SD12- LUND</p> <p>Channel Bargaining with Retailer Asymmetry <u>Anthony Dukes</u>, Esther Gal-Or, Kannan Srinivasan</p> <p>The Determinants of Entry Patterns and Number of Outlets in the Retail Discount Industry <u>Vishal Singh</u>, Mark Manuszak, Ting Zhu</p> <p>Could Coop Advertising Programs Prevent Manufacturers from a Private Label's Threat? <u>Salma Karray</u>, Georges Zaccour</p> <p>Assessing the Effects of a Channel Switch <u>Xinlei Chen</u>, George John, Om Narasimhan</p> <p>Chair: Xinlei Chen</p>

Contributed Sessions

Thursday, 14:00pm - 15:30pm

How to Navigate the Contributed Sessions

There are four primary resources to help you understand and navigate the Contributed 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 Author, Session Chair and Session indices provide cross-reference assistance (pages 84-91).
- The map and floor plans included in the Front Matter show you where contributed 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 85-89) — the session code for your presentation(s) will be shown. Then 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.

↑ **The day of the week** → **Time Block.** Matches the time blocks shown in the Master Track Schedule.

Time Blocks

Thursday

Session C 14:00pm -15:30pm
Session D 16:00pm- 17:30pm

Friday

Session A 8:30am-10:00am
Session B 10:30am-12:00pm
Session C 13:30pm- 15:00pm
Session D 15:30pm-17:00pm

Saturday

Session A 8:30am-10:00am
Session B 10:30am-12:00pm
Session C 13:30pm-15:00pm
Session D 15:30pm-17:00pm

Room Locations

These are shown with the name of the building.

TC01

Forum

Special Session: Customer Retention

Sponsored by Teradata Center for Customer Relationship Management

Chair: Katherine Lemon, Associate Professor, Boston College, 140 Commonwealth Ave, Fulton Hall, Chestnut Hill, MA, 02467, United States, lemonka@bc.edu

1 - Optimizing Customer Retention and Acquisition over Time

Barak Libai, Seior Lecturer, Tel-Aviv University, Faculty of Management, Tel-Aviv University, Tel-Aviv, IL, 69978, Israel, libai@post.tau.ac.il, Eitan Muller

While making informed decisions regarding investments in customer retention and acquisition becomes a pressing managerial issue, formal models that enable generalizations on this topic are still scarce. In this study we examine what should be the optimal path over time that firms should follow in their acquisition and retention spending in a growing market. To do so, we develop a continuous formulation for firms' customer equity that takes into account the future acquisition of new customers. We find that the optimal path of investment in acquisition and retention is generally a declining one: Firms should invest more in the early stages of the market evolution and less later on. Specifically, the optimal retention policy may include an initial blitz followed by a gradual decline over time.

2 - Profit Maximizing Customer Retention Management

Manfred Krafft, Prof. Dr., University of Muenster, Institute for Marketing, Am Stadtgraben 13-15, Muenster, D, 48143, Germany, mkrafft@uni-muenster.de, Marco Hüppelshäuser

In the internet access business, we recognize several challenging issues. Firstly, we can observe that the penetration rate of internet access has remarkably increased over the past few years and flattened recently. Thus, it is very likely that this growth rate will decrease over the next years. Secondly, internet access has to be considered as an almost homogeneous product which causes a high willingness to switch across providers. As a consequence, customer churn becomes one of the most important issues for internet access providers and for related academic research. In our paper, we develop an analytical framework for the maximization of customer value for existing customer relationships of an European internet access provider and empirically validate our model. The major objective is to derive a tool that helps to optimize companies' investments in their client relationships. Our empirical study is based on a data set of 64,000 internet users whose internet usage behavior was observed for 6 months on a daily basis. The first objective is to forecast individual customer probabilities of being loyal for further 3 months after the end of the calibration period. We apply semiparametric and parametric hazard-rate models as well as logistic regressions and compare the results with actual behavior in the holdout period. The second objective is to forecast the session time for the following three months after the observation period to derive an estimate of the future value of individual customers. For this, we apply Poisson regressions and, due to prevalence of overdispersion, a regression approach with a negative binomial distribution.

3 - Throw a Sprat to Catch a Mackerel! The Influence of Loyalty Rewards on Customer Purchasing

Jorna Leenheer, Assistant Professor, Vrije Universiteit Amsterdam, De Boelelaan 1105, Amsterdam, 1081HV, Netherlands, jleenheer@feweb.vu.nl, Tammo Bijmolt

The Customer Relationship Management paradigm has taught marketers to invest in existing customers relationships rather than in attracting new ones, and to provide the most profitable customers with best rewards. Furthermore, companies should take into account both the short-run and the long-run impact of marketing efforts. Marketers have brought these lessons into practice. However, empirical evidence is needed to validate these general statements. Consider the case of a clothing retailer that operates a loyalty program, which provides customers with saving points for their purchases. Every half-year, customers who have reached the minimal points threshold receive a store voucher with a face value equal to the monetary value of their saving points. Obtaining rewards can be highly appealing to customers, and their behavioral reaction is hopefully such that by giving away a relatively small reward to a customer (a sprat), the company is getting additional revenues (a mackerel) from the customer in return. In this project, we use the customer database of the retailer's loyalty program to

conduct an individual-level, longitudinal study of rewarding and purchase behavior. For our analysis, weekly household-level data are available on purchase behavior, voucher mailings, and voucher redemptions during two years. We assess the effects of voucher possession and voucher usage on purchase behavior, and include voucher's face value and expiration time as moderating variables. The household's purchase decision has been split up into purchase incidence and purchase quantity. We also account for possible post-voucher effects. During our presentation the results of the empirical analysis plus managerial implications will be discussed.

4 - Modeling the Customer Upgrade Decision:

When Satisfaction is not Enough

Katherine Lemon, Associate Professor, Boston College, 140 Commonwealth Ave, Fulton Hall, Chestnut Hill, MA, 02467, United States, lemonka@bc.edu, Ruth Bolton, Peter Verhoef

There is much interest in increasing the value of customer relationships. One important (overlooked) approach is the customer's decision to "upgrade" — to purchase a company's high-margin product instead of re-purchasing its low-cost product. The upgrade decision is particularly interesting because customers' prior experiences influence the decision. We develop and estimate a model of customers' upgrade decisions. The study context is the purchase of system support services by large business customers. The cross-sectional, longitudinal database consists of individual contract-level service operations and purchase data, and enterprise-level survey data. The customer's decision of whether or not to upgrade a contract is represented by a binary logistic regression model in which the business customer maximizes subjective expected utility. Since firms hold multiple contracts, a firm makes repeated upgrade decisions, creating dependent observations for each firm. Therefore, we estimate a random coefficients model, with random parameters for the contract-level variables and fixed parameters for the enterprise-level variables. We find that customer perceptions (e.g., satisfaction, price perceptions, criticality) directly influence the contract-level upgrade decision. Interestingly, lower experience quality (at the contract-level) is associated with a higher likelihood to upgrade. We find significant interactions between satisfaction and experience quality, and satisfaction and criticality. The results suggest that customers examine the upgrade decision on a contract-by-contract basis, and that there is a strong interplay between customer actual experience (at the contract-level) and the customer's overall perception of the service provider.

TC02

Tokyo

Diffusion 01

Chair: Albert Bemmaor, Professor, ESSEC, BP 105, Cergy-Pontoise, 95021, France, bemmaor@essec.fr

1 - The Embedded Model of the Norton-Bass Successive Technology Generations Model

Portia Isaacson Bass, Bass Economics, Inc., 4 Glenmoor Ct, Frisco, TX, 75034, United States, portia@basseconomics.com, Frank Bass

We show that the first multigenerational diffusion model (NB-87), which was of sales of a continuously purchased good, has an embedded model (NB-87-E) described literarily, but not mathematically, as the first step in the creation of NB-87 in Norton and Bass (1987). This paper is the first presented mathematical derivation of NB-87-E, which we define for G generations as recursive equations for cumulative users of generation g at t , from which we derive adoptions, sales, switching and leapfrogging for both NB-87-E and NB-87. Several perceived shortcomings of NB-87 have been described in the literature; for example, Mahajan and Muller (1996) thought that NB-87 does not identify the diffusion of the base technology; Danaher, Hardie and Putsis (2001) thought that it does not identify leapfrogging and Bass and Bass (2001) thought that it does not identify sales of a product purchased once each generation except for leapfrogging. We show that these shortcomings are not so after our derivations. We validate NB-87-E users with two generations of wireless telephone and four generations of IBM computers showing resulting sales, switchers and leapfroggers. We validate NB-87-E sales with two copier generations and nine generations of DRAM, which we compare to the fit with NB-87.

2 - The Relationship Between Advertising and Sales:

Evidence from a Stock Market Simulation

Anita Elberse, Assistant Professor, Harvard Business School, Soldiers Field, Boston, MA, 02163, United States, aelberse@hbs.edu, Bharat Anand

Research on the causal relationship between advertising and sales is handicapped by the simultaneous nature of that relationship: advertising is not only likely affecting sales, but also (at least partly) depending on sales. By employing a unique data set that allows us to circumvent this problem, we provide empirical insights into the impact of advertising on sales. Our study considers a setting—the motion picture industry—in which the lion's share of advertising occurs prior to product introduction. Using trading data obtained from a popular stock market simulation revolving around this industry, the Hollywood Stock Exchange (HSX), and detailed advertising expenditures data obtained from CMR, for a sample of over 250 motion pictures released between 2001 and 2003, we are able to construct measures for sales expectations unaffected by advertising efforts (i.e. the inherent 'quality' of the product), advertising efforts, and sales. Our econometric modeling approach is based on the 'natural experiment' captured in the stock market simulation—we assess the impact of advertising efforts on sales, while controlling for product quality. We discuss findings and managerial implications.

3 - The Role of Market Information in the Diffusion of Competing Technology Standards

Demetrios Vakratsas, Assistant Professor, Faculty of Management, McGill University, 1001 Sherbrooke street West, Montreal, QC, H2Y 2M2, Canada, demetrios.vakratsas@mcgill.ca, Vasilis Theoharakis, Veronica Wong

While information in dynamic markets is known to be critical for decision making, limited attention has been given to its effects on market performance. This study identifies two types of market information, technological and product availability-related, and examines their effects on the diffusion of two competing technological standards in the Local Area Networks (LAN) industry. An empirical application to sales data of LAN Network Interface Cards suggests that the market reacts to information selectively. More specifically, availability information has a significant effect on the adoption rate of a LAN standard, whereas technology information has no significant impact. It appears that the market responds only to information that demonstrates a strong product support for the standard providing, therefore, an indication that the technology is real and not "vaporware." The significance of market information effects in a diffusion model context also suggests that market information can exert important influence on adoption decisions even in the presence of strong interpersonal communication (word-of-mouth) effects. The implications of the empirical results are discussed through the use of different market information scenarios.

4 - Forecasting Adoption Growth for a New Durable Good From Purchase Intent Measures: Model, Estimation and Validation

Albert Bemmaor, Professor, ESSEC, BP 105, Cergy-Pontoise, 95021, France, bemmaor@essec.fr

Using the Mansfield (1961) model of diffusion of technological innovations and building on Bemmaor's (1994) derivation of the Mansfield model, this study develops a method to forecast adoption growth for a new durable good when prior adoption data are not available. The paper derives a closed-form expression for the distribution of the most likely times to adopt across the population. It uses consumer-based estimates of these most likely times to adopt as measured by purchase intent data to parameterize the model and it derives the forecasts of adoption growth over the years following the survey. Based on the measurement of purchase intent data for the adoption of personal computers by households, the results show that the Mansfield model forecasts actual adoption over the subsequent 2.5 years quite well. The methodology used can be extended in principle to alternative models of diffusion of technological innovations.

■ TC03

Athene

Marketing Research 01: Bayesian Analysis

Chair: Om Narasimhan, Assistant Professor, Carlson School of Management, University of Minnesota, Department of Marketing, 3-150 CSOM, Minneapolis, MN, 55455, United States, ONarasimhan@csom.umn.edu

1 - A Dynamic Spatial Model for Target Search: Covert Task Switching Over Time and Space

Ralf van der Lans, PhD student, Tilburg University, PO Box 90153, Tilburg, 5000 LE, Netherlands, R.vdrLans@uvt.nl, Michel Wedel, Rik Pieters

We develop a hierarchical, spatial Poisson model with a hidden Markov structure that uncovers the strategies consumers use to locate a predefined brand on the shelf. Our model is based on computational theories of visual search in psychology and consists of two latent stages: a location stage and an identification stage, between which consumers may freely switch over time. In the location stage, search is guided by (1) a salience map, constructed on the basis of the visual package features, and (2) a wired map, constructed on the basis of the shelf layout. In the identification stage, a consumer selects a promising brand and checks whether this brand is indeed the target brand. The model is calibrated on commercial eye-tracking data of over 100 consumers engaged in a target search task in a computer simulated shelf context. We use the locations of the eye-fixations as indicators of the underlying covert visual search strategies that consumers use to locate the predefined target brand. The latent strategies found by our model are strong predictors of target search performance, i.e. search time and accuracy.

2 - Bayesian Analysis of a Multiple Change-Point Regression Model

Duncan K. H. Fong, United States, i2v@psu.edu, Wayne DeSarbo

Multiple regression is probably the most frequently utilized multivariate statistical procedure applied in the Social Science area for examining the impact of one or more independent variables upon a designated dependent variable. The estimated regression coefficients denote the contribution of changes in the levels of the independent variables upon the dependent variable and these contributions are typically assumed constant over the whole collected data set. However, as is known in many time series applications, the effects of such independent variables may change over the course of the time period investigated. Also, in many surveys involving repeated measures, fatigue, order effects, learning, etc. may lead to alterations in the contributions of these independent variables over the sequence of administration. We present a new Bayesian multiple change-point regression model for such studies which simultaneously estimates the number of change points and their location in time/sequence, performs variable selection within each regime, as well as provides regression parameter estimates. An application involving prescription sales over time for an ethical drug is used to demonstrate the methodology.

3 - Comparison of Extended and Bayesian-based Market-Share Models

Akihiro Inoue, Associate Professor, Kwansei Gakuin University, School of Business, 1-1-155 Uegahara, Nishinomiya, 662-8501, Japan, ainoue@kwansei.ac.jp

Market-share models have been studied for a couple of decades in the various field of marketing (e.g., Cooper and Nakanishi 1988). We have developed the market-share models mainly in terms of the assumption of attraction, the functional elaboration (i.e., simple effect, differential effect, cross-competitive effect) and, the density specification (i.e., MCI versus MNL). In this research we compare the extended market-share models with an alternative approach, that is, a hierarchical specification of market-share models based upon the Bayesian approach. We empirically compare the models using the panel-survey purchase data in several distinctive areas in Japan, composed of multiple product-categories. We discuss the results with regard to the goodness-of-fit and marketing implications.

4 - Direct Versus Framing Effects:

A Structural Model of the Dual Roles of Advertising

Om Narasimhan, Assistant Professor, Carlson School of Management, University of Minnesota, Department of Marketing, 3-150 CSOM, Minneapolis, MN, 55455, United States, ONarasimhan@csom.umn.edu, Nitin Mehta, Xinlei Chen

It has long been suggested that advertising can have both a direct effect on a consumer's quality evaluation, as well as an indirect effect, by 'framing' the consumption experience. How important are these two effects, in relative terms? Does the relative importance vary by categories and brands? Is it different for loyal versus non-loyals. We attempt to answer all of these questions by building a structural model of quality learning by consumers. Unlike prior work modeling quality learning, we model both direct and framing effects of advertising. We show why simple Bayesian updating models that do not account for framing effects would give biased results for the impact of advertising. In addition, our model parsimoniously captures the role of message repetition, as well as similarity of advertising content on direct and framing effects. Finally, we conduct various policy experiments measuring the impact on market share of varying advertising content and frequency.

■ TC04

Rochester

Pricing 01: Auctions

Chair: Sandy Jap, Associate Professor of Marketing, Emory University, 1300 Clifton Road, Atlanta, GA, 30324, United States, sandy_jap@bus.emory.edu

1 - Outcome Contingent Regret in Ascending and Descending Auctions

Amar Cheema, Assistant Professor of Marketing, John M. Olin School of Business, Washington University in St. Louis, Campus Box 1133, St. Louis, MO, 63130-4899, United States, cheema@wustl.edu, Atanu Sinha, Dipankar Chakravarti

This paper reports how motivational (i.e., a winning-oriented or a prudent, value-oriented focus) and cognitive antecedents (precision of value information and its salience during the auction) influence consumers' experienced regret, contingent on the outcome (winning versus losing). We compare the pattern of direct and interactive effects in two experiments (involving a descending and an ascending auction respectively) embedding manipulations of deliberation time (short/long) at each auction step. The studies reveal starkly different patterns of direct and interactive effects of the manipulated variables on regret. On average, regret levels are higher in the ascending (versus the descending) auction. The manipulated variables show few main effects in either auction, but influence regret interactively. However, the interaction patterns are qualitatively different. For example, in the descending auction, the goal manipulation has little impact. However, in the ascending auction, its impact is moderated by deliberation time, value salience and value precision. Moreover, the win/loss outcome affects regret directly in the ascending auction. However, its impact in the descending auction is moderated by selected manipulated variables (e.g., bidder goals and deliberation time). Thus, regret experienced in the ascending auction (which reveals more information and allows subjects more control over outcomes) involves a simple outcome contingency (winning/losing). However, the sudden-death and low information characteristics of the descending auction create complex contingencies involving other manipulated variables. We also examine the extent to which outcome-contingent regret mediates reported post-auction values in each auction mechanism.

2 - Is Information Transparency Good?: The Impact of Information on Past Internet Auctions on Sellers

Eric Greenleaf, Associate Professor of Marketing, Stern School, New York University, 44 West 4th St., Rm. 9-68, New York, NY, 10012, United States, egreenle@stern.nyu.edu, Teck Ho, Vishal Narayan

In the interests of creating a trustworthy and transparent environment, internet auctions make available to auction participants large amounts of data on who is bidding, who is selling, and the results of past auctions. This experimental study focuses on how on sellers' use of information regarding the size of bids and the identity of bidders in past auctions affect seller welfare in the most recent auction. From a purely theoretical perspective, having more information should never make sellers worse off, and can often make them better off. However, information overload and false inferences can make sellers worse off with more information. We examine this phenomenon for sellers facing computer simulated, independent private value bidders who are either homogeneous or heterogeneous in their valuations.

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

Eric Bradlow, Associate Professor of Marketing and Statistics, The Wharton School, 3730 Walnut Street, 761 JMH, Philadelphia, PA, 19104, United States, ebradlow@wharton.upenn.edu, Young-Hoon Park

We generalize current research on Bayesian stochastic models for record breaking problems by allowing for the situation in which the number of unsuccessful attempts between records is unobserved. That is, by viewing a record break as the maximum order statistic from an unseen number of attempts, we are able to infer the distribution from which they are derived. Our approach to addressing this problem is through data augmentation in which we stochastically draw both the number and magnitude of the unsuccessful attempts, and then model the observed record (maximal order statistic) conditional on the non-events. The motivation for this research was derived from a currently active research topic in both Marketing and Economics, Internet auctions, in which successive bids can be viewed as record breaking events, but the latent number of bidders and their valuations are unseen. We apply our method to data obtained from an Internet auction site and provide detailed inferences

4 - Bid Analyzer: A Method for Price Discovery in Online Reverse Auctions

Sandy Jap, Associate Professor of Marketing, Emory University, 1300 Clifton Road, Atlanta, GA, 30324, United States, sandy_jap@bus.emory.edu, Prasad Naik

Online reverse auctions are a pervasive and economically significant marketing activity, generating \$40 billion in annual transactional volume in a wide variety of industries. As a result of this, a plethora of point-by-point bid data exists, but there is no systematic approach to analyze it. Hence, we develop a methodology, BidAnalyzer, to estimate the underlying distributions from which bids are generated for each bidder, even if a bidder does not submit a bid in a specific period. This ability to infer the distribution of each bidder is absent in the literature on auctions, and cannot be determined by other time series approaches (e.g., method of moments or vector autoregression). BidAnalyzer also provides the optimal bid price of each bidder, enabling the buyer to understand whether a bidder has bid too aggressively (and may experience a winner's curse) or has held back (indicating that there is still "money on the table"). We illustrate its practical usefulness using two proprietary datasets and a field experiment. Thus, BidAnalyzer enriches the price discovery efforts of the buyer and provides guidance for improving industrial procurement practice.

TC05

Santander

Channels 01

Chair: Katrijn Gielens, Assistant Professor, Erasmus university, Burgemeester oudlaan 50, Rotterdam, 3000 DR, Netherlands, kgielens@fbk.eur.nl

1 - Infomediaries and Channel Strategies

Abel Jeuland, Charles H. Kellstadt Professor of Marketing, University of Chicago, 1101 E 58th Street, Chicago, IL, 60637, United States, jeuland@gsbims.uchicago.edu, Nanda Kumar

We examine the impact of infomediaries on the interactions retailers-manufacturers. Specifically, we are interested in durable good markets, for example the automobile market, where infomediaries such as Autobytel and Edmunds.com not only provide product information but also transaction or invoice price information. This information is valuable to consumers in negotiating with a dealer. Consumers also have the option of having dealers bid for their business through these infomediaries. To highlight the impact of infomediaries on channel interactions, we start with a market made of a single manufacturer who sells a durable good through two differentiated retailers. Consumers differ in their retailer preference as well as in their ability to negotiate with dealers. In the absence of the infomediary consumers base their negotiations on their beliefs about the retailers' costs (or wholesale price). The premium that retailers are able to charge over a base price depends on a consumer's ability to negotiate. We investigate several effects that result from the presence of an infomediary. Availability of invoice price information through infomediaries regulates retailers' pricing behavior and results in demand expansion. This is because infomediaries intensify competition between retailers. Furthermore, the infomediary facilitates market segmentation by allowing retailers to (selectively) bid for the business of some consumers. This has a mitigating effect on the intensity of competition. Our analysis delineates market conditions under which the infomediary can serve a coordination role by alleviating the extent

of double-marginalization, while simultaneously increasing the profits of both the retailer and the manufacturer.

2 - Determinants of Breadth and Depth in Distribution Channel Usage

Rupinder Jindal, PhD Candidate, INSEAD, Boulevard de Constance, Fontainebleau, 77305, France, rupinder.jindal@insead.edu, Werner Reinartz, Manfred Krafft, Wayne Hoyer

Extant channel structure research has focused on the intensity of a specific channel's usage but has largely overlooked the usage of multiple channels. Moreover, literature in channel intensity has assumed product-market characteristics to be its main drivers. This study explores the effect of consumer characteristics, firm's consumer orientation, and its marketing strategy on both the intensity of channel usage and the usage of multiple channels. We define two aggregate measures of channel usage: "channel breadth"—the number of different channels used by a firm, and "channel depth"—the number of different channels that are used intensively by a firm. Using data from four consumer markets, we show the significance of consumer characteristics, firm's consumer orientation, and its marketing strategy in these channel usage decisions. We also test if these two channel decisions, breadth and depth, are interdependent or not.

3 - Choosing Pricing Decision Variables in Models of Distribution Channels

Rajeev Tyagi, Univ. of California, Irvine, Irvine, CA, 92612, United States, rkyagi@uci.edu

Modelers designing game-theoretic models of price competition in distribution channels choose to assign manufacturers and retailers various pricing decision variables, such as absolute retail price or absolute retail margin, absolute manufacturer price or absolute manufacturer margin, etc. For example, Choi (1991, 1996) uses retail margin and manufacturer price; Jeuland and Shugan (1983, 1988) and Lee and Staelin (1997) use retail margin and manufacturer margin; and McGuire and Staelin (1983), Moorthy (1988), and Tyagi (1999) use retail price and manufacturer price. We examine circumstances where the equilibrium outcomes of these models are robust to these modeling choices. In circumstances where the outcomes vary with modeler's assignment of pricing decision variables, we endogenize the choice of pricing decision variables. The results have implications for theoretical and empirical literature on price competition in distribution channels.

4 - How to Seize a Window of Opportunity:

The Entry Strategy of Retail Firms into Transition Economies

Katrijn Gielens, Assistant Professor, Erasmus university, Burgemeester oudlaan 50, Rotterdam, 3000 DR, Netherlands, kgielens@fbk.eur.nl, Marnik Dekimpe

In most western countries, grocery retailers are faced with maturing domestic markets with a year-to-year sales growth close to zero. Moreover, most Western European markets are characterized by a high concentration rate, with a combined market share of the top five players easily exceeding 70%. One important outcome of this evolution has been a growing interest in cross-border initiatives. However, even though the industry gained importance, retailers are still struggling to develop the competencies to compete and survive in this new, more global, arena. In this paper, we study entry investments in Eastern-European transition economies to unveil when, and to what extent, the strategic window to enter those markets opens for different retailers. We develop and empirically test a set of hypotheses on factors that affect (1) the speed (timing) and (2) size of retailers' internationalization decisions. A conceptual framework is proposed which looks at strategic decisions through the option lens. This perspective offers an economic rationale for the behavioral process of major resource allocations. The resulting hypotheses are tested, using a joint hazard/ poisson-regression framework, on a data set covering all expansion decisions of the top 75 European grocery retailers towards Eastern Europe.

■ TC06

Shanghai

Special Session: The Practice of Marketing Mix Analysis

Chair: E. Craig Stacey, Ph.D, Emory University, United States, ecstacey@comcast.net

1 - The Practice of Marketing Mix Analysis

ACNielsen, United States, Inc. Information Resource, Millward Brown

While academic research has been conducted in this area for over forty years, marketing mix modeling did not become widely practiced in industry until the 1990s. Leading companies like Kraft Foods began such analyses in the 1980s, with most other consumer packaged goods (CPG) manufacturers beginning the practice during the past decade. Over the last few years, the practice of marketing mix analysis has gained acceptance in such other industries as retailing, financial services, and telecommunications. The objective of this session is to reinvigorate academic research in this area by enhancing the awareness of the applications of market response modeling in industry. In order to accomplish this objective, this session will begin with an overview of marketing mix analysis with an emphasis on the typical measures utilized from such studies. This overview will be followed by three case studies from leading marketing research companies in this field. ACNielsen, a VNU business, is the world's leading marketing information provider. With a primary emphasis on manufacturers and retailers of CPG products, ACNielsen provides sales modeling and analytic services through their Centers of Excellence. The ACN Centers of Excellence provide solutions in the areas of price and promotion, marketing mix, and assortment and merchandising. Information Resources, Inc. is a leading provider of UPC scanner- and panel-based business solutions to the CPG, retail, and healthcare industries. IRI's Analytic Services group provides insights into issues surrounding marketing mix and the product portfolio with an emphasis on Business Performance Management. Millward Brown is a member of The Kantar Group, the Information and Consultancy division of WPP. In addition to providing brand and communications tracking and copy testing services, Millward Brown offers Category Dynamics™ to assist both CPG and non-packaged goods companies in understanding the impact of marketing activities on sales levels.

2 - Getting Control: Improving the Productivity of the Marketing Mix

Richard Cook, ACNielsen, United States, John Porter, Mike Ljubicic

This paper will discuss the importance of creating marketing metrics that provide a basis for linking the strategic allocation of marketing resources to the tactical implementation of marketing plans. The approach taken will provide a foundation to expand the role of marketing models past the 'understanding and planning' paradigm into a real-time sales monitoring environment. We will take a case study approach to illustrate the use of marketing scorecards to improve the efficiency of three key areas of the marketing mix:

- Media scheduling and purchasing
- Trade promotion implementation
- Coupon design

3 - Category Dynamics

Gordon Wyner, Millward Brown, United States, Alain Pioche

Millward Brown will present some aspects of a new model recently developed in both US and Europe. This is a complete "marketing mix" model, including in-store data, advertising data and tracking data (advertising and image) as well as environmental data. Making these sources available simultaneously allows a greater accuracy and leads to more realistic results. These results are realistic enough to be used for conditional forecasting purposes. The presentation will focus on two particular technical points, which are major improvements made to the initial academic work published by Lee COOPER & Masao NAKANISHI in "Market Share Analysis". This academic work has been taken as a base for further developments because of the strong "construct validity" offered by the method described. However, modifications of this academic work were necessary to make in order to achieve a model structure clearly understandable and also to provide a powerful tool more oriented towards strategic decision making and resources allocation. These improvements are: a) Use of Kalman filter. One part of this model is to follow fluctuations of the total category to which the Brand belongs, category volume being partly driven by some other variables than pure marketing actions. This may be done much more accurately using Kalman filter. In particular, external events are "learnt" by the model, and fully integrated if they are "confirmed" by next data values. b) Use of a "dynamic regression" for market share analysis, allowing

regression parameters to vary along the total period of time. This method introduces more flexibility in the model, allowing a broader scope of Brands to be analyzed with this method. Some real examples will be showed, in order to illustrate these points and making it more concrete when applied to real data. This model, named CategoryDynamics, has been initially developed in France by INTER-STAT.

4 - Improving Total Portfolio ROI

Debbie Samuels, Information Resources, Inc., United States

Many manufacturers market multiple competing brands within the same product category. By doing so, they achieve economies of scale in production but also create unique challenges for the marketing team. The portfolio manager must ensure that each brand has a unique position and that marketing spending is optimally allocated across the brands so as to maximize total portfolio sales and profits. But accurately measuring the impact of each brand's marketing activity on both its own sales and its sister brands, to arrive at the net impact on the portfolio, is a complex task. IRI's approach analyzes the impact of marketing on sales for multiple brands at once. It quantifies the impact of each brand's marketing activities on its own sales and on the sales of each other brand in the portfolio, capturing both negative cannibalization and positive halo effects, to determine the net impact on total portfolio sales.

■ TC07

Hull

Promotion 01

Chair: Guangping Wang, Assistant Professor, Penn State University, 30 E Swedesford Rd, Malvern, PA, 19454, United States, gww10@psu.edu

1 - What the EITF Consensus Standards Reveal About Manufacturers' Use of Promotions

Mary Sullivan, U.S. Department of Justice, Antitrust Division, 600 E Street, NW, Suite 10000, Washington, DC, 20530, United States, mwsullivan@mindspring.com, Bill Baber, Kumar Visvanathan

Despite the importance of promotions as a marketing tool, some questions about promotions cannot be examined because firms are not required to report promotional expenditures on their financial statements. We have a limited understanding of how firms balance the use of promotions and advertising in their marketing strategies, how heavily different types of firms rely on promotions, and how promotions relate to financial performance. A recent change in accounting standards requires many manufacturing firms to issue a one-time revision of their financial statements. These revisions provide a measure of firm-level promotional expenditures. The data from the EITF revisions are supplemented with data from Compustat and the trademark registry of the U.S. Patent and Trademark Office. The study sheds light on the following questions:

1. How do promotional expenditures vary with product differentiation and innovation?
2. Do large firms promote more heavily than small firms?
3. Do firms seem to use promotions and advertising as complements or substitutes in their marketing strategies?
4. Have the big, established consumer goods firms followed P&G in significantly reducing promotional expenditures?
5. Are firms that rely heavily on promotions more or less profitable than other firms?
6. Is there any evidence that heavy use of promotions reduces brand equity?

2 - Determinants of Household Sales Promotion Responsiveness

Linda Teunter, Assistant Professor, Erasmus University Rotterdam (Rotterdam School of Management), Burgemeester Oudlaan 50, Rotterdam, Netherlands, lteunter@fbk.eur.nl, Berend Wierenga, Teun Kloek

Which household characteristics determine whether or not a household responds to a sales promotion? Prior research has led to conflicting findings. In addition, most empirical studies used US-data. In this study, two-year data from 156 Dutch households for 6 product categories (soft drinks, fruit juice, coffee, potato chips, candy bars, pasta) are used to investigate the relationship between household characteristics and promotion responsiveness. Some of our results (obtained through logistic regression) confirm relationships found earlier in the literature (e.g., positive influence of household size and negative influence of non-school-age children). Additional new insights were obtained for variables such as social class, age, employment situation, store loyalty, and shopping frequency. We also found that household response to sales promotions is a different phenomenon from variety seeking. Our finding that promotions for favorite brands have a relatively strong effect, supports the criticism from practitioners and scientists that a large part of

the sales promotion effect is due to additional purchases by "loyal" consumers. This underlines the necessity of more in-depth household-level research regarding the "sources" of additional purchases during sales promotions. Finally, significant differences exist between in-store and out-of-store promotions. In-store promotions especially influence time-limited households with a large grocery budget. Even sales promotions without a price cut influence these households and in-store promotions seem to serve them as timesaving decision-making cues. As unplanned purchasing is increasing, insights into the determinants of in-store promotion responsiveness are of great importance.

3 - Depth and Allocation of Trade Promotions:

Evidence from the US Supermarket Industry

Miguel Gomez, Research Associate, Cornell University, 149 Warren Hall, Ithaca, NY, 14853, United States, mig7@cornell.edu, Vithala Rao, Edward W. McLaughlin

Manufacturers have increased the use of trade promotions (TPCs) from 25% to 70% of marketing budget. Negotiations of TPC contracts have often become a contentious issue. Despite theoretical modeling, there is limited empirical research to test hypotheses on TPCs. In our conceptual framework, TPC negotiations depend on characteristics of brand (position in category, price, equity), product category (frequency of purchase, market structure, storage cost), retailer (private label share, sales and share in trading area) and manufacturer (sales, market share). We develop two models on outcomes of TPC negotiations; (1) the allocation of funds between discount and performance-based TPCs and (2) the depth of TPCs (funds received by a supermarket as a percent of annual brand sales). We employ a unique data set collected from 43 companies, representing 50% of the US supermarket sales, regarding TPCs negotiated between retailers and suppliers in 2002. Our database has 250 brand-level observations. We formulate logistic functions for the depth and allocation of TPCs and use maximum-likelihood for estimation. We find that allocation to performance-based TPCs decreases with share of private label and retailer size; and increases with brand equity, manufacturer size and position of brand in product category. Depth of TPCs increases with share of private label in product category, frequency of purchase, suppliers being characterized by duopoly, and retailer size. Depth of TPCs also decreases with brand equity and manufacturer size. We believe these results form an excellent basis for developing realistic game-theoretic models for understanding the negotiation process between retailers and manufacturers.

4 - Consumer Preference for Rewards in Loyalty Programs

Guangping Wang, Assistant Professor, Penn State University, 30 E Swedesford Rd, Malvern, PA, 19454, United States, gww10@psu.edu

Since the introduction of American Airlines' AAdvantage program in 1981, loyalty programs have become one of the most widely used promotional tools for retaining customers and increasing repeat purchase. While some programs provide convenience, information, and other non-monetary benefits to attract repeat customers, most loyalty programs offer economic savings and incentives in the forms of cash, points, merchandise, and miles. Marketers and academics alike have reservations for sales promotions in general and loyalty programs in particular because the monetary emphasis can erode brand equity, increase price sensitivity, and damage the firm's long term profit potential. Consumers, however, tend to like monetary savings in general, but their preference may be situation contingent. To better understand consumer response to various loyalty programs, we investigate the relationship between consumer preference and program characteristics. In particular, this research extends the previous studies and focuses on the key elements of a loyalty program: rewards, requirements, and benefits (Chandon, Wansink, and Laurent 2000; Kivetz and Simonson 2002). Through a series of experimental studies, we examine consumer preference for three different types of rewards (cash, utilitarian, hedonic) as a function of (1) congruency between the benefits offered by the promoted product and the reward, (2) the required spending level of the loyalty program, and (3) the interaction between benefit congruence and required spending. The research enhances our understanding of what consumers really want from a loyalty program and helps the marketer to design more effective programs. We will present the study results at the conference.

TC08

Baltimore

Consumer Behavior 01

Chair: Kristin Diehl, Assistant Professor of Marketing, University of South Carolina, 1705 College Street, Columbia, SC, 29208, United States, diehl@moore.sc.edu

1 - The Effect of Order and Self-Relevance of Mixed Emotions on Processing of Neutral Ad Information

Suresh Ramanathan, Assistant Professor of Marketing, University of Chicago, 1101 E 58th Street, Chicago, IL, 60615, United States, sramana1@gsb.uchicago.edu, Aparna Labroo

One study and a pre-test indicate that the order in which positive and negative elements of mixed emotion are evoked and the perceived relevance of that emotion affect consumer processing of neutral ad-information. Specifically, when positive emotion is evoked prior to negative emotion (vs. negative prior to positive) liking of an ad containing neutral information increases. Interestingly, this effect occurs only when participants are told to try to experience the mixed emotion; when the mixed emotion is perceived as not self-relevant, and when positive emotion occurs prior to negative emotion, participants like the neutral ad-information less than when the negative emotion precedes the positive. It appears that experiencing positive emotion prior to negative provides coping resources; however, perceived self-relevance of the mixed emotion affects coping style. Under conditions of high self-relevance, prior positive emotion provides the resources to discount negative emotion; however, under conditions of low self-relevance, prior positive emotion leads to distancing from the ad and to increased thoughts about the use of unethical persuasion tactics by the marketer. At a theoretical level, this paper thus adds to the coping literature (e.g., Fredrickson 2001) as well as to literature on consumers' use of persuasion knowledge (e.g., Friestad and Wright 1994).

2 - Casual Discounting: The Impact of Mental Effort and Attention to the Future on Far and Near Future

Jane Ebert, Assistant Professor of Marketing, University of Minnesota, Carlson School of Management, 321 19th Avenue South, Rm 3-150, Minneapolis, MN, United States, jebert@csom.umn.edu, Drazen Prelec

A simple and influential explanation of high temporal discounting is that people would discount less if only they exerted more mental effort or paid more attention to the future. The present paper suggests and tests the alternative idea that the role of mental effort and attention to future time is to make values across future times more sensitive to the time dimension, which means more discounting of the far future, and less discounting of the near future. This, in turn, makes the discount function less hyperbolic and more nearly exponential (as required by rational, compound discounting). We test this idea in 3 experiments, manipulating mental effort (Experiment 1) and attention (Experiments 2 and 3). In Experiment 1, participants value a series of restaurant gift certificates with or without time pressure. In Experiments 2 and 3, participants value future rewards where future time is varied within-subjects (high salience of future time) or between-subjects (lower salience). With greater effort and greater attention to future time, participants show relatively less discounting of near future events and relatively more discounting of far future events, with estimated discount functions that are still hyperbolic but closer to the exponential discounting norm.

3 - Measuring the Dark Side of Consumer Behavior: Non-Compliance, Cheating, and Rational Choice

Ulf Bockenholt, McGill University, 1001 Sherbrooke Street West, Montreal, QC, H3A 1G5, Canada, ulf.bockenholt@mcgill.ca

How can we collect, analyze and interpret data on topics that most people are likely to regard as private? In most studies, it is assumed that respondents provide honest information. The validity of this assumption becomes questionable, however, when researchers ask questions that most would be reluctant to answer publicly. Examples include questions about illegal or stigmatized activities (e.g., illicit drug usage, tax evasion, drunk driving) and about behaviors which respondent may feel are too personal to reveal (e.g., sexual behavior, annual income). The talk will address this issue by proposing a family of item response models that takes into account response biases in the form of cheating and positive self-representations. It will be shown that the modeling framework allows for more efficient and informative analyses than have been possible so far. Results of recent large-scale surveys conducted in the Netherlands on social security regulation infringements illustrate the approach.

4 - When Two Rights Make A Wrong: Searching Too Much in Ordered Environments

Kristin Diehl, Assistant Professor of Marketing, University of South Carolina, 1705 College Street, Columbia, SC, 29208, United States, diehl@moore.sc.edu

Researchers have argued that the true benefits from electronic environments are not necessarily larger selections or lower prices, but rather the ability of smart decision tools to search through and order options on behalf of consumers (e.g. Alba et al. 1997). Such screening tools evaluate all available alternatives on behalf of the consumer and order recommended alternatives based on their expected benefit. Such tools can reduce the consumer's effort, decrease prices paid, and improve decision quality compared to not having access to such an ordering (e.g., Diehl, Kornish and Lynch 2003; Häubl and Trifts 2000). Thus, prior research has shown that, compared to unordered environments, screening tools can benefit consumers. However, I will show that when search is ordered, apparent benefits of easier or deeper search do not materialize. When the most promising options are at the beginning of the list, even seemingly advantageous factors (e.g. lower search cost, greater selection) that prompt consideration of more options degrade choice quality by a) lowering the average quality of considered options and b) lowering customer's selectivity in focusing attention on the better rather than the more mediocre options from the actively considered set. Experiment 1 shows that lowering search costs diminishes choice quality in an ordered environment and Experiment 2 shows that showing consumers the top 50 rather than the top 15 recommendations has the same effect. Experiment 3 shows that motivation to be more accurate diminishes choice quality when search costs are low but not if search costs are high.

TC09

Leuven

Choice 01

Chair: Eok-Soo Han, Senior Researcher, ETRI, 161, Gajong-dong, Yuseong-gu, Daejeon, 305-350, South Korea, eshan@etri.re.kr

1 - Support Vector Machines and Their Potential Role in Marketing

Georgi Nalbantov, drs., Erasmus University Rotterdam, PO Box 1738, Rotterdam, 3000 DR, Netherlands, nalbanto@few.eur.nl, Rob Bauer, Ida Sprinkhuizen-Kuyper, Patrick Groenen, Cor Bioch

Support Vector Machines are a relatively new and popular tool in Artificial Intelligence, used for recognizing patterns of relations and function estimation. They have already been shown to perform well in areas ranging from Biometrics to Economics and Finance. Support Vector Machines have two main attractive features relative to standard linear multiple-regression techniques. First, they tend to avoid overfitting in cases with many predictor variables. Second, they handle multicollinearity easily. Here, we study the use of Support Vector Machines in Marketing. We present an overview of basic ideas behind Support Vector Machines. In addition, we apply Support Vector Machines to forecast the US stock market for a period of ten years, and report promising results.

2 - Estimating Heterogeneous Price Thresholds

Nobuhiko Terui, Professor, Tohoku University, Graduate School of Economics, Kawauchi, Aoba-ku, Sendai, Japan, terui@econ.tohoku.ac.jp, Wirawan Dony Dahana

We develop a discrete choice model that accommodates asymmetric market responses to marketing mix variable—price promotion—by threshold principle. We incorporate the concepts of price threshold, reference price and latitude of price acceptance into the utility function of heterogeneous consumer in the form of piecewise linear switching function. Under the heterogeneity of consumers, we employ Hierarchical Bayes models to estimate the individual price thresholds and their latitude of price acceptance as well as their market responses to marketing mix variables—price, display, feature—by using panel data. Gibbs and Metropolis-Hastings sampling algorithms are applied to implement the proposed model. First, the study leads to empirically confirm the asymmetry of different sensitivity to loss or gain around the reference price. Then we measure the effectiveness of promotions with respect to individual consumer's attribute data. Finally, by evaluating expected incremental sales and profits aggregated over consumers, we show that the pricing based on the knowledge of estimated individual thresholds and market responses would produce an efficient marketing strategy for the target couponing.

3 - A Mixed Logit Approach to a Nested Tourist Choice Process

Juan L. Nicolau, Lecturer in Marketing, University of Alicante, Ap. Correos 99, Alicante, al, E-03080, Spain, J.L.Nicolau@ua.es, Francisco Jose Mas-Ruiz

This study proposes a multi-stage tourist choice process which includes three basic tourist decisions: taking a vacation, foreign vacations and multi-destination vacations. The proposal is based on the nested and non-independent structure of these decisions. Also, we state various research hypotheses relating to the impact of various personal characteristics on these decisions. The methodology uses Random-Coefficient Multinomial Logit Models estimated by Hierarchical Bayesian procedures, due to its ability to deal with the unobserved heterogeneity of tourists and to its flexibility, which allows representation of any correlation pattern among different alternatives. The empirical application is carried out in Spain on a sample of 3,781 individuals and leads to the conclusion that personal characteristics relating to the chosen destination, personal restrictions and socio-demographic and psychographic characteristics are determinants of these decisions, and that the nested and non-independent character of the three decisions reveals a multi-stage decision making process.

4 - A Study on Marketing Performance of FMC Services in Korea Telecommunications Market

Eok-Soo Han, Senior Researcher, ETRI, 161, Gajong-dong, Yuseong-gu, Daejeon, 305-350, South Korea, eshan@etri.re.kr

The purpose of this study is to evaluation on the marketing performance of FMC(fixed mobile convergence)services in Korea. Based on the customer satisfaction by service quality, and intention of purchase and recommendation by service satisfaction.

TC10

Bergen

CRM 01: Satisfaction/Customer Value

Chair: David Dekker, post doc, University of Nijmegen, P.O. Box 9108, Nijmegen, 6500HK, Netherlands, d.dekker@nsm.kun.nl

1 - Satisfaction of Customer Co-Designers: Process vs. Product Satisfaction

Melanie Müller, Research Associate, Technische Universität München, Depart. f. General a. Industrial Manag., Leopoldstr. 139, Munich, 80805, Germany, melanie.mueller@wi.tum.de, Frank Piller

Literature as well as many managers highlight the importance of the customers for the firm's long-term success, and the interdependences between customer orientation, customer satisfaction, customer loyalty and firm success are an often-researched topic. To realize customer orientation, mass customization—the production of goods and services after the individual customer's needs with near mass production efficiency—is one superior mean. Mass customization requires a process of co-design between each single customer and the supplier. In this way, the customer is integrated very deeply in the creation of his new product or service and, therefore, huge effects on customer satisfaction and loyalty can be expected. But which factors exactly drive the customer's satisfaction with the mass customization offering and how can satisfaction be increased? Besides the delivered individual product, the defining element of a mass customization offering is the interaction or configuration process with the customer. First research has shown that not only the product but also the process of mass customizing the own individual product has huge influence on the customer's overall satisfaction, but deeper insights are missing, yet. Because of the fact that the configuration process of a mass customization system is regarded as a premier way to increase customer satisfaction, are the objectives of this paper twofold: (i) to investigate the influence of the customer's product and process satisfaction on his overall satisfaction with the mass customization system and (ii) to explore the mass customization process in a deeper way. A survey among customers of two leading mass customization pioneers—Adidas-Salomon and selve—serves to investigate the field.

2 - Combining Transactional and Relational Marketing Efforts in Relational Exchanges

Simon Pierre Sigué, Assistant Professor, School of Business, Athabasca University, 1 University Drive, Athabasca, AB, T9S 3A3, Canada, simons@athabascau.ca, Gila Fruchter

The relevance of transactional and relational marketing variables in relational exchanges is now well established in the marketing literature. However, the knowledge about their relative effectiveness and their optimal mix over time remains very sparse. We propose an analytical model, which includes social interactions to help sellers determining inter-temporal optimal decision rules for transactional and relational marketing. Our main results are as follows: (1) In the long run, the sell-

er is better off using a mix of transactional and relational marketing activities than focusing only on relational marketing; if there is no interaction between transactional marketing activities and the buyer's commitment, this result holds over the entire planning period. (2) The seller's optimal decision rules change over time, and depend on the level of the partners' commitment if there is interaction between transactional marketing activities and the buyer's commitment; otherwise, they are constant over time. (3) Under certain conditions, at the beginning, the seller should allocate more resources to relational marketing; however, in the long run, the seller should allocate more resources to transactional marketing.

3 - Managing Customer Relationships Through Price and Service Quality

Paulo Rocha e Oliveira, Assistant Professor, University of Miami, School of Business Administration, P.O. Box 248147, Coral Gables, FL, 33124, United States, paulo@miami.edu, Ariel Schilkrut, Gabriel Bitran

This paper examines the ways in which a service provider's policies on pricing and service level affect the size of its customer base and profitability. The analysis begins with the development of a customer behavior model that uses customer satisfaction and depth of relationship as mediators of the impact of price and service level on profitability. Based on this model of customer behavior, the system is analyzed as a queueing network from which the properties of the aggregate population's behavior are derived. The analysis reveals the counterintuitive result that a policy that involves a decrease in prices or an increase in service level may lead to a smaller customer base. However, this policy may also lead to higher profits. The novelty of this result lies in the explanation of the phenomenon that when the customer base decreases due to a change in prices or service quality, companies may experience gains in profit that result not from a decrease in costs associated with serving fewer customers but from an increase in revenues resulting from the indirect effects of the lower prices or higher level of service on customer behavior. The application of optimization techniques to the model developed in this paper yields optimality conditions through which managers can assess the long-term profitability of their pricing and service-level policies.

4 - Effects of Personal Values on Customer Satisfaction

David Dekker, Post Doc, University of Nijmegen, PO Box 9108, Nijmegen, 6500HK, Netherlands, d.dekker@nsm.kun.nl, Jose Bloemer

In this paper we elaborate on two specific processes that relate personal values to satisfaction with (financial) services. These processes are reflected in the value percept model and value disconfirmation model. We generalize both models into a new value disparity-disconfirmation model. This model provides testable conditions to evaluate and compare the validity of the value percept disparity model and the value disconfirmation model. We specify our model in terms of several hierarchical linear models and assess the empirical fit of these models with data on 18 bank branches. The results of our study support the value disconfirmation model. Furthermore, the external dimension of personal values has a larger impact on satisfaction than the internal dimension. This indicates that differentiation between personal values is important in the assessment of their impact on satisfaction. Further theoretical and managerial implications of our study are discussed.

TC11

Heidelberg

Special Session: Exploratory Visualization Models in Marketing

Chair: Patrick Groenen, Prof. dr., Erasmus University Rotterdam, PO Box 1738, Rotterdam, ZH, 3000 DR, Netherlands, groenen@few.eur.nl

1 - Visualizing Interactions by the Interaction-Decomposition Model

Patrick Groenen, Prof. dr., Erasmus University Rotterdam, PO Box 1738, Rotterdam, ZH, 3000 DR, Netherlands, groenen@few.eur.nl, Alex Koning

Analysis of variance is widely used in marketing applications either directly or indirectly (for instance conjoint analysis). There is usually little attention for interpreting the parameters of the effects themselves. This is even more so for interaction effects. One of the reasons is that the number of interaction-effect parameters increases rapidly with the number of predictor variables and the number of categories. In this paper, we propose a new model, called the interaction decomposition model that allows an easy visualization of two-way interactions. This model can be seen as a constrained form of an analysis of variance model with all two-way interaction effects. We argue that with the help of the visualization, the interaction-effect parameters are much easier to interpret. This new model fits closely into the tradition of multidimen-

sional scaling techniques often used in marketing research. We apply our method to predict holiday spending using seven categorical predictor variables.

2 - Beyond Degeneracies in Nonmetric Unfolding: Visualizing Consumers' Preference for Products

Frank Busing, Leiden University, Wassenaarseweg 52, Leiden, Netherlands, busing@fsw.leidenuniv.nl, Patrick Groenen, Alain De Beuckelaer

Before any new consumption products are introduced in a market it is common practice to assess consumers' preferences for several new product ideas. The data on consumers' preferences should reveal which product ideas have the greatest potential in the whole market (or in particular consumer segments within that market). Unfolding is a technique for the analysis of such preference data. The purpose of unfolding is to represent the preferences of consumers for products ideas as distances between points in a low dimensional space, such that a consumer is positioned closest to the product idea he or she prefers the most. An advantage of unfolding is that it allows direct comparison of products ideas, even though the data contain only product idea to consumer information. Nonmetric unfolding additionally treats the preference rank orders ordinally, which seems a logical choice for preference data. The major problem with nonmetric unfolding has been that it often results in perfect, but degenerate solutions in which all distances between consumers and product ideas are equal. Busing, Groenen, and Heiser (in press) proposed a penalty approach and succeeded to avoid the degeneracy. They were the first to present a solution that simultaneously estimates the coordinates and a monotone transformation of the preference rank orders. Their approach is implemented in a computer program PREFSCAL. We show why the PREFSCAL approach for avoiding degeneracies in nonmetric unfolding works. We apply PREFSCAL to consumer preference data on new product propositions for ready-made soups. Based on the unfolding analysis recommendations are made as to what product ideas should be considered for market introduction.

3 - Using Correspondence Analysis to Determine the Set of Relevant Attributes in a Brand Image Study

Michel van de Velden, dr., Erasmus University, Econometric Institute, Postbus 1738, Rotterdam, 3000 DR, Netherlands, vandevelden@few.eur.nl, Anna Torres

A fundamental task in marketing research methods, such as conjoint analysis or brand image studies, concerns the selection of relevant attributes. For this purpose, one often makes use of data collected using focus group interviews, judgments of product managers, retailers, or others knowledgeable about the product. The most difficult- and often subjective- task is then to reduce the number of attributes to a manageable size so that the estimation procedures are reliable while at the same time the reduced set accounts for consumer preferences sufficiently well. To distinguish between the most relevant versus the least relevant attributes, rating scales are often employed (Alpert, 1971; Journal of Marketing Research). In this paper, we study the analysis of such rating data using correspondence analysis. In correspondence analysis the relationships between the attributes (as indicated in the ratings), are depicted graphically allowing a quick and easy interpretation. However, as noted by van de Velden (2000: In 'Innovations in multivariate statistical analysis', eds. R.D. Heijmans, D.S.G. Pollock and A. Satorra) and Torres and Greenacre (2002: International Journal of Research in Marketing), there exist different approaches of correspondence analysis when applied to preference data. Theoretical aspects of these differences were studied in van de Velden (forthcoming, Journal of Classification). However, the practical consequences remained unclear. Using empirical data from a marketing research company, we investigate the practical implications of the differences. We study which method is more appropriate for the selection of relevant attributes in a brand image study.

4 - Visualizing Response Styles in Cross-Cultural Research

Hester Van Herk, Dr., Vrije Universiteit Amsterdam, De Boelelaan 1105, Amsterdam, 1081 HV, Netherlands, hherk@feweb.vu.nl, Patrick Groenen

In the last few years, there has been increased attention for response styles in cross-cultural research (e.g., Baumgartner and Steenkamp 2001; Welkenhuysen-Gybels et al., 2003; Wong et al. 2003; Van Herk et al. 2004). One reason is that direct comparison between countries becomes questionable if subjects from one country assess attributes systematically more positively or more extremely than subjects from other countries, regardless of item content. The studies above showed that the response style affects responses given on rating scales, and influence the validity of comparisons between countries. They mostly focus on the existence of a few response styles such as acquiescence and extreme response style. However, the issue of the proportion in variance that can be explained by stylistic responding in different scales is mostly ignored. In this study, we simultaneously model the content of items as well as the scale type. We do this by a new extension of analysis of variance called the interaction decomposition model that allows to visualize two-way interactions in a low dimensional space (Groenen and Koning, 2004). The interaction decomposition model creates the possibility to study whether respondents in different countries use the same distance between the scale points. It also allows us to see how the scale points relate to item content. By using the interaction decomposition model, we investigate the extent to which response tendencies can be attributed to response style (bias) or to real differences between countries (content). Hereto we examine ratings of various attitudes by approximately 5000 male subjects in 5 countries in the European Union (EU). We discuss the implications for academics and practitioners who want to make cross-cultural comparisons.

TC12

Lund

Service Marketing 01

Chair: Neeru Malhotra, Research Scholar, University of Bradford, School of Management, Bradford, WY, BD94JL, United Kingdom, N.Malhotra@bradford.ac.uk

1 - The Service Concept Evolution: The Influence of Relationship Marketing and ICTs

Raffaele Donvito, PhD Student, University of Florence, Via delle Pandette, 9, Florence, FI, 50100, Italy, raffaele.donvito@cce.unifi.it, Gaetano Aiello

The objective of the present article is to discuss the service concept evolution considering the influence of relationship marketing and ICTs. Firstly the paper explores many theoretical positions have grown up around the service concept in the management literature, emphasizing the outcome and the delivery system dimensions. Secondly examines the connection between service and relationship marketing underlining that the relational dimension of service has fundamentally been related to the interaction process between customers and service companies. According to the relationship marketing and the knowledge literature the paper extends this perspective from the single interaction (or the repletion of the same interaction caused by satisfaction) to a 'customer value process' in which the clients define, together with the providers, the delivery and the outcome service dimensions. Finally the manuscript proposes a theoretical framework of a 'relational service concept' focused on the customer loyalty that originates from the sharing of knowledge between customers and service providers and that is upheld by ICTs tools.

2 - Modeling the Relationship between Quality, Satisfaction, and Value: A Relative Attitudinal Approach

Anand Kumar Jaiswal, Doctoral Candidate, XLRI Jamshedpur, Circuit House Area (East), Jamshedpur, Jh, 831001, India, anandk.03@astra.xlri.ac.in, Pingali Venugopal, Svein Ottar Olsen

Dick and Basu (1994) argued for comparison of brands that are viewed by consumers to be relevant in a given consumption context to achieve higher predictive validity. In Zins (2001) study the superiority of relative attitudes claimed by Dick and Basu could not be confirmed whereas Olsen (2002) found that usage of relative attitudes indicated a much stronger relationship between quality, satisfaction, and loyalty than the attitudes toward a product when they were performed as an individual evaluation. There have been few empirical studies comparing the relative influence of service quality, value, customer satisfaction on service encounter outcomes (Cronin, Brady and Hult 2000). This paper investigates the complex interrelationship of service quality, value, customer satisfaction using a relative attitudinal approach. This study also examines the relative influence of these construct on behavioral outcomes such as word-of-mouth intention, repurchase intention and intention to pay more. We use the data collected from survey of 408 consumers of two large Indian banks. We test the research model using structural equation modeling. The empirical results show the superiority of the model tested under the comparative evaluation to the model tested under non-comparative evaluation. Higher predictive ability and improved overall fit suggest that comparative evaluation approach should be used to evaluate the constructs relevant in service encounters. Results also reveal that service quality has direct influence on all three behavioral intentions whereas customer satisfaction and value have indirect influence on behavioral intentions through service quality.

3 - Performance Analysis of Frontline Service Employees:**Case of a Banking Call Center**

Neeru Malhotra, Research Scholar, University of Bradford, School of Management, Bradford, WY, BD94JL, United Kingdom, N.Malhotra@bradford.ac.uk, Avinandan Mukherjee

Frontline service employees like call center representatives (CCRs) operate with dual objectives—cost efficient and customer oriented. These are frequently contradictory in nature. While cost reductions can be achieved by increasing the number of calls handled by a CCR, they are also expected to forge customer relationships. Our research checks the correlation between cost efficiency and quality efficiency, and identifies their key antecedents. We present an optimization framework for measuring performance efficiencies of CCRs in a banking call center. The transformation of management resources (training, supervision, team support and stress management) to call performance (calls handled, call handling time, queue time and call resolution rate) is called 'cost efficiency', and to service quality (customer satisfaction, self efficacy, adaptability and security) is called 'quality efficiency'. Empirical data obtained from 245 CCRs in an outsourced call center catering to 5 retail banks is fed into a VRS BCC type DEA model. The results show a weak correlation between cost and quality efficiencies. The cost and quality efficiency estimates are regressed on explanatory variables (organizational commitment, job satisfaction, call center experience and customer orientation). We used tobit regression analyses, since the efficiency estimates being limited dependent variables (0—1) are censored. Job satisfaction and customer orientation predict quality efficiency, while call center experience and commitment predict cost efficiency. Our research helps service firms to identify the difference between cost control and customer service, and the key drivers of these two types of efficiencies that are both critical in management of customer frontline service positions.

Thursday, 16:00pm - 17:30pm

■ TD01

Forum

Special Session: Customer Lifetime Value

Sponsored by Teradata Center for Customer Relationship Management

Chair: Edward Malthouse, Associate Professor, Northwestern University, 1870 Campus Drive, Evanston, IL, 60208, United States, ecm@northwestern.edu

1 - Managing Customer Relationships:

Should Managers Really Focus on the Long Term?

Julian Villanueva, Assistant Professor of Marketing, IESE Business School, Avda. Pearson, 21, Barcelona, 08034, Spain, villanueva@iese.edu, Pradeep Bhardwaj, Yuxin Chen, Sridhar Balabsuramian

Researchers and business thought leaders have emphasized that, towards maximizing the lifetime value of customers, firms must manage customer relationships for the long term. In contrast to this recommendation, we demonstrate that firm profits in competitive environments are maximized when managers focus on the short term with respect to their customers. Intuitively, while a long term focus yields more loyal customers, it sharpens short term competition to gain and keep customers to such an extent that overall firm profits are lower than when managers focus on the short term. Further, a short term focus continues to deliver higher profits even when customer loyalty yields a higher share-of-wallet or reduced costs of service from the perspective of the firm. Intuitively, while such revenue enhancement or cost reduction effects enhance the proverbial pot of gold at the end of the rainbow, they lead to even more intense competition to gain and keep customers in the short term. These findings suggest that the competitive implications of a switch to a long term customer focus must be carefully examined before such a switch is advocated or implemented. Paradoxically, customer lifetime value may be maximized when managers focus on the short term.

2 - Incorporating Consumer Behavior into Customer Valuation

Mike Lewis, Assistant Professor, University of Florida, 204 Bryan Hall, Gainesville, FL, 32653, United States, mike.lewis@cba.ufl.edu

The customer valuation literature is primarily comprised of net present value methods that assume fixed managerial policies and customer attrition rates. These implicit assumptions mean that existing customer valuation methods rely on simplistic models of consumer behavior and lack the ability to account for managerial flexibility. In this paper we develop a structural dynamic programming model of consumer demand that can be used to compute customer valuations. The key point is that this dynamic programming model can account for important elements of consumer behavior and link these behaviors to buying decisions and to customer valuations. These elements include a structure to account for purchase feedback effects, an adjustment for unobserved preference heterogeneity, and a dynamic structure that can account for consumer expectations. We illustrate our approach by estimating our model using data on newspaper subscribers. This model is the basis for a series of policy experiments that simulate long-run consumer behavior. These experiments yield estimate of customer asset value as a function of marketing policy and customer transaction history. The benefits of the policy experiment approach are illustrated by comparing the estimated customer values with estimates derived from alternative valuation methods. We find that the inclusion of consumer behavior results in improved forecasts of customer value.

3 - A Bayesian Approach to Customer Lifetime Value Models

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A key object in modern Customer Relationship Management (CRM) strategies is the Customer Lifetime Value (CLV) of each customer in a company's database. Estimates of each customer's lifetime value are an integral part of a company's CRM strategy (e.g., allocations of customers into value-segments, rankings of "worst to best," participation in customer appreciation programs, etc.). In this paper we argue that CLV estimates—which by definition are statements about future behavior of customers—are of little value without accompanying measures of uncertainty. Furthermore, we point out that there are three distinct layers of uncertainty that a researcher needs to quantify in a CLV calculation: outcome uncertainty, parameter uncertainty and model uncertainty. Each of these components will contribute to overall uncertainty about a customer's CLV. We argue that a Bayesian approach is the correct way to

evaluate this uncertainty via computing the posterior predictive distribution of lifetime values for each customer in the database. In addition, we show how various CRM strategies may be formalized as a Bayesian decision theoretic problem which uses as input a loss function and the posterior predictive distribution of lifetime values.

4 - How Far Into the Future Can "Lifetime" Value Be Estimated?

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Estimating Customer Lifetime Value (CLV) is central to most CRM programs. But is it possible (or necessary) to estimate customer value over an entire lifetime? Can customer behavior be estimated more reliably in the immediate future than in the distance future? Reflecting the uncertainty of these questions, many practitioners now use the term "long-term value" instead of "lifetime value." This paper makes several contributions. First, it discusses how to quantify the predictive accuracy of a CLV estimate. Usual measure of predictive accuracy such as the root mean squared error and R-squared are inappropriate because the error variance typically increases with the mean of CLV. Second, it presents analytical results showing how predictive accuracy depends on the length of the future time period over which the long-term value is being estimated. In particular, accuracy is related to the autocorrelation of contributions over time. Third, it provides the results of an empirical evaluation, using several real data sets from different industries, of these autocorrelations and of predictive accuracy of CLV estimates for different future time period lengths. Fourth, it discusses the strategic implications of these findings.

■ TD02

Tokyo

Diffusion 02

Chair: Sönke Albers, Professor of Innovation, New Media and Marketing, Christian-Albrechts-University at Kiel, Westring 425, Kiel, SH, D-24582, Germany, albers@bwl.uni-kiel.de

1 - Should the Firm Focus on its Stronger Markets?

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Firms introducing new products into multi-markets often face the dilemma of how to respond to varying regional developments. While previous academic literature focused on pre-entry decisions such as which countries to enter first, there is little known on how firms should form a responsive strategy given observed adoption rates at the various areas. The aim of this study is to examine which response strategy is more effective for firms entering multi-markets. We examine three major resource allocation strategies: uniform strategy, in which the firm distributes the marketing efforts evenly among its regions regardless of market development; support-the-strong strategy, under which the firm invests its efforts proportional to the number of adopters in that region (at least up to a certain market coverage); and support-the-weak strategy, in which the firm invests its efforts proportional to the remaining market potential. Using both analytical analysis and simulations we find that in many cases support-the-weak and uniform strategies are superior to the support-the-strong strategy and that for the support-the-strong policy to become more effective, considerable market constraints are needed. These results, that run counter to the conventional wisdom of many managers, emphasize the power of spreading marketing resources among regions early in the market entry process.

2 - Marketing Sequels Of Creative Goods: The Case of Video Games

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In many creative industries (including motion pictures, television, books, and video games), developing 'sequels' to successful original concepts is a popular strategy. Anecdotal evidence suggests that the establishment of franchises through the marketing of 'tweaked versions of established formats' is increasingly regarded as a rewarding route to sustaining value in such industries. However, the success of sequels is far from guaranteed. In this study, we aim to provide insights that can aid managers seeking to increase the hit rate of sequels and, in doing so, develop a sustainable franchise based on an original creative concept. We operate on two levels. First, focusing on individual consumer behavior driving aggregate sales dynamics, we conduct a series of experiments to understand how certain marketing actions, such as bundling a sequel with an original concept, can stimulate consumer adoption. Second, working directly with a video game publisher, and using data on unit sales for an original concept and a series of sequels launched over a 4-year period, we develop an econometric model to understand what

drives the success of this franchise. We discuss key results and managerial implications.

3 - An Application of the Bass Model with Demand Curve Estimation

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One key use of the Bass model is to help make go/no-go decisions for new products. Unfortunately, obtaining accurate pre-launch parameter estimates can be difficult. This paper describes an application of the Bass model and the techniques used to solve this problem. We estimated market potential for a new farming product using an 11-point purchase probability scale in a mail survey. We asked repeated price questions, allowing us to sketch a demand curve and calculate a revenue (NPV) maximising price. The innovation parameter was estimated from the adoption rate of previous products in this social system, which turned out to be equal to the mean value of Sultan Farley and Lehman's (1990) meta-analysis. The internal influence parameter was estimated by exploiting the observation of Wright, Upritchard and Lewis (1998) that initial diffusion processes typically take around 12 years. We adjusted the 'q' value until predicted diffusion was largely complete in 12 years. Our forecasts were seen as unreasonably conservative by management; however, post-launch demand showed them to be an order of magnitude more accurate than managerial predictions. The organisation involved has commissioned further Bass modelling, and we have extended our method by using the confidence intervals from the mail survey to derive pessimistic and optimistic forecasts. Our contribution is to illustrate how purchase probability data and prior knowledge allow application of the Bass model, and to apply the model to the identification of revenue maximising prices and the construction of forecasting scenarios.

4 - Forecasting the Diffusion of an Innovation Prior to Launch

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Deriving forecasts for innovative durable product categories prior to launch is a very difficult task. We cannot ask the potential user because he cannot image the future benefits of such an innovation. Therefore, companies depend on subjective judgment based on analogous products. Very often, there is no direct analogue so that it may be advisable to combine several semi-analogous products to a weighted average. Unfortunately, the coefficients of the Bass model depend on each other and cannot be combined independently. Instead of using the innovation and imitation coefficient I propose to describe the diffusion curve by the peak period of sales and the ratio of sales in the peak period to cumulative sales up to this point of time. It is shown how the parameter values for p and q can be derived from these two descriptors. Based on the characteristic that penetration in the peak period is 50% the saturation level for cumulative sales can be inferred. Based on this information it is shown that the diffusion curves of 34 products can be reproduced very accurately up to the peak period. This finding also implies that predictions should focus on the diffusion up to peak because the rest is of minor interest to companies. In order to help managers with forecasts this article provides the values of the three descriptors for 34 different product categories. This is a method that is easy to apply, uses all the experience of the past and shows a high face validity.

TD03

Athene

Marketing Research 02

Chair: Jaap Wieringa, dr., Department of Marketing and Market Research, Economic Faculty, University of Groningen, Postbus 800, Groningen, Gr, 9700 AV, Netherlands, j.e.wieringa@eco.rug.nl

1 - Global Consumer Innovativeness:

The Role of Culture and Personal Demographics and Economics

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This study seeks answers on three important aspects of consumer innovativeness: How does innovativeness vary across different countries and cultures of the world? Do cultural, economic, or demographic variables better account for differences in innovativeness across individuals? Do demographic differences in innovativeness affect consumers the same way in various countries? We survey about 400 consumers in 15 major world economies. We develop a consistent 11-item index to measure innovativeness across these countries and individuals. Results indicate that: country differences are strong and consistent but not always explainable by country wealth. At the same time, age, education,

income, and mobility are strong and consistent explanations for innovativeness, suggesting a common denominator across countries. We discuss the implications.

2 - On the Spatial Structure of Consumer Needs:

Cross-national Evidence from the European Union

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One of the most important decisions for international marketers is related to globalizing their marketing strategy. Since Levitt (1983) made the case for "selling the same product the same way everywhere", there has been a debate in the marketing literature on whether to use standardization or adaptation strategies (e.g., Levitt 1983; Verhage, Dahringer, and Cundiff 1989; Dawar and Parker 1994; Szymanski, Bharadwaj, and Varadarajan 1993). Standardization of products, advertising, and distribution channels can be cost-efficient due to scale economies. However, adaptation of strategies may be more effective in targeting customers with strategies that match their needs. Previous research in international marketing has focused on the differences between countries in terms of macro variables, such as differences in culture, geography, demographics and socio-economic status. However, key information necessary for deciding the extent to which a firm should strive for standardization depends greatly on the core values and needs of consumers (Hassan and Kaynak 1994). The main objective of this study is to provide insights for global firms in deciding on the globalization of marketing strategy by investigating geographic differences of consumer needs. For this purpose, we develop a hierarchical Bayes model that decomposes the variation among consumers into three components: 1) variations across countries, 2) variations across regions, and 3) the spatial dependency across regions. We investigate consumer needs at different levels of abstraction: attributes, benefits, and values. The model is applied to data collected in eight European countries, i.e., Germany, France, Italy, the Netherlands, Belgium, the United Kingdom, Spain, and Portugal.

3 - An Empirical Model of State Dependence Among Physicians: Implications for Marketing Communication

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Marketing communication is an effective means for firms to inform consumers about their products. In the case of experience goods, which are goods differentiated by observable product characteristics and unobservable experience characteristics, marketing communication can reduce the uncertainty present before consumption or usage takes place. How much consumers learn from firms' communications will depend on whether consumers exhibit state dependence or persistence in their purchase and consumption decisions. As a result, it is important to account for state dependence when measuring the response to marketing communication. In this paper, we model prescription drugs as differentiated experience goods. Though marketing literature has documented the response of physicians to marketing communication, there has not been much research to investigate the presence of state dependence or persistence of physician prescriptions. Understanding the degree and source of state dependence among physicians has significant implications for market structure and competition in the pharmaceutical industry. Using a unique panel dataset of physicians' prescriptions, we structurally model both the degree and source of state dependence among physicians and derive strategic implications for pharmaceutical firms. Keywords: State dependence, Marketing Communication, Experience goods, Discrete Choice Model, Pharmaceutical Industry

4 - The Effects of Pharmaceutical Marketing on Sales of Prescription Drugs

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The marketing activities of pharmaceutical companies are the subject of public debate worldwide. Pharmaceutical marketing has been criticized as wasteful and excessive and for contributing to the overuse, misuse, and misprescription of drugs. However, the marketing activities may also serve as key communication vehicles to inform physicians and increasingly consumers directly. Improvements in knowledge about efficacy, side effects and the outcomes of recent studies may improve prescription choices, compliance and health outcomes. Appropriately designed marketing activities may allow more rapid adoption of new drugs that represent advances over past practices. In a recent study, the CPB Netherlands' Bureau for Economic Policy Analysis analyzed the effect of pharmaceutical marketing on the sales of prescription drugs. This study has affected recent policy decisions regarding the pharmaceu-

tical industry. The results reported are based on a pooled econometric model applied to seven years of monthly data, consisting of marketing expenditures and sales for a large number of prescription drugs. We re-analyze the same data using brand-specific models and we come to substantively different conclusions. We find that the null hypothesis of homogeneity in parameters across all brands is rejected. One important distinction that should be made is between 'mature' drugs and 'new' drugs. We find, among other things, that pharmaceutical marketing increases the speed of diffusion of new prescription drugs. For mature drugs it is much more difficult to obtain strong results.

TD04

Rochester

Pricing 02

Chair: Pilsik Choi, University of Illinois at Urbana-Champaign, 339 Wohlers Hall, 1206 S. Sixth Street, Champaign, IL, 61820, United States, pchoi@uiuc.edu

1 - Dimension Reduction in VAR-models: Capturing Factor Structure in Dynamic Retail Pricing Across SKUs

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Long-term marketing effectiveness is a high priority research topic for managers (Marketing Science Institute 2002), and Vector Autoregressive models are commonly employed to capture such effects. Unfortunately, VAR models are prone to overparameterization, especially when the dimension of the vectors is large. This requires researchers to aggregate data across entities (e.g. stores, SKUs), making it difficult to use these models to assess the effects of product line pricing strategies, as well as competitive pricing interactions across SKUs. Model extensions have suggested techniques to deal with this curse of dimensionality, but have yet to offer a satisfactory solution in the high-dimensional context of scanner data at the SKU-level. In the current study, we propose and apply factor VAR-models to reduce the dynamic complexity and thus enable consideration of more endogenous variables and lags. We extend the time series literature on Factor VAR models by developing tests to determine the appropriate number of factors, and by making these approaches scalable to a large number of variables. Our empirical focus is dynamic retail pricing policy at the SKU level. This application demonstrates the advantages of allowing for richer dynamics, gaining additional insights through interpretation of the factor structure, and achieving a better forecasting accuracy.

2 - easyJet® Airlines:

Small, Lean, and with Prices that Increase over Time

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easyJet® Airlines, which has emerged as one of Europe's most successful low-cost, short-haul airlines, has a simple pricing structure. For a given flight, all prices are quoted one-way, a single price prevails at any point, and in general, prices are low early on and increase as the departure date approaches. In this paper we examine the optimality of this pricing scheme and analyze the factors that determine how the price should change over time by building a model of dynamic pricing that incorporates demand uncertainty. We find that while a pricing strategy such as easyJet's is indeed profit-maximizing, the magnitude of the increase in price from the first date of seat sales to the departure time is dependent upon the capacity of available seats between the given city pair, and varies inversely with it. We empirically analyze the data for several easyJet flights and find empirical support for our main model assumption and the result of an inverse relationship between the magnitude of the price increase over time and the available seat capacity.

3 - Understanding the Determinants of Optimal Price under Logit Demand

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We consider a market where multiple brands compete under logit demand and set prices simultaneously to maximize profit. A customer either purchases one of the brands or nothing at all. Under this demand condition, the optimal price under Nash equilibrium does not have a closed-form solution. Although the optimal price can be computed via gradient search, the procedure does not offer any insights into the factors that determine the optimal price. Based on a few assumptions about the number of competing brands and dispersion in value added (i.e.,

customer reservation price minus the marginal cost) by the brands, we develop a simple linear expression for optimal price. We validate the approximation with a series of simulation experiments. We find that the optimal price of a brand is very well approximated by its marginal cost plus a weighted sum of three factors: (1) dispersion in customer reservation prices, (2) the value added by the brand relative to the average value added by competing brands, and (3) the average value added by all brands in the market. The weights depend upon the number of competing brands, with dispersion in reservation prices having the strongest impact, followed by value advantage of the brand and average value added by all brands. Consistent with conventional wisdom, we find that the optimal price declines as the number of competing brands increases. However, even when the number of competitors is very large, firms can earn a non-zero mark-up as long as there is some dispersion in customer reservation prices of the brand. We discuss the managerial implications of the findings.

4 - Optimal Pricing Strategies in the DVD Market

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Since its introduction, DVD format has changed the landscape of the secondary market for the film industry. One of the major issues in this secondary market is how much a movie studio should charge for DVDs to retail stores and rental stores. If wholesale prices for DVDs are low, retail stores can sell more DVDs by charging low retail prices and generate more profits for movie studios. However, high wholesale prices for DVDs help rental stores by reducing consumers' interest in DVD purchase and increasing their interest in renting DVDs, and thus rental stores generate more profits for movie studios. Movie studios need to choose optimal prices for their DVDs to maximize their profits from retail stores and rental stores. This paper addresses the movie studios' problem in the DVD market. With a game-theoretic model, this paper investigates how a movie studio sets its optimal prices for DVDs in the secondary market where a retail store and a rental store exist and how its optimal prices are affected by market condition parameters, such as utility that consumers get from viewing a DVD, expected number of consumer viewing of a DVD, transaction costs, market size, etc. It further analyzes two other situations: (1) when the rental store rents out DVDs and sells used DVDs and (2) when the rental store rents out DVDs and sells used and new DVDs. This paper makes contributions to the literature by addressing pricing issues in a new secondary market that shows different characteristics from those for other secondary markets (e.g., VHS tapes and cars). It also examines optimal pricing strategies for the retail store and the rental store given the market condition parameters.

TD05

Santander

Channels 02

Chair: Juanjuan Zhang, Ph.D. Student, University of California, Berkeley, Haas School of Business, Berkeley, CA, 94720, United States, jzhang@haas.berkeley.edu

1 - How Potential Conflict Drives Channel Structure: Concurrent (Direct and Indirect) Channels

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We study the simultaneous usage by business-to-business manufacturers of vertically integrated (direct) and third-party (indirect) channels of distribution to serve one geographical market (possibly comprising several market segments) with the same product line. This phenomenon is poorly understood, even though it has been growing rapidly. We argue that the potential for channel conflict should drive channel structure: suppliers should refrain from concurrent channels in situations where the two channel types are likely to encounter each other and compete fiercely. Manufacturers have a set of available mechanisms to potentially reduce channel conflict in concurrent channels (e.g. use of demarcation schemes or quantity discounts). We argue that, under certain circumstances, it is impossible (or too costly) for manufacturers to effectively implement these conflict reduction mechanisms and prevent situations where customers contact both channel types, setting them in competition against each other. We argue that when these situations are frequent, or more consequential for the parties involved, firms will reduce their usage of concurrent channels, because severe channel conflict would be likely to arise. We posit five such circumstances. Using original data from prominent manufacturers operating in competitive markets worldwide, we model usage of both types of channels to cover one

geography with the same products. We find substantial support for our model. Further, in a subset of firms that do use both channel types in the same market to a considerable extent, we model the degree to which direct and indirect channels collaborate with each other to achieve competitive advantage.

2 - Channel Coordination for Durable Goods with an Imperfect Secondary Market

Jeffrey Shulman, Kellogg School of Management, Northwestern University, 2001 Sheridan Road, Marketing Department, Evanston, IL, 60201, United States, j-shulman@kellogg.northwestern.edu

In this paper, I endogenize the retailer's buyback decision to model the channel of a durable good with an imperfect secondary market. Allowing the retailer to make a profit on the sale of used goods eliminates the ability of the manufacturer to extract all rents. Under this setup, manufacturer and retailer incentives are not in alignment. Higher first period sales provide fiercer competition for second period sales of new goods, thus damaging manufacturer profit. For the retailer, however, higher first period sales lead to a cheaper supply of used goods and greater freedom from the manufacturer. Using a two-period model, I explore how a manufacturer can design a contract to align incentives and coordinate the channel. I show that previous methods of coordinating the channel for durable goods do not hold when the retailer profits from the secondary market. I find that the common two-part tariff with marginal cost pricing will not coordinate the durable goods channel in a rational expectations equilibrium.

3 - Fair Channel

Z. John Zhang, Associate Prof., The Wharton School, 700 JMH, 3730 Walnut Street, Philadelphia, PA, 19104, United States, zjzhang@wharton.upenn.edu, Tony Cui, Jagmohan Raju

In this paper, we incorporate the concept of fairness into a distribution channel to see how fairness may affect the interactions between a manufacturer and a retailer. We show that channel coordination does not require any nonlinear pricing scheme such as a two-part tariff and quantity discounts. A simple wholesale price offered by the manufacturer can coordinate a dyadic channel when channel members are fair-minded. We also show that in a fair channel, a two-part tariff can also coordinate a channel. However, the manufacturer need not be the one that takes the largest share of the channel profit.

4 - Are Solutions to Double-Marginalization Problem Equivalent?

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The double-marginalization problem has long been recognized as a threat to channel coordination. Many solutions involving more complex contracts have been proposed. Extant economic theories predict these solutions to be revenue and division equivalent in that they all restore full channel efficiency and give the same surplus to the upstream party assuming constant bargaining powers. We conduct a laboratory experiment to test the equivalence of two variants of a two-part tariff contract. The first variant charges the downstream party a fixed participation fee and a uniform unit price. The second takes the form of a quantity discount contract with the total cost to the downstream party identical to that of the first variant for a given quantity. Surprisingly, two-part tariff failed to solve double marginalization even in a well-controlled market environment. Compared with the case of a linear wholesale price contract, channel efficiency turned out to be lower under the first variant, and higher under the second. Asked to pay an upfront fixed fee in the first variant, the downstream party is more likely to turn down the trade offer, in which case the channel realizes zero profit. To account for the observations, we allow the downstream party to have a reference-dependent utility in which the upfront fixed fee is framed as loss and the subsequent retail margin as gain. We derive a new set of theoretical predictions and estimate a structural model to infer the degree of loss aversion as well as the reservation utility of the downstream party. The estimated loss aversion coefficient is 1.6 and the reservation utility is about 8-14 percent of the efficient channel profit. We rule out other plausible explanations such as fairness concerns and non-linear risk attitudes.

TD06

Shangai

Special Session: Online Pricing

Chair: Sandy Jap, Associate Professor of Marketing, Emory University, 1300 Clifton Road, Atlanta, GA, 30324, United States, sandy_jap@bus.emory.edu

Co-Chair: Prasad Naik, Associate Professor, University of California Davis, Graduate School of Management, One Shields Avenue, Davis, CA, 95616, United States, panaik@ucdavis.edu

1 - The Role of Seller Rating in Online Auctions

Ernan Haruy, Assistant Professor, University of Texas at Dallas, PO Box 830688, Richardson, TX, 75083-0688, United States, eharuy@utdallas.edu, Ram Rao, Norris Bruce

Whereas in brick and mortar stores quality and seller reliability can be effectively communicated through a variety of quality cues, in the online world different mechanisms help sellers establish reputation and trust. Among the commonly used mechanisms by infomediaries that screen and rate sellers are customer-feedback reputation mechanisms where buyers provide seller ratings and feedback. The success of such mechanisms and their impact on prices in electronic markets are described and empirically investigated in this work. Specifically, we investigate both theoretically and empirically (1) whether seller rating should and does affect consumer valuations, particularly in the presence of insurance (2) whether seller ratings are indicative of future default likelihood, and (3) whether a seller who is terminal (about to go out of business) is more likely to default prior to exiting.

2 - Price Dispersion on the Internet: A Review and Directions for Future Research

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The explosive growth in Internet retailing has sparked a stream of research on online price dispersion, defined as the distribution of prices (such as range and standard deviation) of an item with the same measured characteristics across sellers of the item at a given point in time. In this paper, we review the empirical and analytical literature on online price dispersion and outline the future directions in this research stream. We address the issue of whether price dispersion is greater or smaller online than offline, examine whether price dispersion on the Internet has changed over time, discuss multichannel retailing and measurement of price dispersion, explore why Internet price dispersion exists, and examine the drivers of online price dispersion.

3 - E-Tail and Retail Reference Price Effectson Expected E-tail Prices, Price Fairness, and Satisfaction Perceptions

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Results from an experimental study provide empirical support suggesting that consumers expect to pay less in online e-tail settings than bricks-and-mortar retail settings. Additionally, results suggest that bricks-and-mortar retail external reference prices influence consumer e-tail price expectations, price fairness, and satisfaction perceptions more than online e-tail external reference prices when reference prices are high. When external reference prices are low, both online e-tail and bricks-and-mortar retail external reference prices are equally effective.

4 - Price Partitioning on the Internet

Kent B. Monroe, J. M. Jones Professor of Marketing, Department of Business Administration, 1206 S. Sixth St, Champaign, IL, 61820, United States, kbmonroe@uiuc.edu, Lan Xia

The Internet provides managers with opportunities to monitor and manage their pricing strategies and tactics with minimum costs. Partitioning the total product sale price into a base price and various surcharges, such as shipping and handling, taxes, and other fees, is one way to manage price structures online. Using three experiments, our research shows that appropriate online price partitioning may enhance consumers' purchase intentions, perceived value, price satisfaction, and reduce further information search intentions. The effect of price partitioning is due to both consumers' insufficiently adjusting for the surcharge and the clarity of the price structure provided. However, when multiple surcharges are added to partition the price further, these positive effects may decline leading to an inverted 'U' shape function of partitioning on price perceptions. Finally, the amount and the way the surcharges are presented are important factors to consider when designing an effective price partitioning structure.

5 - The Effects of Buyer Identification and Purchase Timing on Consumers' Perceptions of Trust, Price Fairness, and Repurchase Intentions

Dhruv Grewal, Professor of Marketing, Babson College, Malloy Hall, Babson Park, MA, 02457, United States, dgrewal@babson.edu, Gopalkrishnan R Iyer, David Hardesty

The ease of use and commercial feasibility of Internet-enabled technologies for price segmentation has found increased managerial applications as well as a concurrent rise in questions about fairness and legality. We manipulate two price segmentation tactics and assess their effects on consumer perceptions of trust and fairness of the price differences. We also assess consumer repurchase intentions. We find that consumers report lower levels of trust, price fairness, and repurchase intentions when Internet-enabled buyer identification techniques are used (as compared to purchase timing tactics) to segment consumer markets. Our experimental results also suggest that the difference between these two tactics is more pronounced when firms do not provide an explanation for the price differences. The results indicate that the effects on perceived trust associated with the Internet retailer are further moderated by the size of the price difference (more pronounced when such price differences are relatively small). We offer some suggestions for the managerial use of such price segmentation tactics.

TD07

Hull

Promotion 03

Chair: Joseph Johnson, Asst. Professor, University of Miami, 501 Kosar Epstein Building, Coral Gables, 33186, United States, jjohnson@miami.edu

1 - Who is Stockpiling, and Who is Consuming More? — A Study on Decomposition of Price Promotion Effects

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This research aims at decomposing the effects of temporary price cuts into the effects of brand switching, household stockpiling and increase in consumption. We propose a dynamic structural model of a rational household who makes purchase decisions of when, what, how much to buy as well as how much to consume to maximize its expected utility over an infinite horizon while taking into account the inventory cost as well as the expected purchase cost in the future periods. We manage to simplify the infinite horizon dynamic programming problem to a finite horizon problem and also overcome the problem of high dimensionality. We use Simulated Methods of Moments to estimate our model using scanner panel data on canned tuna purchases. The results from our model can help managers make inferences about for which brands and categories the household stockpiling and consumption expansion occur, as well as occur on which types of households. We find that a household's brand preference has significant impact on its stockpiling and flexible consumption behavior. We show that when a brand temporarily cuts its price, the sales increases from its brand loyals mostly come at the expense of future sales. Non-loyals do not stockpile, the major impact of the price cut on them is brand switching in both an immediate term and a long term; however, they do increase their consumption for the focal brand too. We also find that light users respond to the price cut with higher consumption increases, while heavy users mainly respond with stockpiling the brand for future use. We also find that households' stockpiling behavior is greatly affected by the magnitude of price cuts. When the price cut is relatively small, the stockpiling effect is insignificant.

2 - The Effects of Free Sample Promotions on Incremental Brand Sales

Kapil Bawa, Professor, Baruch College, CUNY, One Baruch Way, Box B12-240, New York, NY, 10010, United States, Kapil_Bawa@baruch.cuny.edu, Robert Shoemaker

The distribution of free samples is a common practice among marketers. However, relative to other promotions such as coupons and price promotions, little is known about the effectiveness of free samples. We propose a new model and segmentation scheme for analysing free sample effects on incremental brand sales. The model is applied to data from two field experiments involving two different free sample promotions. The experimental data show that, unlike other consumer promotions such as coupons, free samples can produce long term positive effects that can be observed as much as twelve months after the promotion. The model provides useful insights into free sample effects and suggests some possible explanations for the differing effects on sales of the two promotions.

3 - How Do Promotion Programs Affect Consumers' Purchase Decisions:

A Behavioral Perspective

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This research studies how promotion programs affect consumers' purchase decisions from a behavioral perspective. Unlike the traditional utility model, which suggests that a rational economic evaluation of a purchase opportunity should depend on the sum of the utility offered by the product and the negative (dis)utility of the price paid, a new theoretical model is proposed based on the concepts of transaction utility and pain of paying. The authors then argue that incentives such as discounts, rebates, and rewards offered by promotion programs enhance purchase likelihood by increasing the transaction utility and decreasing the pain of paying, which provides an extra justification for making a purchase. It is shown that incentives such as reward programs can have a positive effect on both consumers' affect and their behavior. In a real reward program, customers who use a frequent shopper card are observed to be happier, to chat with and thank the employee more often, and to leave tips more frequently than those non-cardholders. Further, it is shown that using incentives such as reward programs companies can charge a price premium. Although such price premium exceeds the value of the offered reward it does not decrease the likelihood that consumers would purchase the offered good. Therefore, promotion programs can help the company build a more sustainable and profitable relationship with customers. Finally, more interestingly, these promotion programs are shown to have a stronger positive effect on the purchase likelihood of luxuries than necessities due to the higher guilt associated with acquiring luxuries.

4 - To Whom, When, and How Much to Discount? A constrained optimization of customized temporal discounts

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Recent technological advances in media, data, and methods have created a unique opportunity for marketers to customize their pricing of products. Researchers have not yet looked at how to customize temporal discounts to capture the full measure of consumer surplus in the pricing of products. The authors show that with the power of customized temporal discounts household-level differential pricing can maximize manufacturer profit. They argue that, unlike online differential pricing, customized temporal discounts allow companies to better control to whom, when, and how much to discount. The authors' approach begins by modeling individual household purchase incidence and brand choice in response to discount. The joint response timing and choice model captures the tradeoffs involved in determining optimal value and timing of the discount. The authors formulate the optimization task as a constrained multiple-knapsack problem under a given budget. The models are calibrated and tested using panel data from a Japanese drugstore chain. The authors' model allows a 53 percent lift in profits from using their model relative to the current practice of random standard discounts to all customers, and an 8 percent lift relative to customized model without the timing component. They also provide strategic analyses of customized temporal discounts under different marketing scenarios.

TD08

Baltimore

Consumer Behavior 02: Reference Points

Chair: Koert Van Ittersum, Assistant Professor, Georgia Institute of Technology, DuPree College of Management, 800 West Peachtree Street, NW, Atlanta, GA, 30332, United States, koert.vanitter-sum@dupree.gatech.edu

1 - Understanding Reference Point Strength and its Impact on Consumer Responses

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In marketing, a number of papers have provided theoretical and empirical support for the impact of reference points on consumer's product and price evaluations. The focus of this paper is on understanding how consumer evaluations of a given product or price are influenced by reference point strength. We empirically demonstrate that reference point strength moderates the impact of gains and losses on consumer evaluations. We define reference point strength (RPS) and specify a model building on prospect theory to investigate how gains and losses are evaluated differentially based on RPS. We also study individual level factors

(such as product knowledge, experience, relevance, and demographic variables) that may influence RPS. For this purpose, we conduct two studies. In Study 1, we focus on the attribute of price and show that reference point strength has an impact on consumers' price evaluations. In Study 2 we test our model in single and multi-attribute financial products context with questionnaires customized for individual reference points. Results of our studies indicate that the impact of losses and gains are amplified for consumers with high reference point strength compared to consumers with low reference point strength. We empirically identify drivers of reference point strength for price and non-price attributes. From a managerial perspective, RPS provides direction for identifying attributes that are critical in meeting or exceeding consumer expectations. We also discuss the role of reference points and RPS in product design.

2 - Investigating the Effects of Consumer Characteristics on Loss Aversion using a Bayesian Approach

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Much research has focused on the effects of reference prices on brand choice decisions using scanner panel data. The theory and application is well documented and accepted. However, researchers have found contrary results on the existence of loss aversion in consumer good markets. Loss aversion is a phenomenon based on the reference dependent theory that consumers respond more to losses (reference price price) than to gains (reference price price). The mixed results on the existence of loss aversion can be a result of not adequately accounting for consumer heterogeneity in response to marketing effects. Therefore we focus our analysis on loss aversion and adequately accounting for consumer heterogeneity. We estimate a reference dependent model with a mixed logit specification that allows for a continuous distribution of response heterogeneity in the population. We use Gibbs Sampling to obtain individual estimates. Our estimation results from two different consumer goods categories show that the degree of loss aversion is small after properly accounting for heterogeneity. Further, we accomplish a posterior analysis and investigate whether the individual response to gains and losses can be attributed to consumer specific characteristics. The relation of the estimated individual specific variables to households' sociodemographic and psychographic variables as well as to observed purchase behavior reveal interesting insights into which consumers respond more or less to price deviations from their reference point. Hence, our results are important for the development of effective pricing strategies and the timing of price promotions.

3 - Anchoring and Adjustment in Non-linear Pricing

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Marketers frequently price services in a non-linear fashion such that the cost for each additional unit depends on total usage. This forces consumers to calculate a weighted average to determine their effective price per unit. Our research indicates that consumers exhibit predictable biases in price estimation and revealed preferences for different pricing plans. Consumers rely on two anchors when evaluating non-linear pricing plans. First, consumers frequently overly anchor on the rate associated with the last volume tier a consumer expects to reach. This causes consumers to underestimate the effective price for plans where the marginal rate decreases with usage (direction bias). Second, consumers overly anchor their estimates on the simple average of the rates across the different usage tiers. This produces an underestimation of the effective price for plans with a larger percentage of the volume at higher rates (simple average bias). Four studies examined the cost estimates and preferences for non-linear pricing schedules. The settings included differing numbers of tiers, use of two-part tariffs, uncertainty about the expected usage, and incentives for accuracy. The results provide robust support for the presence of direction and simple average biases in both price estimates and plan preferences. Consumers do appear slightly less susceptible to these effects when choosing plans, as preferences are more correlated with actual prices than estimated prices. Overall, the results suggest firms using non-linear pricing (e.g., wireless providers) can improve profits by redesigning their pricing plans to take advantage of these consumer biases.

4 - Reference Points and the Importance of Attributes in Consumer Judgment and Choice

Koert Van Ittersum, Assistant Professor, Georgia Institute of Technology, DuPree College of Management, 800 West Peachtree Street, NW, Atlanta, GA, 30332, United States, koert.vanittersum@dupree.gatech.edu, Joost M.E. Pennings, Brian Wansink, Hans C.M. Van Trijp

While the effect of reference points and loss aversion on consumer judgment and choice is well-documented (e.g., Putler 1997), we study the effect of reference points and loss aversion on attribute importance measurement. Building on the reference-dependent theory (Kahneman and Miller 1986, Tversky and Kahneman 1991), we show that the importance of product attributes in consumer judgment and choice depends on consumers' reference points and loss aversion. More specifically, we show that the importance of an attribute in judgment and choice is larger if the attribute levels in the product space represent a loss, relative to the consumer's reference point. Next, we show how the priming of consumers' reference points strengthens this effect of reference points and loss aversion on attribute importance. Finally, we demonstrate that by framing consumers' reference points, the importance of attributes in consumer judgment and choice can be altered. If the reference point of an attribute is framed as a loss (gain), the importance of that attribute in consumer judgment and choice increases (decreases). The results guide researchers how to improve the validity and reliability of attribute importance measurement and provide marketing managers with a tool to influence the importance of attributes in consumer judgment and choice.

■ TD09

Leuven

Choice 02

Chair: Yanan Wang, Lingnan University, Marketing Dept. Lingnan University, Castle Peak Road No. 8, Tuen Mun, Hong Kong, Hong Kong, ywang@ln.edu.hk

1 - Consumer Dynamic Intertemporal Choice with Reference Point

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Recently, researchers have realized that consumer dynamic choice is an important issue to address. Several empirical studies have been done. In this study, we model consumer forward-looking behavior with reference point, which is missing in the current empirical study. Loewenstein (1988) advocates that consumers have reference point to contrast when making intertemporal choice. The model we're using in this study has an investigation of this behavioral phenomenon in the empirical field. Forward-looking consumers make brand choice decisions by considering current price and reference price together. Consumers make an expectation about whether future price will be lower or higher, and they make brand choice in a dynamic way—look at their net present utilities. In this study, we show that consumers do consider shelf price, reference price, and expected future price together when they make a purchase decision. We show that this reference point phenomenon has an important impact on consumer dynamic choice model. This model performs much better than static model and some dynamic models without reference point. Furthermore, this study has an impact on reference price study. Many researchers miss the important element that: reference price is a concept under a dynamic framework. In this model, we consider reference price under a dynamic framework. Without taking consumer expected future price into account it can lead to confusion about reference price. For example, a consumer doesn't purchase a low price brand because she expects that the future price is lower. But in a conditional brand choice model with reference price, it can maybe be explained by a very low reference price.

2 - Analyzing the Effect of Past Prices on Reference Price Formation

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We develop a new model for reference price formation, which can be incorporated in a brand choice model for household scanner panel data. The model assumes that a household's current reference price is the average of observed prices in the past which the household is still able to remember. If the household cannot remember any price at all, the household is assumed not to be able to construct a reference price. We use a two-state first-order Markov process to model the price recall states. The Markov process describes the price recall probabilities, which have to be estimated from the data. Hence, the model explicitly accounts for uncertainty whether a price from the past shows up in the current reference price. The recall probabilities may, for example, depend on time since previous purchases and the presence of promotional activities at previous purchases. In the Markov process the "do

not recall state" is an absorbing state, and hence once a price is forgotten, it will never be remembered. The proposed model can be used to analyze the extent to which households use internal reference prices. Furthermore, the Markov structure allows us to determine the extent of past price information used to construct reference prices. We apply our model to several scanner panel data sets.

3 - Consumer Choices in One-Stage vs. Two-Stage Markets

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The paper presents an analysis of choice processes that are made in markets going through a choice set enlargement process. The markets analyzed are facing two stages. In the first stage the decision maker can choose between the only product alternative and the possibility to stay out of the market. In the second stage the choice set contains two or more alternatives that include the original alternative and, as in the first stage, the possibility not to enter the market. Such market condition can evolve as a result of regulatory change, a loss of competitive advantage of a "first mover" or an improvement in industry ability to provide new alternatives. The purpose of this paper is to understand the factors that might influence these choice processes and to suggest that the outcome of such processes will differ from that in markets facing only the final choice set. The paper also attempts to model choice in these markets. The model predicts choice outcomes by capturing the effects of the influential factors and their relative strength. The paper provides an empirical example that allows us to analyze choice outcomes on a seemingly identical choice situation (i.e. an identical final choice set), and investigate the differences, between choices made in a one-stage market and those made in a two-stage market. The analysis is based on data obtained on bank customers' choices between bank fee packages. In addition, a more accurate method of testing different influential factors' effect is suggested using field experiments.

4 - Modeling Online Brand Choice Behavior:

Exploring the Effects of Some Internet-Specific Attributes

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Papers on the E-Commerce Research Forum (MIT) show that existing research on online consumer choice behavior has mainly focused on comparative studies of channel or store choice (online or offline) or online store choice (different e-tailors). Relatively less effort has been devoted to consumers' online brand choice behavior within a single e-tailor. Few papers have explored the choice behavior involving in the purchase stage. Exceptions are two empirical papers, one on consideration set formation (Wu and Rangaswamy, 1999) and the other on choice behavior comparison between online and offline supermarkets (Degeertu, 2000). The goal of this research has been to explore the effects of some Internet-specific attributes (namely: order delivery, online promotion & advertisement, webpage display and payment method), to see whether those specific variables have great impact to the online brand choice for registered customers. Specifically, this paper chooses the Multinomial Logit Model (MNL), to be the estimation methods. In terms of a less-biased modeling, the paper made an attempt to get the refined smoothing constant for loyalty variables (brand loyalty, size loyalty, SKU loyalty). The SKU-leveled online panel data are collected from www.eguo.com, a well-known e-tailor headquartered in Beijing. The initial sample consists of more than 2000 panelists who bought coke (7 SKUs alternatives) at least twice between Feb 2001 and Aug 2003. This paper has meaningful managerial implications for the e-tailor's stock control and online promotion; together with the single customer's purchase forecasting.

TD10

Bergen

CRM 02

Chair: Thorsten Posselt, Professor, University of Leipzig, Marschnerstr. 31, 04109 Leipzig, 04109, Germany, posselt@wifa.uni-leipzig.de

1 - Enhancing the Effectiveness of the Customer Relationship Management Effort Through Marketing Network

Fabrizio Zerbini, Ph.D. Candidate, Bocconi School of Management, Via Bocconi, 8, Milano, 20136, Italy, fabrizio.zerbini@uni-bocconi.it

How do firms increase the effectiveness of their customer relationship management efforts? A growing body of research provides evidence that strategies based on relationship-marketing instruments (RMIs) have little impact on customers' frequency of purchases, lifetime, and share of wallet. However, these studies so far focused mainly on stand-alone efforts, while little is known about the effectiveness of RMIs based on inter-firm collaboration, which leverage on partner complementarities for locking customers in a relational behavior. This paper points on the

effects of collaboration on a specific relationship-marketing instrument, the customer loyalty program. Drawing from previous research on collaborative marketing and social networks, a conceptual framework is proposed where a firm's embeddedness in the marketing network and its complementarity with network partners are linked to the effectiveness of the CRM effort. Basing on survey data on loyalty programs in the airline industry, the framework is tested through a hierarchical regression model, assessing both the direct effects of firm's embeddedness in the marketing network on the frequency of purchases, customer lifetime, and share of wallet of its cardholders, and the interaction effect between embeddedness and complementarity. Findings show that network characteristics affect firm effectiveness in managing customer relationships. Such results suggest that collaborative strategies allow firms to develop RMIs that provide customers with original combinations of benefits, being much more effective in modifying their relational behavior. A contribution to social network theories is also provided, by further specifying the relationships between embeddedness, complementarity and outcomes at the firm level.

2 - Moderators of the Relationship Between Third-Party Complaints and Spanish Banking Performance

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This article focuses on the impact of third-party complaints on firm performance and the moderator roles played by quality corporate image and market concentration. We propose various research hypotheses, which are developed from the literature of consumer complaint behavior, economics and quality. The methodology is based on an event study to estimate variation in firm share returns in the stock market due to the publication of the Annual Complaints Service Report by the Bank of Spain; as well as a moderator regression analysis (MRA) to examine the moderator effects. The empirical focus is on a sample of eleven banks (that represent the 75.3% of the sector's total assets in 2001) to which complaints were made and which were quoted on the Spanish Stock Exchange between 1992 and 2001. The results show a negative impact of the publication of these annual complaint reports on the share returns of the banks concerned. Additionally, these returns are explained negatively by the number of complaints per branch and quality corporate image. We also find that market concentration moderates the effect of the number of complaints per branch on the abnormal returns obtained for the banks concerned.

3 - Linking Team Efficacy and Group Potency to Customer Perceptions and Financial Performance

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Increasingly, companies are restructuring their service operations by implementing boundary-spanning self-managing teams. Recent team research has identified the constructs of (task-specific) team efficacy and (generalized) group potency (Gully et al. 2002; Jung and Sosik 2003) as essential drivers of team performance. These parallel constructs typically reflect members' collective confidence in the team's capacity to self-manage daily job activities from two sides of the same coin. While research on team efficacy and group potency is increasing, little is known about their role in customer-contact operations and their relation with customer-based and financial performance parameters. Furthermore, there is an ongoing debate about whether employee attitudes about work group practice lead to customer perceptions and financial outcomes or the other way around. To date, research on self-managing teams has largely ignored the causality of these relationships. To cover these gaps in current research this paper examines the lagged effects of team efficacy and group potency on customer perceived service quality and service revenues as well as the cross-lagged effects to determine the causal direction of these team performance parameters. To investigate this we employed a longitudinal study at a major financial company, collecting employee surveys, customer surveys, and business performance data at two points in time. The findings show (1) that team efficacy stronger relates to perceived service quality than group potency, while only group potency relates to service revenues, and (2) stronger lagged effects of team efficacy and group potency on perceived service quality and revenues than cross-lagged effects. Keywords: team efficacy, group potency, service performance, causality

4 - Financial Incentives in Promoting Referrals

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Our objective is to examine the role of financial incentives in promoting referrals and sales. In this contribution we present a work-in-progress empirical examination on explaining the magnitude of referrals in selected industries. We also investigate the effect of referrals on sales. We estimate the number of referrals in three selected industries by including a set of exogenous variables such as customer satisfaction, the inclination to recommend as well as financial incentives to recommend the service supplier. Since the number of referrals is an integer value, we will apply count data regression models. Special attention is paid to the fact that for a large fraction of individuals the number of referrals is zero. Therefore more flexible count data models capable to handle this "excess" zeros problem are applied. Based on these estimations we simulate the effects of customer recommendations on sales. One of the major findings is that there are huge differences in word-of-mouth-processes between service industries and that these can be significantly—both statistically as well as economically—influenced by financial rewards.

TD11

Heidelberg

Competition & Game Theory 01

Chair: Sihem Taboubi, Professor, GERAD and HEC MONTREAL, 3000 chemin de la côte Sainte Catherine, Montreal, H3T2A7, Canada, sihem.taboubi@hec.ca

1 - A Model of Bargaining in a Vertical Marketing Channel and Positioning of Store Brands

Tirtha Dhar, Assistant Professor, University of British Columbia, 2053 Main Mall, Vancouver, BC, V6T1Z2, Canada, tirtha.dhar@sauder.ubc.ca, JeanPaul Chavas, Philippe Bontems

Since 1980s increased concentrations across marketing channels have changed bargaining relationships between retailers and manufacturers both in North America and in EU countries. New practices have evolved, practices like various types of off-invoice fees like slotting allowance and at the same time share of private labels in most markets increased significantly. Compared to existing literature, this paper explores the role of store brands in the bargaining processes between several manufacturers and a retailer in a vertical marketing channel using a single theoretical framework. Our model of product differentiation takes into account both horizontal vertical differentiations. By exploring these two practices in a single framework our goal is to address few of the following policy concerns: [1] Are these two practices complementary or substitute in effecting channel relationships between processors and retailers? [2] Which channel players benefit the most from a joint use of store brand and off-invoice fees for a product in a supermarket? [3] Implications for consumer welfare as a result of the growth of these two practice. Our model will incorporate game theoretical bargaining concepts, and wholesale price will be modelled as two-part tariff to take into account any off-invoice payments. Our preliminary results suggest, practices like introduction of private labels and slotting allowance can both improve social welfare but gains from such changes will be unevenly distributed. And in some scenarios, with increase in bargaining power at the retail level, the optimum strategy of branded manufacturers will be to offer both branded and private label to the retailer.

2 - Sequential R&D and Quality of New Products:**The Case of Specialized Equipment Suppliers**

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A number of B2B markets characterized by a mature customer base witness frequent introduction of new technology. To develop new technology, firms invest in R&D. When a firm invests in R&D sequentially, it gains through learning from experience with initial innovations. At the same time, however, it endogenously creates competition for subsequent technological innovations due to consumer resistance to upgrade. Using a multi-period model, we analyze a firm's decision to invest in innovation-directed R&D based on its R&D capability and the degree to which product quality is observable. The key insights are 1) The strategy of a firm with strong R&D capability is to focus on the high valuation customers (high-types) and upgrade them to a new generation each period. 2) The strategy of a firm with a weak R&D capability generally is to focus on broad market coverage. Under certain conditions, this can result in a situation where the latest generation of the product is only sold to low valuation consumers (a situation we call 'market inversion'). 3) When consumers cannot evaluate product quality by inspection, the

ability of the firm with strong R&D capability to screen consumers based on their willingness to pay is restricted. This leads to broader sales strategies early in the life of the category.

3 - Ingredient Branding in Vertically Related Markets

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Ingredient branding is the brand building activity an ingredient manufacturer embarks on to establish brand equity directly in consumers' minds. Without such activity, consumers would not be aware of the ingredient's existence in the final products. "Ingredients" here include inputs such as materials, parts and production technologies. The fear of being commoditized and lost in the end-product motivates the ingredient suppliers to build its own brand equity. However, ingredient branding is not seen in all industries; sometimes such branding strategy is even forbidden by end-product producers. We propose a game theoretic model to investigate the effects of such branding endeavor on the two vertically related industries. The end-product is modeled as a bundle of ingredients and its quality is dependent on the quality of the ingredients. The end-product manufacturers serve as experts in detecting the ingredient's quality and, at the same time, put their own investment and reputation at stake. In this sense, by offering the manufacturers co-op advertising allowance, the ingredient supplier signals his high quality. Although it is necessary for the ingredient supplier to run standalone advertising to build his brand name, we show that the use of co-op advertising with manufacturers is a more efficient way of signaling. We also discuss the role of labeling, the act of the manufacturers attaching the supplier's logo on the outside of the end-product. Labeling facilitates the transfer of the manufacturers' brand equity to their less known rivals.

4 - Incentives for Retailer Promotion in a Marketing Channel

Sihem Taboubi, Professor, GERAD and HEC MONTREAL, 3000 chemin de la côte Sainte Catherine, Montreal, H3T2A7, Canada, sihem.taboubi@hec.ca, Georges Zaccour, Steffen Jorgensen

The paper analyzes a differential game model of a two-member marketing channel. A manufacturer invests in national advertising with the purpose of improving the image of one of her brands, and her retailer makes local promotions for the brand. The manufacturer has the option of affecting the retailer's efforts by offering to support local promotional efforts. As a channel leader, the manufacturer aims to coordinate the channel. The study deals with two specific instances of channel coordination: How can the manufacturer, through her choice of marketing strategy, induce the retailer to implement an outcome that (i) is favored by the channel members as a group, or (ii) is favored by the manufacturer only? Our findings indicate that the manufacturer can design an incentive strategy, being dependent on the retailer's promotional effort rate, such that the retailer will act in accordance with the manufacturer's wishes, stated as Cases (i) and (ii) above. It is also shown that it is not always in the manufacturer's best individual interest to implement the joint maximization outcome, cf. Case (i).

TD12

Lund

Internet 01

Chair: Raquel Gurra Sarasa, Profesor University of Zaragoza, Gran Vía, 2, Zaragoza, Z, 50005, Spain, gurra@unizar.es

1 - Gauging Consumer Evaluations of Online Knowledge: Ordinary Least Square Versus Ordered Logit Models

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Do multiple-item scales always outperform single-item scales? Should ordinary least square (OLS) regressions that deal with continuous dependent variables be routinely employed to estimate marketing equations that are characterized by ordinal dependent variables? This study investigates the modeling biases that may occur with this common marketing practice. Using responses from 377 consumer evaluations of online information and knowledge, the econometric method of ordered logit models (OLM) that considers ordinal dependent variables was performed and the results compared with those of OLS. The evaluative responses captured technology acceptance and consumer satisfaction, two dependent variables that have been widely used in information systems and marketing, respectively, to gauge the performance of electronic commerce. Technology acceptance was measured using a standard six-item technology acceptance scale, and consumer satisfaction was assessed with single-item overall satisfaction and twelve-item consumer satisfaction scales. Consumers were asked to respond regarding their levels of acceptance and satisfaction on a seven-point scale. Significant

differences were found between the results from the OLS and OLM methods. Specifically, OLS tended to underestimate the importance of explanatory variables by ignoring the ordinal nature of the dependent variables. Given these results, it is argued that OLS should be used with caution when the dependent variable is single-item ordinal. In some situations, such as online surveys where multiple-item scales are not feasible or concrete concepts where single-item scales are more appropriate, OLM should always be employed.

2 - Customer Co-Production in an E-Service Support Setting: Antecedents and Performance Consequences

Vera Blazevic, Universiteit Maastricht, Tongersestraat 53, Maastricht, 6211 LM, Netherlands, v.blazevic@mw.unimaas.nl, Annouk Lievens, Steve Muylle

This study investigates the role and impact of customer co-production in an electronic service support setting. Within the context of a commercial virtual community, the antecedents and performance consequences of customer co-productive knowledge exchange are modeled. As extant research has not focused on the actual impact of customer co-production on perceived service quality in an electronic service support setting, this study intends to contribute to the services marketing literature on electronic service support. Furthermore, it provides guidelines for practitioners to benefit from their electronic service support initiatives by better addressing customer requirements while reducing inbound service costs. We conducted an online survey (n=226) in a technical online support community of a leading global computer organization. The community is geared toward computer hardware and software experts at customer firms in a wide variety of fields, e.g. operating systems, servers, and printers. The measurement instrument was grounded in the literature, pre-tested qualitatively with academic experts and business managers, and pre-tested quantitatively with 105 students in a laboratory setting. The conceptual model is tested using structural equation modeling with partial least squares estimation. At the conference, we will present our model, followed by a discussion of our key empirical research findings and managerial implications.

3 - Marketing-oriented Information Exchanges through the Internet. The Role of the Environmental Context

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This paper attempts to empirically determine the compatibility of the Internet with marketing orientation, which leads to organizational responsiveness. The role of the environment regarded as both a predictor and a moderator of the examined variables, is also considered. Specifically, we examine: a) the compatibility of the Internet with market information acquisition and integration exchanges that lead to organizational responsiveness, b) the explanatory powers of certain environ-

mental uncertainty facets upon the aforementioned Internet marketing-oriented information exchanges and c) the moderating effects of these environmental variables upon the relationships between the Internet market-oriented information exchanges and the organizational responsiveness variables. Measure validation was achieved through a series of confirmatory factor analyses, using structural equation modeling, that were performed on data collected by an international e-mail survey. Hypotheses derived from multiple streams of research were tested through a series of regression analyses and Chow test procedures. Research results placed evidence upon certain marketing-oriented information exchanges that may be performed through the Internet, leading to enhanced organizational responsiveness. Some fruitful implications are also derived from the research findings concerning the moderate effects of the environment upon the examined Internet marketing oriented strategies.

4 - The Role of Perceived Usability, Satisfaction and Consumer's Trust on the Loyalty to a Website

Raquel Gurrea Sarasa, Profesor University of Zaragoza, Gran Vía, 2, Zaragoza, Z, 50005, Spain, gurrea@unizar.es, Miguel Guinaliú, Carlos Flavi-n-Blanco

The spectacular development of businesses on the Net entails substantial changes in the way companies and customers establish their relationships. As a result of the entrance of companies in the virtual world, some concepts like reliability or usability have taken a new relevance. In fact, the consumer's lack of trust in Internet relationships has proved to be one of the main obstacles to the supply of services through this new channel. Equally, we could point out that those aspects related to content design and presentation, organization and the ease of use of web-pages which integrate the concept of usability have become the key for the success of service supply on the Internet. Considering the important peculiarities of this analysis context and in order to cover some deficiencies in the specialized marketing literature, the purpose of the present work is to analyse the influence of an Internet server's usability on the trust and satisfaction shown by its users and the influence of these three variables on the loyalty degree expressed by the clientele. With this aim, this work will develop valid and reliable scales which enable to quantify these concepts when the relationships are established through the Internet and we will contrast the proposed relationships by means of a structural equation model. The results of the analysis allow us to empirically confirm the proposed relationships from a theoretical perspective, obtaining important implications for the management of digital economy companies.

Friday, 8:30am - 10:00am

■ FA01

Forum

Special Session: Strategic Innovation

Chair: Praveen Kopalle, Associate Professor, Dartmouth College, 100 Tuck Hall, Hanover, NH, 03755, United States, praveen.kopalle@dartmouth.edu

Co-Chair: Rajesh Chandy, University of Minnesota, 3-150 Carlson School, 321 19th Ave S, Minneapolis, MN, 55455, United States, rchandy@csom.umn.edu

1 - How Legacy Firms Can Introduce Radical and Disruptive Innovations:

Theoretical and Empirical Analyse

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This paper addresses the issue of how legacy firms can introduce both radical and disruptive innovations, where radicalness is a technology-based dimension of innovation, and disruptiveness is a market-based dimension. The key contributions of this paper are as follows. First, we provide a theoretical and an empirical analysis of the differential impact of four SBU-level abilities (mainstream customer orientation, emerging customer segment orientation, willingness to cannibalize, and technological opportunism) on the radicalness and disruptiveness dimensions of innovations, thus linking the research streams of customer orientation and radical innovations with that of disruptive innovations. Second, we distinguish the combinations of SBU-level abilities that are required to introduce disruptive and radical innovations. Third, we identify the key role of an SBU's emerging customer segment orientation in developing disruptive innovations. Finally, we examine the antecedents of an SBU's emerging customer segment orientation, i.e., identify the organizational factors such as incentives, adhocracy culture, and structure that promote such an orientation. Based on data from 138 SBUs in 23 large Fortune 500 corporations, we find the disruptiveness of innovations is determined by an SBU's emerging customer segment orientation and willingness to cannibalize, while the radicalness of an innovation is determined by the SBU's mainstream customer orientation and technological opportunism. Also, we find that SBUs can develop an emerging customer segment orientation via long-term-oriented/subjective-based incentive mechanisms, fostering an adhocracy culture and creating separate organizational units for innovation.

2 - Identifying and Using Emergent Consumers in Developing Radical Innovations

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While much research has emphasized improving current new product concept techniques, (e.g. Dahan and Hauser 2002; Dahan and Srinivasan 2000; Dahl and Moreau 2002), little research has focused on which consumers to use in the new product development process, particularly in the consumer goods industry. The lead user approach has been applied in business-to-business settings (von Hippel 1986) with expert users; however, the use of particular, rather than mainstream, consumer groups for developing and testing new products in consumer settings has received less attention. Thus, the goal of this project is to develop a methodology to identify these "right" consumers via using the interactive, Internet medium. >> We propose that identifying the "emergent consumers" and using them for concept development in the consumer goods and services industries can: 1) aid in the successful development of radical new product concepts, 2) improve the chances of success in the marketplace for such innovations, and 3) help predict their acceptance by mainstream consumers. Identification of emergent consumers complements current concept testing methods and provides an "early warning system" for radical innovations targeted at typical consumers. Along with this goal, this research addresses two questions: 1) how can we identify emergent consumers? i.e. who should firms talk to when testing new consumer products that represent really new ideas, and 2) how can emergent consumers be used at the concept testing stage to improve the subsequent new product development process with a firm's mainstream consumers? i.e. how can firms extract and incorporate key feedback from emergent consumers.

3 - The Dynamics of Radical Innovation

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Radical innovations are crucial to the survival and growth of firms, industries, and entire economies. To succeed at radical innovation, firms need to develop assets in at least two areas: marketing and technology. When developing these assets, firms have a critical decision to make: should they integrate the new assets needed for radical innovation with their existing marketing and technology assets? Firms' integration decisions have long-lasting implications for their success at radical innovation. On the marketing front, tight integration with existing brand assets can raise fears of brand dilution due to product failure, and thus dampen radical innovation. However, powerful brands, which help reassure apprehensive customers, and gain valuable visibility for a radical innovation, can also make success easier to grasp. On the technology front, firms that outsource the development of products based on the new technology may lose control over their new products, and may have difficulty in differentiating their products from those of competitors. However, internal development is expensive and risky. This research focuses on the drivers and outcomes of integration decisions in radical innovation. A unique aspect of this research is that the authors examine radical innovation dynamically—over time, and on an industry-wide level. They track the US retail banking industry between 1995 and 2001, and examine how dominant versus non-dominant firms managed the development of the technology and brand assets needed for a single radical innovation: Internet banking. They find that the firms' actions changed substantially over time; these actions have large effects on the outcomes of radical innovation.

4 - Understanding the Seeds of Growth:

Technological Evolution and Product Innovation

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Technological change is perhaps the most powerful engine of growth in markets today. To harness this source of growth, firms need to understand the dynamics of technological change. In particular, they need answers to the following questions: (1) How do new technologies evolve? (2) How do rival technologies compete? (3) How do firms deal with technological evolution? Currently, answers to these questions come primarily from the theory of S-curves of technological evolution. However, that theory is based on scattered empirical evidence and some circular definitions. Using new definitions, the authors examine the pattern and competitive dynamics technological evolution in six markets. Results seem to cast doubt about the received wisdom about technological evolution.

■ FA02

Tokyo

Diffusion 03

Chair: Kay Peters, University of Kiel / Dept. Innovation, Marketing and New Media, Westring 425, Kiel, D, 24098, Germany, kay.peters@t-online.de

1 - The Generalized Bass Model: An Empirical Application to Take-Off of Durable Goods in Italy

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The Bass diffusion model (Bass, 1969) has been successfully applied to describe the adoption curve of a substantial number of technological innovations and new product introductions. A variety of authors have extended the original model by including decisions variables. The Generalized Bass model (Bass, Krishnan and Jain, 1994) is one of the most recognized models in this regard, including both price and advertising variables. This allows observing how investment policies under direct management control influence adoption patterns. Though the model is widely recognized, only few empirical validations have been published so far. Our paper contributes to the empirical validations and provides an application to a Non-U.S. context, namely Italy. Several implications for future research and managerial practice are drawn.

2 - Analyzing Dynamic Relationship of Diffusion of Products

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Diffusion processes of two products (service) in the same market could affect each other in various ways, depending on how consumers perceive the characteristics of these products. If these products are per-

ceived complementary, their interactive diffusion processes are expected to exhibit a positive relationship. On the other hand, if they are perceived to be substitute products, the interactive diffusion processes are expected to show a negative relationship. Other relationships may include a spurious relationship, and an independent relationship, among others. In this study, we consider such complex interactive diffusion processes of the IT products, and model these relationships with the alternative assumptions using the Bass model. We present the empirical results of the case where the diffusion process of the second generation cellular telephone shows an interactive effect with the diffusion process of the subscription to internet providers with personal computers.

3 - Word-of-Mouth for Movies: Its Determinants, Consequences, and Implications for Advertising Strategy

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It is well known that word-of-mouth plays a critical role in a movie's box office performance. However, very few empirical studies have examined specific features of movie word-of-mouth. One important reason for this lack of research is due to the availability of data; word-of-mouth information outside a laboratory setting is generally difficult to track and gather. In this study we use a data set that contains weekly word-of-mouth information for 80 movies screened in the U.S. during the 2002 season. By linking important aspects of word-of-mouth (i.e., amount and valence) to other movie features (such as genre, production budget, star power) and the advertising and distribution strategies (such as weekly advertising intensity, weekly number of theaters), we are able to identify a number of factors that drive word-of-mouth behavior of movie audience, and evaluate the impact of such behavior on movies' box office performances, both weekly and in aggregation. For example, we find that pre-release advertising is much more effective in generating word-of-mouth than other factors such as star power. The study also points to the possibility that movie studios may have wasted advertising money on movies that do not need much advertising support. This is especially true for movies that may rely on their potential to generate healthy word-of-mouth. We discuss the dynamic correlation between advertising, the intensity of distribution, and the word-of-mouth throughout the lifespan of a movie.

4 - Explaining Lead-/Lag-Effects and Spatial Autocorrelation in Models of International Diffusion

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Recent research on modeling lead-/lag-effects or learning-coefficients between countries with different starting dates of diffusion processes often suggests e.g. 'tourism' as an explanation. We examine whether these effects arise due to the presence of spatial autocorrelation stemming from omitted variables describing the homogeneity/heterogeneity of neighboring countries during their diffusion processes. We investigate this systematically by introducing a set of new variables describing the (dis-) similarity of neighboring countries. Further we introduce a set of industry specific technology, know-how transfer, management and marketing variables to explain the lead-/lag-effects, learning coefficients and present spatial autocorrelation. Our research is based on the diffusion of cellular phone services in approx. 200 countries using an extended Generalized Bass Model.

FA03

Athene

Marketing Research 03

Chair: Andrea Godfrey, PhD Student, University of Texas, Department of Marketing CBA 7.202, McCombs School of Business, Austin, TX, 78712, United States, andrea.godfrey@phd.mcombs.utexas.edu

1 - Between-Method Convergent Validity of Four Data Collection Methods in Quantitative Means-End Chain Research

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The aim of this paper is to examine the between-method convergent validity of four alternative data collection methods used in quantitative Means-End Chain research. The benchmark method is the classical APT method (i.e. a paper-and-pencil method) in which respondents are asked to indicate existing links between product Attributes and consumer Benefits (i.e. AB), and between consumer Benefits and consumer Values (BV). The alternative data collection methods are a verbal interview, and two types of computer interviews each of which differ only in terms of the order in which the AB- and BV- links are offered to the respondent. Between-method convergent validity was established

between the verbal interview and the benchmark method (APT), as well as between one type of computer interview and the benchmark method. These results give empirical support to assume that by using computers (or by using the Internet) one could obtain consumer Means-End Chains which are very similar to the Means-End Chains that would be obtained by means of the paper-and-pencil method (i.e. classical APT method).

2 - Solving and Testing for Endogeneity without having Instrumental Variables at Hand

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Michel Wedel, Ulf Bockenholt

The latent instrumental variable (LIV) model is a new approach that solves regressor-error correlations in linear models by postulating that instrumental variables are discrete and unobserved. As a byproduct, it allows testing for endogeneity without requiring access to observable instruments. We present several ways to examine model fit and to detect outliers and influential observations using the LIV approach. Furthermore, we address the issue of choosing the number of instruments. We present results of various simulation studies and illustrate the LIV method on three previously published datasets where it is expected that one regressor (Schooling) is endogenous. Our simulation and theoretical results show that the LIV method yields consistent results that are superior to OLS. The proposed test statistics is shown to have a reasonable power throughout a wide range of settings. We find for the three empirical datasets that the OLS estimate of the return to schooling has an upward bias of approximately 7%. In contrast, the classical instrumental variable approach indicates biases in OLS that are not consistent in terms of size and magnitude throughout the three applications. We conclude that the LIV estimates are therefore preferred to classical instrumental variables.

3 - On the Predictive Content of Production Surveys: A Pan-European Study

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Christophe Croux

For over forty years, Business Tendency Surveys have been collected in multiple member states of the European Union. Previous research has studied the predictive accuracy of the expectation variables included in those surveys through bivariate, within-country, Granger-causality tests, which has resulted in mixed conclusions. We extend previous research in various ways, as we (i) explicitly allow for cross-country influences, and (ii) do so using both bivariate and multivariate Granger-causality tests. Specifically, the multivariate El Himdi and Roy test is adapted to jointly test the forecasting value of multiple production expectation series, to assess whether part of this joint effect is indeed due to cross-country influences, and to determine which countries' expectation series have most "clout" in predicting the production levels in the other member countries, or have higher "receptivity", in that their production levels are Granger-caused by the other countries' expectations. Results partially confirm the existence of Granger causality at the individual country level. In contrast, very strong evidence of Granger causality is found at the multi-country level. Moreover, cross-country Granger causalities are found to be present in multiple instances, indicating that it could be advantageous to exploit the underlying correlations in multivariate forecasting methods. Finally, some countries (i.e. France and Germany) are found to have more "clout", and others to be more "receptive" (i.e. Austria and Finland and Denmark).

4 - Latent Class Analysis of Customer-Mix Distributions

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Brand choice models tell us how a customer chooses brands (i.e., the customer's relative attraction to different brands). When we combine latent class analysis with brand choice models, we identify groups of customers who have similar preferences across brands. Customer-mix models (Chien, George, McAlister 2004) tell us how a brand "chooses" customers (i.e., the brand's relative attractiveness across customer types.) When we combine latent class analysis with customer-mix models, we identify groups of brands with similar patterns of attractiveness across customer types. We illustrate the methodology using MBA student course selection. "Brands" are MBA courses and "customer types" are MBA student segments. For example, when we define customer types by starting salary, we identify those courses that are disproportionately taken by MBAs who make high starting salaries. The method could be used by a catalogue retailer to identify groups of products that tend to be bought by different customer types. The retailer could target each customer type with a catalogue featuring products that customer

type favors. A bricks and mortar retailer could create a "store within the store" for a particular customer type by jointly displaying products favored by that customer type. A manufacturer could use such knowledge to select effective partner brands for promotions that target a particular customer type.

■ FA04

Rochester

Practice Prize 01

Chair: Gary Lilien, Penn State University, BAB 402, University Park, PA, 16802, United States, g5l@psu.edu

1 - Attribute Drivers: A Dynamic Factor Analytic SKU Choice Model

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To improve particular aspects of a product, product development decisions are often made at the attribute level. Thus, brand managers need to understand consumer choice behavior at the attribute level (rather than at a brand level). Academic approaches in this area have been highly stylized models applied to small datasets that have very few SKUs. Applying these highly stylized models is problematic in 'real world' settings, because often the number of SKUs and households even in smaller categories are many times larger than the problem on which these models have been developed and tested. This lack of scalability of models has largely forced applied researchers and consultants to estimate models at the brand-packsize level, thereby precluding any attribute level insights. In order to alleviate limitations of the models identified above, we develop a model using an internal market structure analysis approach that extends the SKU models of attribute-level by incorporating dynamics of consumer choice. The model assumes both common and idiosyncratic latent factors influence a consumer's SKU choice behavior, thereby providing a highly parsimonious solution to the scalability problem. This model has been applied to numerous practical settings to provide clients with attribute level market structure, behavioral measures of brand equity, assortment insights and a better understanding of the impact of SKU addition or deletion. It has been successfully applied to several product categories, including, salty snacks, shavers, salad dressing, laundry detergent, toothpaste and analgesics. IRI considers this product to be one of the most successful panel products in recent times.

2 - CHAN4CAST: A Multi-Channel Multi-Region Forecasting Model and Decision Support System for Consumer Package Goods

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We developed an aggregate forecasting econometric model by channel and region for a frequently purchased line of products. The model has several important and distinctive features: (1) It decomposes forecasts into several channels, including grocery, mass, drug, convenience and gas, fountain, and independent stores. (2) It accounts for the effects of temperature, significant holidays, trading day corrections, quality of day effects, and the occurrence of significant events such as new product introductions and new account acquisitions. (3) It allows for different functional forms and parameters for different channels and different regions. (4) It decomposes sales forecasts into retail and wholesale (shipment) levels by incorporating bottler and point of sale volume. (5) It includes aggregates forecasts for multiple pack-sizes for multiple stock keeping units (SKUs). We estimated the model based on 130 weeks of calibration data from a Fortune 50 CPG company and forecast sales in a holdout sample of the next 52 weeks. The model predicts sales very well and the forecast errors for 2003 were as low as less than 0.4%. We have also developed a web based decision support system (DSS) tool (CHAN4CAST) based on the forecasting model that enables top and mid level executives in sales and marketing to: (1) develop good forecasts of sales volume, (2) plan prices and promotional activities over a long time frame, (3) track sales response to marketing actions over time, and (4) simulate new forecast scenarios based on possible marketing decisions and other variables. The company is already implementing the new system to help and track forecasts for 2004 sales volume by channel using inputs from field sales personnel.

■ FA05

Santander

Retailing 01

Chair: K. Sudhir, James L. Frank '32 Associate Professor, School of Management, Yale University, 135 Prospect St PO Box 208200, New Haven, CT, 06525, United States, sk389@som.yale.edu

1 - The Choice and Consequences of Using a Category Captain

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The practice of using a category captain for category management involves an alliance between a retailer and a leading national-brand manufacturer, where the retailer delegates considerable decision-making authority over the product category to the manufacturer. This manufacturer is designated as the category captain by the retailer. Facing demanding challenges in the marketplace, retailers have recently adopted this practice for managing their product categories. Our research focuses on the following key questions. (1) Is it profitable for the retailer to delegate pricing authority to the category captain? (2) What categories are most suitable for using a category captain for category management? (3) Which manufacturer should the retailer partner with? The main results are as follows. Using a category captain for category management is profitable for the retailer and the manufacturer who serves as the captain. Furthermore, this practice has a potential for benefiting all channel members including manufacturers of competing non-captain brands, when the retailer partially delegates pricing authority. The profitability of using a category captain is higher in a product category with fewer national brands, higher price competition among national brands, lower price competition between national brands and a store brand, or lower marginal costs for national-brand manufacturers. It is optimal for the retailer to partner with the national-brand manufacturer who has a higher base level of demand, lower marginal cost, lower own-price sensitivity, or higher cross-price sensitivity. When demand is less sensitive to price changes, the advantage of demand side becomes more important than cost advantage.

2 - Are Slotting Allowances due to Manufacturer or Retailer Competition?

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Slotting allowances, i.e. fees manufacturers pay to retailers for the opportunity to sell their products, are observed increasingly often. In a full information game theoretic setup, we consider whether manufacturer competition, retail competition, and/or a particular cost structure lead to the optimality of a slotting allowance. Consistent with previous empirical results, but contrary to popular beliefs, we find that the retail competition, and not the manufacturer competition, is responsible for the optimality of slotting allowances. In particular, we show that the competition among manufacturers alone and/or high retailer bargaining power do not justify slotting allowances. This is because in the absence of retail competition, an appropriately lower wholesale price instead of a slotting allowance is a preferred alternative for all parties involved. However, retail competition with costly shelf space may result in the optimality of a slotting allowance even if the manufacturer is a monopolist. In the classic situation with a monopoly manufacturer and retailer, double marginalization results in the retailer price being too high relative to the industry optimum, and therefore, double marginalization is a problem for the channel. On the other hand, under retail competition, the retailer price, even after double marginalization, may be too low relative to the industry optimum. A slotting allowance enables the manufacturer to increase the wholesale price and, therefore, bring the retailer price up to the optimal level. This research complements existing literature that finds asymmetric information between a manufacturer and a retailer to be one of the causes of slotting allowances.

3 - An Experimental Analysis on Nonlinear Distribution Contracts

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Theoretical research in marketing has shown that a variety of distribution contracts can coordinate the channel. This paper investigates the efficacy of three theoretically equivalent nonlinear contracts: a) two-part tariffs, b) two-block tariffs, and c) all-units quantity discount using methods in experimental economics. We propose a behavioral model that accounts for the experimental results.

4 - Slotting Allowances: An Empirical Investigation

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Slotting allowances are lump-sum payments by manufacturers to retailers for stocking new products. The economic rationale for slotting allowances is controversial. Several theoretical arguments have been provided in the literature. We use a unique dataset of new products introduced by a diverse group of manufacturers in a wide range of categories at a representative retailer to empirically investigate the theoretical predictions. We find strong support for the predictions from the signaling theory. Consistent with the signaling theories, slotting allowances are offered most often by manufacturers when there is greatest uncertainty for the retailer about the success of the new product and therefore slotting allowances can be a credible signal about the likelihood of new product success. Slotting allowances are substituted by advertising, when advertising is effective in increasing the demand. Slotting allowances are used when retailers have greater opportunity costs for shelf space, so as to compensate them for the economic value of shelf space. Finally, we find that the use of slotting allowances are used more often when retail competition is greater, providing empirical support for a theory that suggests that retail competition can be reduced by slotting allowances.

FA06

Shangai

Special Session: Product Portfolios

Chair: Leo Paas, Assistant Professor, Tilburg University, P.O. Box 90153, Tilburg, 5000 LE, Netherlands, l.j.paas@uvt.nl

Co-Chair: Tammo Bijmolt, Professor of Marketing Research, Tilburg University, P.O. Box 90153, Tilburg, NB, 5000LE, Netherlands, bijmolt@uvt.nl

1 - Extending Dynamic Segmentation with Lead Generation: A Latent Class Markov Analysis of Financial Products

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A recent development in marketing research concerns the development of dynamic segmentation techniques. In this paper the authors extend the latent class Markov model, a suitable technique for conducting dynamic segmentation, to accommodate for predicting the next product acquisition consumers make. We show that this is relevant for the important marketing issue of lead generation. We illustrate the utilization of this extension of the latent class Markov model on empirical data. The analyzed database contains information that was collected by the international marketing research company, GfK, and is on the ownership of twelve financial products and contains demographic information (such as age of the household head and family income). The data were collected in four bi-yearly measurement waves, 1996, 1998, 2000 and 2002, in which a total of 7676 Dutch households participated. The proposed latent Markov model defines dynamic segments on the basis of consumer-product-portfolios and shows the relationship between the dynamic segments and demographics. Because we analyze panel data we can test the stability of the segmentation solution, changes in segment sizes and switching between segments by individuals. Also, a proposed extension of the latent Markov model supports predicting future household acquisitions of various financial products in the analyzed database. Using the longitudinal data we demonstrate in what manner such predictions are applicable for lead generation purposes.

2 - Cross-Selling Sequentially Ordered Products: An Application to Consumer Banking Services

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In service and consumer technology product industries, we often observe people sequentially purchasing multiple products and services from the same provider. These sequential purchases can take place over an extended period of time and can often be naturally ordered in terms of complexity and functionality, with the purchase of some products or services generally preceding others. This commonly observed situation offers significant opportunities for companies carrying multiple products and services to "cross-sell" other products and services to their existing customer base. In this paper, we adopt a multivariate probit model, implemented in a Hierarchical Bayes framework, to investigate how customer demands for multiple products evolve over time and its implications on sequential acquisition pattern for naturally ordered products. This paper is the first paper formally models customers' sequential

demands and investigates the behavioral reasons driving consumers' acquisition pattern for multiple products and services. It also studies how the sequential demands for naturally ordered products develop differently across customers. This model helps managers predict which product or service a consumer is likely to buy and in what sequence. We investigate the customer purchase patterns for products marketed by a large Midwestern bank. In this process we highlight interesting substantive findings and provide guidance to managers charged with allocating marketing dollars towards customers with the greatest incremental profit potential.

3 - A Hidden Markov Model of Family Lifecycle

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Family lifecycle has been widely used by marketers as a determinant of consumer behavior since the 1960's; virtually every Marketing textbook devotes some space to the family lifecycle and its impact on consumption and life styles. However, despite this prevalence of the concept in the literature, very limited empirical evidence has been presented on the existence and nature of this lifecycle. All published studies use arbitrary a priori definitions of the various stages in this lifecycle and are based on a cross-sectional survey of households collected at a single point in time, confounding generation effects with life stage effects, and cannot reveal the real dynamics of the family lifecycle. Consequently, there is considerable disagreement among authors about how life stages should be defined and how families progress through this lifecycle. Fortunately, the Panel Study of Income Dynamics provides longitudinal data on family composition in the U.S. for a period of 35 years, which can be used to identify the most typical stages and the most common paths followed by families since 1968. Taking advantage of this unique data set, we develop a Hidden Markov Model (HMM) where the stages of the family lifecycle are taken as latent, unobservable states, which are uncovered from the manifested demographic profiles of the households over the 35 years, while they evolve through these latent stages following a first-order Markov process. We apply the HMM results to classify members of another panel (Consumer Expenditure Survey) into life stages, which allows us to study the impact of the family lifecycle on the families' budgetary allocations, providing a comprehensive analysis of lifestyles (through consumption expenditures) over the family lifecycle.

4 - Introduction to the Special Session: Investigating Dynamics of Consumer Product-Portfolios in the Financial Services Market

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Consumer financial product-portfolios are an important issue for economic research and for contemporary financial services marketing. For economic research financial product-portfolios can give insight into a country's level of economic develop, the purposes to which consumer's allocate their assets, product innovation, internationalization, etc. For marketing insight into financial product portfolios can be relevant for recognizing cross-sell opportunities, assessing the value of customers, consumer segmentation and for various other issues.

5 - Database Marketing Research into Consumer Product Portfolios at Postbank

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Postbank is a leading retail bank at The Netherlands. It is part of the ING group, which offers financial services all over the world. Postbank has approximately 7.000.000 customers. All data about product possession and product usage of these customers is stored in a marketing database. Research of these data plays a major role in marketing practice of Postbank. Particularly important is research that can enhance the development of consumer's product portfolios at the Postbank. I will discuss two applications of such research. The first application deals with classification of customers. Postbank selects specific groups of customers for specific direct marketing campaigns. Statistical models are applied to the data Postbank has on consumers. The goal is ranking customers according to the probability of responding to the specific campaigns, for outbound campaigns as well as for inbound campaigns. The second application deals with market segmentation. The concept of market segmentation is rapidly developing at Postbank and is strongly based on the analysis of financial product portfolios that customers have. One interesting line of development is the business analysis. The business analysis is the search for interesting and actionable business facts. A business fact is a fact that is related to a specific group of customers and which is actionable for marketing. I will explain the search for business facts by means of an example of the analysis of the dynamics of consumer product portfolios. And I will show in what manner such information can be used to enhance the development of consumer product portfolios at the Postbank.

■ FA07

Hull

Promotion 02

Chair: Yoshinori Kawasaki, Assistant Professor, The Institute of Statistical Mathematics, 4-6-7 Minami-Azabu, Minato-ku, Tokyo, 106-8569, Japan, kawasaki@ism.ac.jp

1 - Statistical Inference of Stochastic Switching Model with Time-Varying Price Effects using MCMKF

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The execution of price and/or display promotion has a significant effect on the sales of a brand sold in a supermarket. Information on price and/or sales unit is available from POS data. On the other hand, unless an investigator collects information on the execution of display promotion from every retail store, such information is unavailable. However, it is important to get information on the execution/non-execution of display promotion for effective and efficient sales. A price effect is usually assumed to be constant throughout all time. However, it may be natural to suppose that a price effect varies smoothly in response to changes in a supplier's sales promotion strategies or competing environment. The purpose of our research is to solve these two problems simultaneously only from a POS data. We treat the execution / non-execution of a display promotion as a state variable, and introduce a smoothness prior to represent time-varying parameters in a proposed model. An unknown stationary probability matrix assumed to describe the probability of a transition between states. A different stationary time series model with unknown parameters characterizes each state. Unknown state and time-varying parameters can be estimated by employing the Monte Carlo Mixture Kalman Filter (MCMKF) method, which is based on the Rao-Blackwellisation and particle-Kalman filter techniques. Finally, we provide a high precision estimator of a past execution/non-execution of a display promotion and time-varying price effects based on the proposed model.

2 - Semiparametric Support Vector Machines to Analyze Temporary Price Deals

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The relationship between brand sales and temporary price cuts (deal effect curve) has been widely studied. The modeling of complex interactions between prices and discounts of several brands within the same category is a difficult problem, particularly when additional categorical variables are included. Aiming to overcome the curse of dimensionality, semiparametric regression modelling has been applied to estimate the deal effect curve in large data sets. However, the performance of this methodology can be limited when applied to moderate data sets, which is a common situation with supermarket scanner data. Recently, a methodology for classification and regression has been proposed, the Support Vector Machine (SVM), which is robust in problems with moderate sized data sets. We have developed a new Semiparametric SVM (S-SVM) which is adapted for the estimation of the deal effect curve. We use two kernels: a linear kernel accounts for the effect of dummy (discrete) variables, whereas a Gaussian kernel accounts for the interactions among metric (continuous) variables. The S-SVM solution only depends on a reduced set of the observations, whereas conventional semiparametric regression uses all of them. The S-SVM estimates simultaneously the parametric and the nonparametric parts of the model, and it does not require any heuristic rule for its tuning. The optimization process has a single minimum solution which is directly obtained. The S-SVM methodology has allowed us to simultaneously analyze cross-brand effects and temporal features of the temporary price discounts in ground coffee category using a scanner data set.

3 - Modeling Purchases as Repeated Events

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We put forward a statistical model for interpurchase times that takes into account all the current and past information available for all purchases as time continues to run along the calendar timescale. It delivers forecasts for the number of purchases in the next period and for the timing of the first and consecutive purchases. Purchase occasions are modeled in terms of a counting process, which counts the recurrent purchases for each household as they evolve over time. We show that formulating the problem as a counting process has many advantages, both theoretically and empirically. We illustrate our model for yogurt purchases and we highlight its useful managerial implications.

4 - Discrimination of Unobserved Display Promotion from POS Data using RBF Network

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The execution of price and/or display promotion has a significant effect on the sales of a brand sold in a supermarket. Information on price and/or sales is available from POS data. However, unless an investigator collects information on the execution of display promotions from every retail store, such information is unavailable. Usually, it costs a lot for a supplier to collect information on the execution of display promotion data by conducting field research. In this light, a supplier will want to minimize the cost for such a data collection. In this paper, we construct a nonlinear discrimination method using radial basis function (RBF) neural network that depends only on information available from POS data, and examine the effectiveness of the proposed method by out-of-sample forecasting of the execution/non-execution of display promotion. Essential difficulty with the estimation of discriminator lies in the choice of the magnitude of regularization parameter and the number of basis function. Exploiting the framework proposed by Ando, Konishi and Imoto (2002), we make use of generalized information criteria as a data-dependent, objective tool for model selection. Besides the forecasting accuracy, we are also interested in the response of sales to temporary price-cut. The response curve for the days having display promotion is quite different from the one estimated for non-promotion days. We estimate the curves by nonparametric regression not only on true data but on forecasting results, and examine the forecasting accuracy using ROC and AUC in terms of the difference of nonparametric regression curves.

■ FA08

Baltimore

Consumer Behavior 03

Chair: Bjorn Vroomen, Erasmus University Rotterdam, PO Box 1738, Rotterdam, 3000 DR, Netherlands, bvroomen@few.eur.nl

1 - On- and Off-line Cultural Contents Consumers Segmentation in Korea: Pop, Cartoon, Animation, and Game

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This research explores the actual condition of cultural contents such as Pop song, Animation, Cartoon, and Game. For this research, we use the survey data which were made by Korea Culture and Tourism Policy Institute. Applying a mixture model, we identify four significant customer segments, such as light users, medium users, heavy users, and mania. Each segments show different contents choice criteria, preferred cultural contents and genre, as well as demographical characteristics. Especially, heavy users on animation and cartoon are explicitly different with heavy users on music and game. Also we find that there is a significant consumption difference between on- and off-line cultural contents consumers.

2 - Dynamic Magazine Cover & Package Design & Optimization in the Internet Era

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Traditionally, package design research was usually done either at the end of the design process, usually to gather reactions to a completed package, or perhaps at the very beginning, in focus groups, to understand what consumers wants. In either case there is no way that ongoing package development could be benefit greatly from systematized consumer feedback of an actionable nature. The paper presents a systematic approach using conjoint analysis on the Internet to understanding how package design factors drive response. The approach differs from conventional methods because the user can create the study himself, import the necessary graphics to the computer program, and then run the program automatically. The experimental design, study execution in the field, data analysis and segmentation are then done automatically by the WEB server based computer program. Thus, the researcher can do studies of package design rapidly and inexpensively. The speed, simplicity and low cost of Internet-based research combined with the power of conjoint analysis open up the field of package design research to systematic investigation, leading to greater understanding of how consumers respond to the individual features of package designs. Whereas before package design was an art, now systematic, cost-effective research into packaging allows consumer research to make a major contribution to package design.

3 - Family Influences in the Young Adult Consumer Behaviour: An Integrative Perspective

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Family influences in consumer behaviour have been studied from three different perspectives: consumer socialization (Moschis, 1985; Roedder, 1999), family decision making (Davis and Rigaux, 1974; Palan and Wilkes, 1997) and intergenerational influences (Heckler, Childers and Arunachalam, 1989; Moore, Wilkie and Lutz, 2002). Important differences between these perspectives have justified isolated analysis of every line of research (Moschis, 1988). However, young adult consumer behaviour can be addressed integrating all of these lines. This paper supports an integrative perspective aimed at compiling main findings from these three respective views. Lack of integrative analysis in consumer behaviour literature has made difficult to compare measures of family influence, as much as the factors that determine this influence. In this paper we will analyse main measures of family influence (Keillor, Parker and Schaeffer, 1996; Viswanathan, Childers and Moore, 2000); and its key determinants: family type, product type and personal characteristics (Carlson and Grossbart, 1988; Shah and Mittal, 1997). A survey will be carried out over a random sample of young adults in the city of Zaragoza (Spain), and the questionnaire will be composed of measures of family influence and main scales of family type, product type and personal characteristics. This includes family communication patterns (McLeod and Chaffee, 1972; Moschis, Moore and Smith, 1984), locus of control scale (James, 1957; Srinivasan and Tikoo, 1992), sociodemographic variables, etc. Multivariate analysis will be conducted using multiple regression.

4 - Measuring Decision Strategies

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Decision strategy is an important concept in the field of consumer behavior. Especially, multi-attribute strategies have received much attention. Over the past decades several decision strategies have been identified, which consumers may use in order to make a decision. A current research topic in the field of marketing is the relation between decision strategies and decision aid tools. These tools include management support systems as well as recommendation agents on the Internet. The interaction between these two entities may have an effect on the design of these tools, on decision strategy selection and on decision quality. We focus on the effects on decision strategy selection and the consequences thereof. An important aspect of these studies is measuring the decision strategy used. Methods for identifying the strategy used include verbal protocols and self-stated use of strategies. These methods have a clear drawback that these are time-consuming, costly and difficult to incorporate into an experiment or survey. The objective of this study is therefore to develop a scale to determine the degree of usage of decision strategies. Requirements of this new method should be that it can be easily applied with a minimum level of effort and time required from both consumer and researcher. Using the newly developed scale we investigate the effect that a decision aid tool may have on consumer satisfaction levels. A distinction between the satisfaction with the decision aid tool, product and decision will be made.

FA09

Leuven

Choice 03

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1 - Product Design and Suitability to Intended Usages of the Product: Influences on Buyer Behaviour*

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This study analyses how product design influences the buyer's choice through the usage situation concept. This paper focuses on the effects of product attributes on perceptions of subjects, particularly with regard to the suitability of choice alternatives to the main contexts in which buyer anticipates using goods. We propose a methodology to measure these perceptions based on the substitution in use approach for market analysis. We construct an indicator of suitability. In order to build up this measure we perform a correspondence analysis on information about usage appropriateness, which proceeds from a survey. An application to home cleaners' category is presented (fourteen types of products and seven usage situations are identified). Subsequently, we study two issues. First we test whether perceptions influence on choice, through a multinomial logit formulation (using as explanatory factors, marketing

variables and perceptions of suitability to the seven usage situations of the category). We employ scanner panel data and a significant influence of perceptions is detected. The strength of this effect depends on the usage situation to which the suitability is referred. Second, we study which product attributes influence on the perceptions of suitability through a regression analysis; product features have been encoded as dummy variables. A regression is conducted for each one of the seven situations of the category. The results indicate that not all the attributes have a significant effect, oscillating between one and three the number of significant characteristics.

* Financed by Project BEC2003-07996

2 - On the Relationship Between First-order Cross Effects and Two-way Interactions

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The advent of choice-based conjoint enables estimation of two types of cross effects: 1) availability effects (the effect of the availability of an alternative in a choice set on preferences for other alternatives in the choice set); and 2) attribute cross effects (the effect of attribute levels of one alternative on the partworths associated with attribute levels of other alternatives in a choice set). Cross price effects are one example of attribute cross effects. This paper addresses the following questions. Are availability and attribute cross effects conceptually the same? If not, how do they differ? It is well known that cross effects are not the same as two-way interactions, but are they related? If so, in what way? The objective of the discussion is to clarify the nature of the respective effects.

3 - Modeling Consumption Patterns in the Attribute Space: Theory and Evidence of Hybrid Behavior

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This paper presents and estimates a dynamic choice model in the attribute space considering rational consumers that discount the future. In light of the evidence of several state-dependence patterns, the standard attribute-based model is extended by considering a non-linear utility function that allows for a hybrid behavioral pattern. Pure inertia and pure variety seeking behaviors can be explained in the model as particular cases of the general utility function. The dynamics of the model are fully characterized by standard dynamic programming techniques. The model presents a stationary consumption pattern that can be inertial, where the consumer only buys one product, or a variety-seeking one, where the consumer shifts among varied products. Under the inverted-U marginal utility assumption, the consumer behaves inertial among the existing brands for several periods, eventually switching to a variety-seeking behavior when the stationary levels are approached. An empirical analysis is run using a scanner database for fabric softener. Heterogeneity is introduced in the model estimation by allowing for multiple latent segments. The results confirm the statistical superiority of the non-linear structure. The estimated partial utility functions are strongly concave for all the attributes and market segments, revealing strong and robust evidence of hybrid behavior in the fabric softener category.

4 - Interpersonal Influences on Purchase Incidence

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In this paper, we examine purchase incidence in a social context where the customer is not alone but among others who are faced with similar current and past purchase opportunities. We investigate whether a customer's purchase likelihood after having missed a previous, superior purchase opportunity depends on whether referent others had taken advantage of the previous opportunity. Using a series of studies, we show that the past purchase decisions of others and the nature of their relationship with the focal customer influences purchase incidence. We also show that the relationship between past purchase decisions of others and the focal customer's current purchase decision is mediated by the level of regret arising from having missed a superior purchase opportunity. We draw implications for the design of promotions and the interplay between pricing and product features.

■ FA10

Bergen

CRM 03: Datamining

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1 - Implementation of "Instant CRM": Building One-to-One Relationship with Loyal Customers

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For the purpose of improving the quality of face-to-face customer service at the point of sale, we developed some prototype systems based on our "Instant CRM" method, which is a simple method for instantly identifying loyal customers. The method only requires a very small amount of data and can be implemented in devices with limited hardware performance, such as smart cards or mobile phones. It calculates values that can represent the degree of customer loyalty according to a combination of frequency and amount spent with the factor of time. The results obtained are similar to those from RFM analysis. In one example, the Instant CRM function is implemented on a database server for customer management. Since the clerk instantly knows the degree of customer loyalty by reading the online real-time calculations, he/she is able to do a one-to-one promotion suitable for each customer's loyalty. The function can also be combined with a more detailed analysis on the server. Another example is a loyalty point system using the customer's mobile phone, provided it is capable of running an Instant CRM program and storing log data. The program will automatically generate and present appropriate promotional data for the customer, according to his/her degree of loyalty. Loyal customers can enjoy preferential service at the point of sale, and can access to up-to-date promotional information at any time without receiving unsolicited promotional mail. With this system, it will be possible to achieve a one-to-one customer relationship, while protecting customer's anonymity and privacy.

2 - CRM and Database Marketing: An Integrated Approach

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This paper introduces an Integrated approach in the process of CRM and Database Marketing. Making effective decisions in competitive marketing environments is a complex process requiring expertise in various areas such as marketing, statistics, finance, and operations research. This paper provides decision-makers with integrated expertise in these areas, thus facilitating the analysis of problems and optimizing feasible solutions. A conceptual model of the architecture is presented, together with diagrams of the different modules applied. This architecture is then suggested as the basis of a decision support system, which can accurately integrate and apply the knowledge of various experts in order to communicate intelligent suggestions to the user for solving complex competitive marketing problems. A decision support system application is described through the analysis of a problem concerning the viability index of a presidential candidate. Given the data concerning the particular problem, the decision-maker is provided with two models, one statistical and the other financial. The models from this paper and the decision-maker's expertise derive a final model, which can be used to arrive at an optimal solution.

3 - Cost-Benefit Analysis of Several Hard-Segmentation Methods for Identifying Target Customers

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In direct marketing or CRM practices, certain segmentation methods such as Decision Trees, Neural Networks and Logistic Regression are widely accepted as a tool for identifying target customers based on the past purchase data. Performance of such methods, however, tends to be evaluated by overall error rates for the identification, often ignoring the distinction between two types of errors. This distinction is important in managerial decision making because the two types of errors have different financial implications. More specifically, if target customers are incorrectly identified as non-target customers (Type I error), the opportunity loss will occur while the marketing cost may be saved. In case that non-target customers are identified as target customers (Type II error), the resulting revenue will be lower than expected. In this presentation, we propose a comprehensive scheme to assess various segmentation methods for identifying target customers. The two types of errors are explicitly incorporated in an evaluation function, which reflects the associated cost-benefit structure discussed above. Using the customer purchase data obtained from several retailers in Japan, three

segmentation methods: Decision Trees, Logistic Regression and Support Vector Machines (SVM) are tested and compared. It should be worth mentioning that SVM has been recognized as an excellent classification tool in image cognition or machine learning but is really brand-new in marketing area.

4 - Direct Data Applied: A Behavioural Segmentation for Marketing Purposes

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In customer segmentation tasks a common strategy is to use individual differences as a predictor of future behaviour. Customer segmentation is a widely used tool for marketing purposes where different predictive characteristics like 'psychographics' or 'purchasing involvement' have been regarded (i.e. Wells, 1974; Slama & Tashdrian, 1985; Lesser & Hughes, 1986; Lockshin, Spawton & Macintosh, 1997; Gould, 1997). Here an elaborated version is presented which takes differences in purchasing behaviour into account. Based on a rich data set from a financial service institution, a psychologically oriented approach is used. It is a method of differentiating between customers using directly observed behaviour. The advantages of a directly behaviourally based segmentation are that it is independent of additionally gathered data and that it adds valuable information besides attitude, interests or demographical data. The prerecorded information is aggregated according to individual differences. The records of manifested behaviour are analyzed systematically to extract the underlying personal characteristics. These characteristics directly represent the individual differences. They are based on actual everyday behaviour and are highly ecological valid. The differentiation on personal behavioural characteristics is used for a segmentation of the customer base. This psychometrically-based separation enables focused marketing strategies and tailored customer services. The behavioural dimension adds new independent evidence. We show that behaviour-based segmentation does not simply align with classic demographic information. In particular a systematic combination of this independent source and more traditional measures can enhance the predictive power of marketing research.

■ FA11

Heidelberg

Competition & Game Theory 02

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1 - Impact of Intra-format Competition on Retail Formats

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Heterogeneous consumer base is an important factor driving the coexistence and success of different innovative retail formats in many markets. In most retail markets that are served by different retail formats, within each format however exist multiple retailers who compete with one another. Thus, while format differentiation serves to reduce retail competition in general, it does not preclude intra-format competition. We analyze how retail format differentiation will evolve when both intra- and inter-format retail competition are considered. We model a market in which multiple retailers coexist under two specific types of retail formats. One format strategically positions itself as carrying a consistent assortment, and the other does not. Both retailer formats make additional decisions on other attributes, such as price and service provision. We develop a multi-level game theoretic model that includes both intra- and inter-format retail competition in a heterogeneous consumer market. We derive the conditions when both intra-type and inter-type retail competition support one and the same type of retail structure and the conditions when they don't. We demonstrate our findings using empirical data.

2 - Market Structure Analysis and Cross Category Choice - A Network Analysis

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Market structure analysis (MSA) is at the core of the marketing process and has resulted in continuous improvements and refinements, in the theory as well as in the methodologies and techniques (Shocker 2002; Desarbo, Kim, and Choi 2002). So far, analysts have usually focused on competitive relations within the boundaries of a unique product category, but the need to consider relationships across product categories and to explain (rather than just describe) them has been advocated (Elrod et al. 2002). It is suggested that social network analysis (SNA) can prove valuable also to such an undertaking (Iacobucci et al. 1996). We provide

an application to the print media industry, by focusing on duplication of readership between media. Some representative findings follow:

- Extensive cross-category buying is present, but relationships are weaker between rather than within categories; variability in the intensity of relationships is larger within rather than between categories.
- Media belonging to different categories show very different relationship patterns
- The overall system may be partitioned into subsystems (blocks), where similar positions are grouped together, that cut across category lines. Again, categories show very different patterns.
- Cross-category buying, and the overall system of relations, is significantly related to similarity in readers' profile, built upon a few socio-demographic and psycho-graphic variables; but categories differ widely as to the relevant variables.
- No variable is strongly associated with block membership, if it isn't lifestyle, age and sex

3 - When Does Product Information Reduce Market Competition?

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Consumers nowadays have access to increasingly large volume of product information. Understanding how such product information affects market competition has significant implications for firms' marketing and pricing strategies. Prior academic research, however, has proposed two conflicting arguments in this regard. On the one hand, it is widely believed that product information increases product differentiation perceived by consumers, therefore reducing market competition. On the other hand, it is well established that uncertainty about product features softens market competition among close substitutes; product information reduces such uncertainty, therefore increasing market competition. This paper reconciles the two arguments. We show a simple condition under which products are differentiated enough so that product information always reduces market competition. When the condition is violated, products are too substitutable to each other so that product information always reduces product differentiation perceived by consumers, which may lead to higher market competition. Besides reconciling the two conflicting arguments, this paper provides an alternative explanation on how product information reduces market competition. We show that product information can reduce market competition without increasing product differentiation. Instead, it reduces market competition by reducing uncertainty of product differentiation perceived by consumers. This is because market competition is disproportionately influenced by consumers who perceive competing products too close to each other. Product information simultaneously reduces the likelihoods that competing products being perceived too close to or too far away from each other, resulting in net reduced market competition.

4 - Computing the Levels of the Impulse Response Functions of a Log-Transformed VAR System

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IRFs are often used to analyze the dynamic behavior of a VAR system. In many applications of VAR modeling the variables are log-transformed before the model is estimated. This is particularly useful in situations where the relationships between the variables are assumed to be of a multiplicative nature. Applying the log-transformation linearizes a multiplicative model, so that estimation is greatly simplified. Other reasons for applying the log-transformation include reducing the impact of outliers and reducing the increasing variance of trending time series. If this is the case, although the IRFs can be interpreted as elasticities, their sum does not have a direct interpretation, since they are also log-transformed. However, the net effects of marketing actions are essential to properly evaluate the consequences of own and competitors' marketing moves. In this paper we present explicit expressions for computing impulse response functions that are expressed in the levels of the variables. We illustrate the methodology by an application in marketing in which a log-transformed VAR model is used to capture the competitive behavior of multiple brands to price promotions. We employ IRFs to track the effects of 'price shocks' over time. In order to evaluate the profitability of a price promotion, a marketing manager will be interested in a forecast of the net revenues of the discount. Cumulating over time the IRF that tracks the effects of a price-shock in a log-log specified VAR model does not provide her with this information, since it represents the net effect of a price discount the logarithm of the sales. Instead, she would be interested in a forecast of the cumulative additional unit sales, after accommodating for important dynamic competitive effects.

■ FA12

Lund

Internet 02

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1 - Suboptimal Utilization of the Internet's Distributive Power: A Case of Optimizing P-P Networks

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This paper argues that giving up the Peer-to-Peer model for distributing music may not be the right strategy after all. It is our contention that the P2P model reflects the best of the net's distributive power and therefore we suggest ways of capitalizing on this distribution system. While the world is enamored by the i-tunes model, the real facts are that the amount of volume transacted (30 million at last count) is negligible compare to the potential. We present possible means of bringing out a viable commercial model rather than condemning and giving up the P-P model altogether. In this paper we propose a subscription model which could explore the potential of Internet's distributive power. In our model, monetizing the P-P model involves all the participants in the process as partners and everybody getting their share of pie—paying copyright owners, up-loaders and online service providers (50:30:20). This model also takes in to account, the free rider problem that plagues all P-P networks along with other transactional difficulties that 'per song' service providers face. The benefits of this model are many, primary among them being that this model creates a perpetual revenue streams for the copyright holders as well as for the people who downloaded the songs. So over a period of time the cost of ownership for the music lover goes down & the revenue per song increases exponentially. In this model, we found that even five million users joining such a system leads to gross revenue of \$450 million at fifty cents per download, a much higher figure than the \$30 million generated by i-tunes. The beauty of the p-p network is its exponential nature & the revenue streams really explode at higher levels of participation.

2 - A Dynamic Model to Assess E-mailing Impacts on Web Visit and Purchase by Using Petri Nets

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In this paper we introduce Petri Nets to model dynamics of Web site visit and purchase behavior. Our main focus is to assess the impact of e-mailing on visit frequency and purchase timing in a commercial Web site. Compared to previous research on the Web focusing on content customization (Ansari and Mela 2003) or on purchase conversion (Moe and Fader 2004), we develop a model based on Petri Nets in which key Web visitor activities such as visit frequency and purchase are integrated with dynamic links. We first select a distribution, Weibull, that captures inter-visit time variations. Hazard models are applied to explain e-mail opening rate with covariates: average visit frequency, elapsed time since the last e-mail, opening and clicking of the last e-mail. These different models are then programmed in Petri Nets in order to explain the overall functioning of Web visit and purchase behavior. Petri Nets were created in 1962 by Carl Adam Petri to study complex dynamic systems and then applied to numerous domains such as operational research, computer science, biology (Jensen (1992, 1994, 1997), Diaz (2001), Weitz (1998) modeling E-commerce flow). Petri Nets model dynamic systems evolving from one state to another, from visits to purchase in our case, when an external or internal event occurs, e-mailing in our case. A comprehensive data set of a French Web site specialized in consumer referral system is applied for our model development. The authors finally describe Petri Nets advantages and future researches opened by applying Petri Nets to Marketing area.

3 - Internet Usage and Online Shopping Experience as Predictors of Consumers' Preferences to Shop Online

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The product that a consumer intends to buy influences his/her preference for a shopping channel. Using sample survey data, we analyse the impact of (1) the consumer's satisfaction derived from using the Internet and (2) the consumer's previous experience of buying products on the Internet on the preference to shop either online or off-line across five product categories. Each of these five product categories has a different level of product specific risk which influences the consumer's preference to shop on the Internet rather than "going to the shops". This research demonstrates that consumers who have previously shopped online display stronger preferences to buy products on the Internet irrespective of

the product specific risk of online shopping. This strong preference for online shopping across product categories is explained by the consumer's positive perception of the Internet as a shopping channel. The results would also suggest that, for those consumers who accept the Internet as a shopping channel, the difference between "search" and "experience" goods is smaller than it is for other consumers when they decide whether to use the Internet for shopping.

4 - E-Tail Brand Equity: The Role of Brand Name on Consumer Choice

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Empirical evidence suggests that e-tailers with more recognized brand names do not necessarily provide superior services, although they charge a higher price premium for homogeneous products such as books and CDs. Meanwhile, it is found that even for price sensitive shopbot users, e-tailer brand name is influential on their choice decisions. As an online shopping environment allows price and service quality comparisons to be assessed directly, it is important to understand how consumer choice decisions are affected by e-tailer prices, service quality information, and e-tailer brand name. The answer to this question provides an assessment of e-tailer brand equity and this is the main objective of this study. Using a framework based on information integration theory, we apply a multinomial logit model (MNL) to examine consumer choices, with experimental data from a simulated online shopping environment. In particular, we focus on how consumer sensitivities to e-tailer brand name and price are influenced, with and without the information on e-tailer service quality. We analyze the asymmetric effects between strong and weak e-tailer brand names. In addition, we examine the roles of consumer online shopping experience and product category risk that affect the buyer's sensitivity to service quality information. We also investigate the reference price effect in online shopbots. Our study analyzes actual purchase behavior in an experimental setting, so it provides improved internal and predictive validity compared to existing studies that focus on web traffic. This study is expected to offer new insight into consumer online shopping behavior.

Friday, 10:30am - 12:00pm

■ FB01

Forum

Special Session: Social Networks and Social Contagion

Chair: Christophe Van den Bulte, Assistant Professor of Marketing, The Wharton School, University of Pennsylvania, 3730 Walnut Street, Philadelphia, PA, 19104-6340, United States, vdbulte@wharton.upenn.edu

1 - Exploring Connectivity among Marketing Researchers: The 'Kevin Bacon' of Marketing

Eitan Muller, Professor, Tel-Aviv University, Faculty of Management, Tel Aviv University, Tel-Aviv, 69978, Israel, muller@post.tau.ac.il, Barak Libai, Jacob Goldenberg

As marketers are increasingly aware of the need to understand and influence information spread among their customers, more advanced methods to analyze the effects of social networks on information diffusion become essential. An important research issue is the level of connectivity among members of the social group. Popularized by Milgram's experiments of "six degrees of separation" and later by Watts on the "Small World" phenomenon, the distance among members of a social system is of high interest for students of social systems. Six degrees of separation is intriguing because it suggests that, despite our society's enormous size, it can easily be navigated by following social links from one person to another: A network of six billion nodes in which any pair of nodes are on average six links from each other. An efficient way to study connectivity is to understand structure of scientific collaborations. Collaborations among colleagues have been already used to study social networks in disciplines such as Mathematics (the Erdős Project), and even movie actors networks (Kevin Bacon Project). Here we propose a marketing connectivity framework, where we analyze co-authorship among academic marketing researchers. Details and an explanation of what marketing connectivity entails, and who is the Kevin Bacon of marketing is found at: www.mconnectivity.com. By collecting and analyzing the Proquest database during the past three decades, we built a social map of collaborations among academic marketing researchers. We report initial findings aiming at better understanding both our scientific social structure, and what can we learn from this case about information dissemination.

2 - Firm Created Word of Mouth Communication: A Natural Experiment

David Godes, Assistant Professor, Harvard University, Morgan 165, Soldiers Field, Boston, MA, 02163, United States, dgodes@hbs.edu, Dina Mayzlin

In this paper, we investigate whether, and how, a firm can exogenously create word of mouth (WOM) communication among its customers in order to drive sales. While previous research has identified WOM as an important driver of consumer behavior, these studies have all been based on the impact of endogenous WOM by actual customers. Here, we design, implement and analyze a natural experiment in which we created WOM through two different populations: the firm's loyal customers and non-customers of the firm. Our analysis is split into two stages. First, we investigate what kind of WOM (defined according to sender-receiver characteristics) has the biggest impact on sales. Then, we investigate the profile of the creator of the most impactful WOM. Based on previous research on the importance of dispersion in WOM, we hypothesize that non-customers will create more impactful WOM since the loyal customers are likely to have already dispersed the information to their social network. For similar reasons, we hypothesize that WOM to acquaintances will be more impactful than WOM to either friends or relatives. Consistent with these hypotheses, we find that WOM created by non-customers to acquaintances is the most powerful. Finally, we compare two alternative hypotheses regarding the optimal profile of the communicator: (a) those with many social linkages vs. those one might describe as "opinion leaders."

3 - Discriminating Between the Word-of-Mouth Hypothesis Versus the Consumer Heterogeneity-in-Propensity-to-Adopt Hypothesis as Drivers of Diffusion in a New Product Growth Model for Consumer Durables

Albert Bemmaor, Professor, ESSEC, BP 105, Cergy-Pontoise, 95021, France, bemmaor@essec.fr

In 1994, Bemmaor showed that one can obtain the Bass model as a mixture of a shifted Gompertz distribution with an exponential distribution. It follows that the Bass model can be considered as a reduced form of two alternative structural models: one that is based on the assumption of deterministic adoption times as a function of word of mouth (Bass's premise or hypothesis) versus a competing formulation that is

based upon the assumption of random adoption times as a function of the (unobserved) individual level propensities to adopt (Bemmar's hypothesis). The second formulation does not negate the potential influence of word of mouth at the individual level but it treats it as a random element in the adoption process, whether it be positive or negative. This paper develops a testing procedure that permits to discriminate between both formulations when the Bass model is the "true" model. Typically, in applied studies in marketing, most authors consider the Bass model only as a model of diffusion for consumer durables, and consequently, they assume it is the "true" model. Bass himself in 1995 stated that the Bass model was an "empirical generalization". Based on a sample of 420 pairs of estimates (either published or unpublished) of the parameter p (coefficient of innovation) and q (coefficient of imitation) for a set of household durables, the study supports the heterogeneity-in-propensity-to-adopt hypothesis strongly. We discuss the implications of this result.

4 - Social Contagion and Income Heterogeneity in New Product Diffusion: A Meta-Analytic Test

Christophe Van den Bulte, Assistant professor of marketing, The Wharton School, University of Pennsylvania, 3730 Walnut Street, Philadelphia, PA, 19104-6340, United States, vdbulte@wharton.upenn.edu, Stefan Stremers

Standard diffusion models capture social contagion only coarsely and do not allow one to operationalize different contagion mechanisms. Moreover, there is increasing skepticism about the importance of contagion and, as has long been known, S-shaped diffusion curves can also result from heterogeneity in the propensity to adopt. We present hypotheses about conditions under which specific contagion mechanisms and income heterogeneity are more pronounced, and test these hypotheses using a meta-analysis of the q/p ratio in applications of the Bass diffusion model. The ratio is positively associated with the Gini index of income inequality in a country, supporting the heterogeneity-in-thresholds interpretation. The ratio also varies as predicted by the Gamma/shifted Gompertz diffusion model, but the evidence vanishes after controlling for national culture. As to contagion, the q/p ratio varies with the four Hofstede dimensions of national culture, and for three of them in a direction consistent with the social contagion interpretation. Furthermore, products with competing standards have a higher q/p ratio, which is again consistent with the social contagion interpretation. Finally, we find effects of national culture only for products without competing standards, suggesting that technological effects and culturally moderated social contagion effects may not operate independently from each other.

■ FB02

Tokyo

Innovation 01

Chair: Sonja Radas, Research Fellow, Institute of Economics Zagreb, Trg J.F. Kennedyja 7, Zagreb, 7, 10000, Croatia, sradas@eizg.hr

1 - Strategy of Introducing Next Generation New Product

Ben Shaw-Ching Liu, Associate Professor of Marketing, Butler University, College of Business Administration, 4600 Sunset Ave., Indianapolis, IN, 46208, United States, bliu@butler.edu, D. Sudharshan, Brian Ratchford

In the economics literature, either imitations or leapfrogging can be optimal, depending on whether the outcome of R&D investment decisions is deterministic or stochastic. We contend that changing demand for existing vs. new technologies is a key consideration because as shown by Norton and Bass (1987), there is strong empirical evidence that consumer preferences for new technologies diffuse gradually, with substantial overlap in preference between generations. However, to our knowledge, the decision to imitate or leapfrog in the face of changing consumer demand has not been addressed elsewhere in the literature. Therefore, in this paper, we develop a decision rule for choosing the optimal response strategy to a new generation or technologically advanced new product in a market in which customer sophistication increases over time. Faced with the introduction of a new generation product, a firm can either imitate or leapfrog it. If the new product is introduced optimally, we show that the optimal response is to imitate it. If the new product is not introduced at its optimal technology level, then the optimal response depends on market characteristics. We provide a decision rule for making response decisions in such situations. We also derive the optimal advancement strategy for a technology leader.

2 - Agent-based Approach to Target Marketing

Geonha Kim, Waseda University, 3-4-1 Okubo, Shinjuku, Tokyo, Japan, ghkim@aoni.waseda.jp, Daisuke Takashima, Takahiro Ohno, Shingo Takahashi

Generally speaking, we aim at a target market when we launch a new product into a certain market. The target market is usually defined by demographic variables. We focus on the situation of product category market is not fixed but changing, and the preference structure of consumer is changing as well. What about the target market that a company set in the early stage of a new brand? We design a virtual system that is composed of product space, and consumer market. A consumer as an agent evaluates the brands in the product space, learns from other consumers' choices, influences each other, and adapts to circumstances. These processes of consumer behavior are described by genetic algorithm. As the evolution progresses, what are the characteristics of target market consumers like? We suppose that we are able to analyze the attributes of target market by reverse simulation. We concluded that the proposed approach is useful for a priori analysis for target marketing in the early stage of new product development.

3 - Inference on Information

Joseph Retzer, Director, Marketing Sciences, Maritz Research, 2019 E. River Rd., Grafton, WI, 53024, United States, jjr@wi.rr.com, Ehsan Soofi

The problem of assigning relative importance weights to attributes in marketing research is well known (see Soofi & Retzer (1992) and references therein). General agreement exists in that:—Significance tests, t -ratios and standardized coefficients are inappropriate.—Relative Importance refers to quantities that compare the contributions of individual explanatory variables. Soofi, Retzer and Yasai (2000) outline an Analysis of Importance (ANIMP) framework which satisfies, among other things, two desirable properties of an importance measure. Specifically:—Additive Separability and—Order Independence. ANIMP is based on a decomposition of the mutual information associated with independent attributes in reference to some dependent measure. It yields importance estimates that are both intuitively meaningful and more robust to complications arising from ill-conditioned data (Retzer & Chrzan 2003). Questions pertaining to inference involving ANIMP measures include,—Can we identify attribute information content 'significantly' greater than 0?—Can we identify 'significant' differences between various attributes in terms of information content? We begin by describing the information theoretic approach to attribute importance assignment as illustrated by the ANIMP framework. Next, we address questions of inference on the subsequent importance measures employing a Bayesian approach. The inference will utilize work done by Press & Zellner (1978) involving inference on the coefficient of multiple correlation. The analysis will be applied in the modeling of behavioral loyalty (tenure) data in the telecom industry.

4 - An Exploration of the NPD Process in a Transition Country

Sonja Radas, Research Fellow, Institute of Economics Zagreb, Trg J.F. Kennedyja 7, Zagreb, 7, 10000, Croatia, sradas@eizg.hr

This paper reports on a study that was performed on one hundred leading companies in Croatia. This study examines the degree of formalization of the NPD process in a transition country. It also examines the impact of antecedents such as firm size and ownership structure on NPD process. To gain deeper understanding on this process, this paper explores what differentiates adopting firms from other firms. To assess how beneficial the NPD processes have been in practice, the paper explores linkages between sophistication of the NPD process and innovation output, including new product commercial performance. The study indicates that in the short run implementation of new sophisticated business practices such as the NPD process might not yield significant improvements by itself. Some issues concerning functioning of NPD process are explored.

■ **FB03**

Athene

Marketing Research 04

Chair: Barbara Deleersnyder, Erasmus University Rotterdam, Burgemeester Oudlaan 50, Rotterdam, 3000 DR, Netherlands, BDeleersnyder@fbk.eur.nl

1 - Multiple Store Patterns in Grocery Shopping: Antecedents and Consequences

Els Gijsbrechts, Full Professor, Tilburg University, Warandelaan 2, Tilburg, 5000 LE, Netherlands, e.gijsbrechts@uvt.nl, Patricia Nisol, Katia Campo

Consumers increasingly engage in 'multiple store shopping', strictly store loyal consumers having become the exception rather than the rule. Marketing papers have typically viewed multiple store shopping as opportunistic behavior, consumers switching between stores to benefit from temporary promotional offers. Yet, recent findings suggest that consumers also allocate grocery purchases to different stores on a systematic basis, driven by stable (as opposed to time-varying) store characteristics. This research aims to contribute to a better understanding of systematic multiple store (SMS) shopping and its implications. We develop a formal model of consumer shopping behavior, that (i) spells out the antecedents of SMS for groceries, (ii) sheds more light on the nature/characteristics of the ensuing shopping patterns, and (iii) indicates the strategic retailer implications. The model integrates insights from geographical and marketing shopping behavior research to provide a more comprehensive representation of the benefits and costs that drive multiple store shopping behavior, and of the shopping decisions it entails (store choice, shopping frequency, category allocation, and trip organization). Trip organization not only includes the decision to visit one versus multiple stores, but also when several stores are visited: on separate versus combined (multiple stop) trips. We present analytical results on consumers' optimal (single and multiple store) shopping patterns, as well as model based simulation results, and empirical support for the model assumptions and outcomes. The insights from the model shed new light on the interrelationships and nature of competition between prevailing grocery store formats, and the role of product categories therein.

2 - What Can Store Loyalty Cards Data Tell Us About What the Consumers Buy From the Competition?

Marc Vanhuele, HEC School of Management, Marketing Department, Jouy-en-Josas, 78351, France, vanhuele@hec.fr, Xavier Dreze

Many stores have introduced loyalty cards. Their purpose is both the increase customer loyalty and gather data about customer behavior. The direct effect on consumer loyalty has been put into question; the usefulness of the data collected is still unproven. We investigate whether store loyalty card data can be used to infer the extent to which a store's customer base also patronizes other retailers. To what extent do a customer's purchases at one store predict purchases at competing stores? To what extent are classifications of customers based on sales of one store representative of the shopping behavior across all stores? We seek to answer these questions by combining the grocery purchases of the members of a home-scanning panel with the store loyalty records of the same consumers at a leading grocery retailer.

3 - Designing Sales Promotion Campaigns with Case-Based Reasoning: Do Case-Base Size and Content Matter?

Niek Althuizen, PhD Candidate, Erasmus University Rotterdam, Burg. Oudlaan 50, Rotterdam, ZH, 3000 DR, Netherlands, nalthuizen@fbk.eur.nl, Berend Wierenga

Traditionally, marketing science has focused on the development and use of data-driven marketing management support systems, like marketing models and marketing information systems. Developments in the field of artificial intelligence, such as expert- and case-based reasoning systems, have made it possible to capture also soft, qualitative knowledge and put it into action for decision-making. In a series of studies, we test the effectiveness of case-based reasoning (CBR) for supporting the design of Sales Promotion (SP) campaigns. CBR-systems try to mimic analogical reasoning; a form of human reasoning that is likely to occur in weakly-structured problem solving, like the design of SP-campaigns. The CBR-system contains a "case-base" in which previous SP-cases are stored. Based on input about the current case, the system retrieves the most similar previous cases. Knowledge from these cases can be reused or revised in order to solve the current case. We will investigate the conditions under which CBR-system usage is most effective. In the first study (n=34), the focus was on CBR-system effectiveness, in interaction with the thinking style of the decision-maker. In subsequent studies (n=25), we manipulated two CBR-system characteristics, namely case-base size and case-base content. With respect to con-

tent, we consider near analogies (i.e., from the same problem domain) and far analogies (i.e., from more distant domains). In this presentation, we will discuss the results of study 4 in which we try to corroborate the earlier findings in a large-scale study (n=120). In a next study, we will look at the role of expertise.

4 - Weathering Tight Economic Times: The Sales Evolution of Consumer Durables Over the Business Cycle

Barbara Deleersnyder, Erasmus University Rotterdam, Burgemeester Oudlaan 50, Rotterdam, 3000 DR, Netherlands, BDeleersnyder@fbk.eur.nl, Marnik Dekimpe, Miklos Sarvary, Phil Parker

Despite its obvious importance, not much marketing research focuses on how business-cycle fluctuations affect individual companies and/or industries. Often, one only has aggregate information on the state of the national economy, even though cyclical contractions and expansions need not have an equal impact on every industry, nor on all firms in that industry. Using recent time-series developments, we introduce various measures to quantify the extent and nature of business-cycle fluctuations in sales. Specifically, we discuss the notions of cyclical volatility and cyclical comovement, and consider two types of cyclical asymmetry related, respectively, to the relative size of the peaks and troughs and the rate of change in upward versus downward parts of the cycle. In so doing, we examine how consumers adjust their purchasing behavior across different phases of the business cycle. Consumer durables are found to be more sensitive to business-cycle fluctuations than the general economic activity, as expressed in an average cyclical volatility of more than four times the one in GNP, and an average comovement elasticity in excess of 2. This observation calls for an explicit consideration of cyclical variation in durable sales. Moreover, the combined evidence across all durables suggests that asymmetry is present in the speed of up- and downward movements, as durable sales fall much quicker during contractions than they recover during economic expansions. Finally, key variables related to the industry's pricing activities, the nature of the durable (convenience vs. leisure), and the stage in a product's life cycle tend to moderate the extent of cyclical sensitivity in durable sales patterns.

■ **FB04**

Rochester

Practice Prize 02

Chair: Gary Lilien, Penn State University, BAB 402, University Park, PA, 16802, United States, g5l@psu.edu

1 - Modeling the Effects of Direct Television Advertising

Rajesh Chandy, University of Minnesota, 3-150 Carlson School, 321 19th Ave S, Minneapolis, MN, 55455, United States, rchandy@csom.umn.edu, Pattana Thavanich, Deborah MacInnis, Gerard J. Tellis

Firms spend billions of dollars each year on media advertising. Yet much of this expenditure is made without adequate testing. Published tests on advertising's effectiveness have generally studied the aggregate effects of advertising on sales or market share. However, managers today need to know which particular creative works, why, in which medium or vehicle, at what time of the day for broadcast media, and for how long. These questions are important because that is the way managers schedule advertisements. The need is all the more acute given the increasing pressure on managers to show tangible outcomes for ad expenditures. We developed a model to address these issues for FutureDontics, a leading provider of toll-free medical referral services. FutureDontics advertises its service in over 60 major markets in the U.S., with a multi-million dollar advertising budget that includes over 3500 TV ad exposures per month. We describe two research studies, conducted over a five-year period. The first study seeks to determine which ads are effective, when (at what times), where (in which medium) and for how long. The second study addresses which execution cues (emotion, argument, etc.) are more effective, how their effectiveness varies by the age of the market.

2 - Sales Territory Design: 30 Years of Modeling and Implementation

Andris Zoltners, Professor of Marketing, Kellogg School of Management at Northwestern University, 2001 Sheridan Road, Evanston, IL, 60208-2001, United States, andy.zoltners@zsassociates.com

Sales territory alignment is the assignment of accounts and their associated selling activities to salespeople and teams. This paper traces the evolution of models and processes over a 30-year period during which we have implemented these alignment approaches in over 1500 projects for over 500 companies in 39 countries and designed an estimated 500,000 sales territories. We trace the evolution along four dimensions—models, technology, process, and wisdom. Technology has enabled the models to get closer to sales managers, and we have used

an effective implementation processes that enhances the model-based answer and generates sales manager buy-in at the same time. The sales territory alignment decision touches everyone in the sales force and any model only captures some of the information that impacts the decision. Incorporating local knowledge into the alignment answer is a key to its success. We have developed and used a process that first creates a model-based answer, and then integrates field manager input in a structured way by having the manager work one-on-one with an alignment expert and the model. It is this process that has led to a 100% implementation rate for the models. This process creates alignments that are simultaneously good for the business and good for the salespeople. The repeated implementations have helped us enhance the model to solve previously addressed issues better and they have also helped us uncover and solve new issues.

■ FB05

Santander

Branding 01

Chair: Guido Berens, Erasmus Universiteit, Woudestein F4-76, PO Box 1738, Rotterdam, 3000 DR, Netherlands, gberens@fbk.eur.nl

1 - Positioning Store Brands against National Brands: Get Close or Keep a Distance?

Raj Sethuraman, Southern Methodist University, 6212 Bishop Boulevard, Dallas, TX, 75275, United States, rsethura@mail.cox.smu.edu

A stream of academic research has suggested that retailers may be better off positioning their store brands close to the national brands by promoting their store brands as being similar to the national brands. Retailers also appear to have embraced this notion. In this manuscript, we investigate this strongly held belief and ask the question—should store brands always strive to be “like national brands?” Analysis of a game theoretic model identifies eight market conditions when positioning a store brand close to a national brand may be less profitable or unprofitable. In particular, we find that close store brand positioning may not be profitable in categories where the manufacturer can expand category demand through non-price marketing investments such as advertising, or when there is a significant “unserved” (by national brand) market that can be served by the store brand. A follow-up empirical analysis, using data on 109 grocery products from two retail chains, reveals that positioning a store brand close to the national brand is less likely in categories whose sales are expandable and in highly advertised categories, but more likely in high-margin categories and where the national brand has a large market share. Together, the analytical model and the empirical findings enhance our understanding of a retailer's store brand positioning strategy. Future research can investigate the effect of store competition, price promotions, and other factors on store brand positioning.

2 - Analysis of Price Competition Using Measures of Brand Similarity

Gary Russell, Professor of Marketing, Tippie College of Business, University of Iowa, 108 Pappajohn Business Bldg, Iowa City, IA, 52242, United States, gary-j-russell@uiowa.edu, Ann Petersen, Suresh Divakar

Brand price competition is a well-researched area of marketing science. Significant progress in elasticity estimation has been made by constraining the pattern of cross-price elasticities using theories from consumer behavior and economics. Recently, concepts from the classical literature on market structure have been employed to reduce the number of coefficients necessary to represent brand competition. Bucklin, Russell and Srinivasan (1998) [BRS] developed a theoretical relationship between brand switching patterns and cross-price elasticities. They showed that a matrix of cross-price elasticities is proportional to a simple transformation of a row conditional brand-switching matrix when the underlying consumer population makes purchases following a logit choice model. In this research, we build upon the BRS model by developing a theoretical framework for the specification of sales response models. We construct a corner solution choice model that allows for time variation in purchase quantity. By analytically aggregating this choice model over consumers, we are able to derive a sales model specification in which the brand-switching matrix again plays a key role. We apply the BRS theory to the analysis of brand price competition in the soft drink category. Using store-level data, we develop a random coefficients sales response model that constrains the matrix of cross-price elasticities using brand-switching information. We demonstrate that the new methodology yields high quality estimates of cross-price effects (consistent with a priori notions of category market structure) without sacrificing the level of model fit.

3 - The Dynamics of Brand Growth at Customer Level

Cullen Habel, Lecturer, University of South Australia, 29 North Terrace, Adelaide, SA, 5000, Australia, cullen.habel@unisa.edu.au, Cam Rungie

When a brand grows, the process will display heterogeneity at the customer level. Customers increase their preference for the brand by a variable amount. This presentation aims to further an understanding of the drivers of growth in terms of the “Latent Selection Rate” of the population of customers (LSR). This latent selection rate is conceived to apply to both category and brands independently as a gamma distributed random variable across a population of consumers. This saw an early application within the NBD model (Ehrenberg 1959), (Morrison and Schmittlein 1988). The combination of NBD at category level and Dirichlet Multinomial Distribution at brand choice level (The Dirichlet, (Goodhardt, Ehrenberg and Chatfield 1984)) is considered an “advanced case” empirical generalisation (Uncles, Ehrenberg and Hammond 1995), which we use as our framework for investigation. We propose that the latent selection rate for a growing brand increases by variable amount that, itself, is gamma distributed. The addition of two gamma distributed variables gives itself a gamma distributed variable with shape parameter equal to the sum of the previous two shape parameters (Johnson, Kotz and Balakrishnan 1994). The grown brand, with its gamma distribution of LSR's remains consistent with the principles of the model and represents a new ‘steady state’. Furthermore the brand now appears as a ‘stronger’ version of that original; the increase in its shape parameter means that there are proportionally less consumers with negligibly low LSR's for that particular brand. A developed simulation is demonstrated with favourable comparisons to a real life example of a growing brand.

4 - The Compensatory and Non-Compensatory Effects of Corporate Brand Associations

Guido Berens, Erasmus Universiteit, Woudestein F4-76, PO Box 1738, Rotterdam, 3000 DR, Netherlands, gberens@fbk.eur.nl, Cees B. M. van Riel

Corporate brand associations, more frequently termed corporate image or corporate reputation, have attracted increasing attention over the past decade. A number of previous studies have addressed the influence of these associations on consumers' product preferences. Roughly, they have focused on two types of associations: associations related to corporate abilities (CA), and associations related to corporate social responsibilities (CSR). They have generally found that both CA and CSR associations can influence preferences, but that the effect of CA is stronger than the effect of CSR (e.g., Brown and Dacin 1997; Sen and Bhattacharya 2001). However, few studies have investigated when CA and CSR associations are most likely to influence preferences. Particularly, it is not clear whether consumers want companies to have both a good CA and a good CSR, or whether a good CSR can compensate to some degree for a poor CA, and vice versa. This paper addresses this issue by looking at the combined effects of CA and CSR on people's product preferences. The results of this study show that favorable CA associations served as a necessary condition in the eyes of consumers, in that a poor CA could not be compensated by a good CSR. However, this was only the case when people thought that doing business with a company with a poor CA record could endanger the fulfillment of their important life goals. When CA was not perceived as relevant to goal fulfillment, a good CSR was able to compensate for a poor CA.

■ FB06

Shangai

CRM 04

Chair: Florian Wangenheim, Assistant Professor of Service Management, Universität Dortmund, Otto-Hahn-Str. 6, Dortmund, 44221, Germany, Florian.Wangenheim@uni-dortmund.de

1 - Optimal Prices and Rewards when Customers Generate Autonomous Referrals and When Free Riding Occurs

Helge Löbner, Professor, University of Leipzig, Marschnerstrasse 31, Faculty of Business Administration, Leipzig, 04109, Germany, loebner@wifa.uni-leipzig.de, Martin Welk

Sellers who plan to capitalize the sales potential from customers' positive word of mouth need to know how to manage customer referrals. To encourage existing customers to generate referrals, a seller can offer exceptional value through attractive prices or through rewards to customers for referring other customers. We investigate the impact of autonomous referrals as well as the impact of free-riding on the optimal price and reward. We define autonomous referrals as referrals without any reward. Free-riders are customers who generate autonomous referrals if there is no reward but take the reward for their referral if it exists.

In the case of no free-riding, we show that optimal prizes decline (rise) with an increasing (decreasing) number of autonomous referrals and that optimal rewards rise (decline) with an increasing (decreasing) number of autonomous referrals. In the case with free-riding, we show that optimal prizes rise (decline) with an increasing (decreasing) number of free-riders and the optimal reward declines (rises) with an increasing (decreasing) number of free-riders. Using this results, we develop price- and reward-rules for practitioners.

2 - Managing Flexibility in Buyer-Seller Relationships by Real Options

Ellen Roemer, Lecturer in Marketing, University of Bradford, Emm Lane, Bradford, BD9 4JL, United Kingdom, eroemer@notes.upb.de

The management of industrial buyer-seller relationships is one of the most important areas of research in marketing science. The main focus of relationship research is usually on topics such as customer retention, on continuity and stability. This perspective highlights the value of reduced flexibility since relationship instruments are applied to make partners stay in relationships. However, there is a value of greater flexibility in buyer-seller relationships when the partners act in uncertain environments where they have to adapt to new environmental circumstances. When partners are flexible, they can act to benefit from positive developments or they can mitigate loss in negative situations. The value of flexibility in buyer-seller relationship can be assessed by using real options analysis. By viewing the partner as a real option, models from financial theory can be applied to measure the value of greater or lesser flexibility in buyer-seller relationships. It can be shown that reduced flexibility in buyer-seller relationships has a value in stable environments where new outside options are unlikely to appear. In contrast, flexibility becomes valuable in buyer-seller relationships when the relationship environment is uncertain. The paper is organized into five sections. Section I develops the research question. In Section II, we analyze the value of reduced flexibility in buyer-seller relationships from a TCE. The value of greater flexibility in buyer-seller relationships is explored in Section III by a real options approach. A numerical example demonstrates the value of flexibility in buyer-seller relationships (Section IV). The paper closes with management implications, a summary of the main results and ideas for future research.

3 - RFM Analysis Based on a Consumer Behavior Model: A Hierarchical Bayes Approach

Makoto Abe, Associate Professor, University of Tokyo, Graduate School of Economics, 7-3-1 Hongo, Bunkyo-ku, Tokyo, 113-0033, Japan, abe@e.u-tokyo.ac.jp

While RFM analysis is popular among practitioners, ad-hoc rules are often employed to judge whether customers are alive or not. For example, a customer is considered to be dead if she did not make any purchase for over three months. Even with the same period of nonpurchase, however, customers with a long interpurchase time need not be worried for death whereas those with a short interpurchase time could be dead. Hence, it is very important to account for customer heterogeneity when assessing the survival of customers. In this research, using standard RF data I will derive the survival probability of an individual customer based on the common hypotheses on consumer behavior. This customer measure, which combines RECENCY and FREQUENCY in a theoretical manner, have the following marketing implications. (1) Assessing the customer equity of a firm: calculation of customer base and diagnosing and forecasting firm's health with its trend analysis. (2) One-to-one marketing to existing customers: customized direct marketing tactics differentiated by the survival probability. (3) Acquisition of prospect customers: Planning of an effective marketing strategy for customer acquisition by relating customer profiles to the survival probability.

4 - Customer Asset Segmentation

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Although customer asset management and the marketing-finance interface are "hot topics" in the marketing literature, little if any research has attempted to segment or evaluate customer assets according to metrics and criteria used in the financial literature. The present research represents a first step into this area. Customer relationships are described in analogy to the financial literature, and the terms average transactions, transaction volatility and trend are introduced, defined and conceptualized as central descriptors of the customer lifecycle. Average transactions is the arithmetic mean of the number of transactions a customer makes over the course of the relationship. Transaction volatility refers to the variation of transaction frequency over time. Lastly, trend refers to the long term development of customer transactions over time. Longitudinal data from the airline industry is used to derive a lifecycle segmentation scheme based on the three conceptualized parameters. Different clustering techniques are applied to identify the most appropriate technique

for segmenting customers into homogenous lifecycle segments according to those three criteria, and both hold-out and out-of-time samples are used for validating the stability and robustness of segmentation. Results should be of interest to managers and researchers: First, the variables used for describing the customer asset are closely linked to measures used in the finance literature to evaluate assets. Second, strategies for managing the customer portfolio can be directly derived from the finance literature on asset valuation and portfolio management. Third, the drivers of the introduced variables, i.e., customer asset volatility and trend, can be determined.

■ FB07

Hull

Pricing 03

Chair: Jonathan Bohlmann, Asst. Prof., Michigan State University, N370 NBC, Dept. of Marketing & Supply Chain Mgmt., East Lansing, MI, 48824, United States, bohlmann@msu.edu

1 - Fair Target

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In this paper, we investigate the strategic implications of fairness in the context of competitive targeted pricing. In our model, consumers care not only about the size of their economic surplus, but also about fairness. If a consumer perceives that a price offer is unfair, he or she is willing to sacrifice its economic surplus to get even with the firm that makes the offer. However, if the offer is perceived to be fair, the consumer may sacrifice its surplus to show his or her will toward the firm. We show that the existence of fair-minded consumers can be a blessing to all competing firms that implement targeted pricing, even when firms are symmetric. This result is quite robust to different specifications of fairness. Our analysis also sheds some new light on the Standard Hotelling model.

2 - Why Do Manufacturers Subsidize Leases?:

A Price Discrimination Model of Firm Leasing Behavior

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The literature on durable goods recognizes leasing as a means of solving the time consistency problem. The implicit assumption made in this stream of research is that firms set the residual value of their products equal to the market value. In many markets however, especially the automobile market, manufacturers use the residual value as an instrument to promote leases: inflating it reduces the financial cost of a vehicle, thereby making it more attractive to consumers. A direct consequence of this strategy is that the price of a leased car is lower relative to one that is purchased. This implies that another rationale for leasing is that firms' can use it to price discriminate between people with different driving patterns. More specifically, the penalty imposed on the miles driven on a leased car creates differences in operating costs between the leased and purchased variants, allowing firms to charge a price premium on the car with lower costs of operation, namely the purchased vehicle. This strategy permits a firm to earn higher profits by effectively segmenting the market between high and low mileage individuals. To test this hypothesis, we develop and estimate an econometric model of demand and pricing for leased and purchased vehicles using transaction data. From the profit maximizing conditions, the price differential between the two types of cars is expressed as a function of the distribution of driving distances in the population, which allows us to test whether firms exploit the preference heterogeneity for the number of miles driven.

3 - Determinants of Short-run and Long-run Promotion Elasticities

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Although several articles address the determinants of (immediate) store-level price elasticity, there is little known about the factors that influence the dynamic effects of promotions. This is surprising as a wide range of literature shows existence of dynamic effects of promotions, which implies that the (overall) effects of promotions cannot be captured only by immediate promotional elasticities but is the sum of immediate and dynamic effects. Therefore, it is important, for brand managers and for retailers, to know the main factors that influence the dynamic effect and the overall effects of promotions. In addition, there may be common determinants across stores and brands for the immediate price elasticity and for the dynamic effects of price promotions. In this paper we address these issues empirically. We put forward a representation of the sales model, which is useful for explicitly disentangling

long-run from short-run effects. The model we develop allows these effects to differ across markets, categories and across brands within categories. We relate the short-run and long-run elasticities to market- and item-specific variables. Such a specification allows us to make generalizing statements concerning the short-run and long-run effects of the marketing mix on sales. Based on the findings in the literature, we postulate a few hypotheses. To check these hypotheses we fit the resultant hierarchical Bayes vector auto regression sales model to several product categories. Our main finding is that long-run price elasticity is usually smaller in absolute size than the immediate short-run effect. Furthermore, we find that the effect of higher promotion intensity on the price elasticity is larger in the short-run than in the long-run.

4 - Asymmetric Retailers and Price Promotion Strategies under Segmented Switchers

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The price promotion strategies of asymmetric retailers have received considerable theoretical and empirical study. The theoretical findings, usually based on asymmetric loyalty between two firms that compete for informed switchers, sometimes differ in terms of optimal frequency and depth of discounts. Some empirical findings remain unexplained as well, particularly that small firms with few loyal customers may nonetheless price relatively high, apparently forgoing the lucrative switcher market contrary to most theoretical predictions. We present theoretical and empirical analyses that address many of these issues in the context of more than two firms. Our model of three asymmetric firms offers a richer competitive context than typical duopoly models. Our results show that under multiple switcher segments, where different switchers compare prices at different retailers, firm-specific loyalty is not sufficient to explain the variety of retailer pricing strategies. Instead, we theoretically and empirically demonstrate that pricing is driven by the relative 'discount motivation index' of the retailers. The discount motivation captures the ratio of switcher segments for which the retailer competes to its loyal segment size. The relative discount motivations explain when a firm is more or less inclined to discount deeply or frequently, and when a small firm is better off pricing high with little discounting, despite having few loyalists. The empirical results confirm that discount motivation can significantly explain varied retailer pricing strategies in a rich set of Internet bookseller price data.

■ FB08

Baltimore

Consumer Behavior 04

Chair: Erica van Herpen, Dr., Wageningen University, Hollandseweg 1, Wageningen, 6706 KN, Netherlands, erica.vanherpen@wur.nl

1 - How Customer Attributions Influence the Effectiveness of Compensation as a Service Recovery Strategy

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This research investigates post-service-recovery loyalty assessments taking into account attribution theory (Folkes 1984). Specifically, we investigate how compensating customers after a service failure affects their loyalty evaluations as a function of the failure's stability and locus of responsibility. The research uses a scenario-based experimental approach. In studies 1-3 the scenario involves a flight cancellation. The cause of the cancellation and compensation amount varies between conditions. Findings demonstrate that compensation only enhances evaluations when the company is responsible for the failure and the failure occurs frequently. Interestingly, the amount of compensation is not important—small amounts enhance loyalty to the same extent as large amounts. In contrast, when the failure occurs infrequently or the company is not responsible for the failure, compensation does not enhance evaluations unless the compensation is extremely generous. Studies 4-5 investigate how the severity of the failure situation impacts the effectiveness of compensation. Both studies involve a scenario where a hotel room is not available. The results show that when a failure is severe, consistent with Studies 1-3, compensation only enhances loyalty when the failure is due to something internal to the company and occurs frequently. In contrast, when a failure is not severe, compensation enhances loyalty in all conditions except when the company is responsible for the failure and the failure occurs frequently. This research enhances our understanding of how attributions influence the effectiveness of service recovery strategies, as well as provides guidelines for how to address service failures in a cost-effective manner.

2 - Impact of Peripheral Information on Beliefs

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It is well understood that the decision context affects decisions and judgments, and is the basic premise of product positioning. Prospect Theory (Kahneman & Tversky) and Mental Accounting (Thaler) also suggest that appropriate 'framing' of the issue can influence judgments. Empirical pricing studies, likewise, confirm that variables like past prices, competitive prices, brand name or store name may influence reference prices and price judgments. Perhaps, this is true of attitudes as well. Attitudes are considered to be early precursors of behavior, and are, therefore, of interest to marketers. Beliefs are an integral part of attitudes, and are often used in models of attitude formation (e.g., Fishbein). Indeed, modifying beliefs is considered an important means of changing attitudes. The major issue being examined is whether there is a relationship between the nature of peripheral information provided and the beliefs formed. Information that is directly related to the task is being labeled focal information, and additional, non-essential information is being labeled peripheral information. In this exploratory study, I attempt to examine if the beliefs evoked about a politician's likely action, given the actual voting record of the person (focal information), are affected by peripheral information about party affiliation and gender. The data comes from a 2x2 factorial experiment, in which the type of peripheral information (consistent/discordant) is manipulated for an explicit (party affiliation) and an implicit (gender) variable, and resulting beliefs and confidence measures are obtained for two political issues.

3 - Psychological Factors Underlying the Gambler's Ruin

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Suppose a person has \$50 to gamble and is offered two types of gambling games, Game A and Game B. Game A has a 48 percent chance of winning, but one can only quit after one has reached a pre-specified Target amount of \$100 (or has lost the \$50). Game B has a 49 percent chance of winning and a pre-specified target amount of \$500. Which game should one choose? A risk-neutral decision-maker should choose Game A over Game B, as the former has higher expected value (-19.2 and -45.15, respectively). However, results from a survey and an experiment conducted thus far, however, suggest that people generally tend to prefer Game B. This preference appears to be driven not by risk-seeking tendencies, but rather, by a bias generated by a disproportionately heavy focus on the probabilities associated with winning vs. losing (which favors Game B). While it is true that probabilities of winning vs. losing can significantly affect the overall outcome of gambles (and should hence be considered in evaluating gambles), a more subtle factor, viz., the number of plays required to reach the Target can also play an important role. The harmful impact of an unreasonably high target on the overall outcome of gambles was revealed in a survey conducted in a Las Vegas casino. On average, respondents indicated that they would quit playing if they reached a target amount equal to sixteen times their initial outlay. An experiment demonstrated that subjects' preferences display a disproportionately heavy weighting of the probabilities, compared to the number of plays required to reach the target, which is consistent with our predictions. A second experiment is currently under development, which will allow estimating the effects overstating the likelihood of reaching the target.

4 - The Influence of Product Scarcity on Choice: Snobs and Bandwagons

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Scarcity plays a central role in economic theory, and affects the product evaluations of consumers. Two main drivers of scarcity are insufficient supply and excess demand. Interestingly, this distinction between supply and demand reasons for scarcity has not been elaborated upon in consumer research. We propose a scarcity theory, which distinguishes these two scarcity reasons, and identifies resulting consumer inferences. Our theory suggests that scarcity due to excess demand leads to inferences of product popularity (the bandwagon effect). Conversely, scarcity due to insufficient supply leads to inferences of product exclusiveness (the snob effect). Both increase product quality perceptions and choice. The relative strength of the effects depends on consumption goals. For instance, a desire for uniqueness can diminish the effects of demand-caused scarcity but enhance the effects of supply-caused scarcity. Our scarcity theory can thereby lead to a better understanding of inconsistent results reported in earlier studies. Two experiments with empty shelf space manipulations test our theory. Experiment 1 shows that scarcity due to excess demand enhances quality inferences and choice. Experiment 2 uses a virtual-reality environment in which respondents are led through

a virtual supermarket. The results support the two proposed scarcity routes. Our findings have implications for sales forecasting, inventory management and the influencing of product preference, as well as for theories about the effects of scarcity.

■ FB09

Leuven

Choice 04

Chair: Ashesh Mukherjee, Assistant Professor, McGill University, 1001 Sherbrooke St. West, Faculty of Management, Montreal, QC, H3A1G5, Canada, ashesh.mukherjee@mcgill.ca

1 - Two-Stage Choice Process of Foreign Market Entry

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The aim of this paper is to analyze the entry mode decision in a foreign country through direct investment, which constitutes a fundamental aspect of international marketing. We model the entry strategies by using a two-stage choice process: diversification mode (acquisition versus greenfield) and ownership structure (full control versus partial control). We consider literature on mergers and acquisitions, transaction cost, learning organisation, the institutional context of a company, and the cultural context of the target countries, to formulate hypotheses on the entry mode determinants. The methodology used estimates various Multinomial Logit Models with Random Coefficients estimated by Bayesian Procedures, which take the unobserved heterogeneity of companies into account and, in turn, is able to represent any correlation structure among different alternatives. It is applied on a sample of 141 Spanish manufacturing companies over the period 1998-2000. The empirical findings support the relevance of related diversification, international and local experience, advertising intensity, cultural distance, company size, and ownership structure on entry mode decisions, and that diversification mode and ownership structure are nested and non-independent decisions.

2 - Segmentation and Targeting for New Product Development in China: Mixture Regression Model

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A Multinational company planned to launch new type of drum washer (Slim Drum Washing Machine for Built-in Concept) in China Market. This case shows that mixture regression model is useful and accurate tool in segmenting consumers especially in identifying hidden segments, when the product in new category is customized locally and launched. Also an analytical tool applied allowed us to find out its unmet needs and to set an optimal price based on the segments' price acceptance zone. In order to segment consumers in China Washing Machine Market, we used the Hybrid Conjoint analysis—choice-based conjoint analysis (CBC) and mixture regression modeling. The preference data from conjoint questionnaire are analyzed by the mixture regression model. The BIC (Bayesian Information Criteria) shows the best explanatory index at the five segments. Among five segments, two segments show its most loyalty to its corporate brand and its new function (Slim type and Dry function). One segment is characterized as price-sensitive group with slim type preferred. The other is positioned as price-non-sensitive group with both slim type and dry function preferred. With this result on hands, this multinational company finally launched two products for different segment reflecting its different consumer needs. Furthermore, this analytical procedure is starting to be applied to other new product—localization process.

3 - The Effect of Brand Similarity and Typicality on Preference

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The effect of attribute-based similarity among brands in a choice set on preference has been studied in both consumer behavior and choice modeling. However, these two streams of research emphasize different aspects of the effect. Consumer behavior theories (e.g., the typicality advantage in preference and the compromise effect) suggest that a brand will be preferred when it shares more attributes with other brands. However, empirical consumer choice models (e.g., logit models allowing for brand similarity and nested logit models) suggest that choice probability will become lower for a brand that shares more attributes with others in the choice set. This study proposes that the effect of attribute-based similarity on preference is moderated by the consumer

knowledge. When consumers are less knowledgeable about a product category, they tend to prefer a brand that is more similar to other brands whereas when consumers are more knowledgeable, similarity will have a negative effect on preference. These predictions are tested in two laboratory experimental studies and a multinomial logit analysis of discrete conjoint choice data. The results of the three studies support the predictions indicating that the effect of attribute-based similarity on brand preference is moderated by the consumer knowledge.

4 - The Positivity Effect in Agent Evaluation: Role of Attribute-Level Variance

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Individuals often seek out the opinion of agents (e.g., movie critics, food critics, interior decorators), when making decisions about products and services. Recent research has reported a positivity effect in agent evaluation, whereby individuals consider positive stated preferences (i.e., loves) of the agent to be more reflective of an agent's tastes, than negative stated preferences (i.e., hates). In the present research, we show that the positivity effect in agent evaluation arises from differences in attribute-level variance of loves versus hates. Specifically, in study 1, we show that loves are associated with lower attribute-level variance than hates, and are hence objectively more informative than hates. In study 2 (currently in progress), we seek to show that loves are considered subjectively more informative than hates. In addition, we test the mediating role of attribute-level variance in the positivity effect, and assess whether attribute-level variance is a stronger driver of the positivity effect than the attribute base rate in the population as a whole. Finally, we investigate the extent to which individuals are aware of the role of attribute-level variance in the positivity effect. We conclude by discussing the theoretical implications of these results for judgment biases in interpersonal evaluation, as well as practical implications for influencing agent choices in the real world.

■ FB10

Bergen

Marketing Strategy 01

Chair: Rui Yamaguchi, Faculty of Mathematics, Kyushu University, 6-10-1 Hakozaki, Higashi-ku, Fukuoka, 812-8581, Japan, ruiy@math.kyushu-u.ac.jp

1 - Outsourcing as a Model of Fast-Growth Entrepreneurial Companies

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Outsourcing allows firms to focus on their core competency while allowing others that are specialized in particular functional areas to provide services in needed areas that are not its core competency. Fast-growth entrepreneurial companies need every resource to accelerate their growth. By examining a sample of fast growth entrepreneurial companies, it is possible to determine the different stages of development that they are currently undergoing. These stages of development are different from the normal stages of development of companies, which is one reason the firms have been classified as fast-growth. Determining these differences in the cycle of development is an important first step in understanding the evolution of fast-growth entrepreneurial firms and the areas of their focus at each stage. Persistent fast-growth rates are a function of certain factors such as belief in the management team, incentive wages and options, growth orientation, and intensity of sales and marketing efforts. Outsourcing is influenced by these factors, as it is a natural strategy for entrepreneurial firms with high levels of these factors if fast growth is desired. A survey of over 700 firms is used to estimate the models.

2 - A Study on the Region of - And Country of Origin Effect Among Chinese Consumers

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On behalf of Korean companies' marketing strategy which is developed in China, this study aims at examine the region of origin effect which occurs when Chinese consumer evaluate foreign products using country of origin effect which was treated many times in sphere of international marketing as a background. Region of origin effect is distinguished notion from country of origin effect, and means that Chinese consumers value products differently one region to another. Therefore, this study

would widen the understanding of consumer behavior by providing practical suggestion point in order to understand activities of Chinese consumers more deeply, and theoretically making an attempt to examine the region of origin effect that have not been treated in the sphere of international marketing heavily. According to those results of the study, we could find that in case of computer and cassette tape, as valuation products, country of origin effect was invalid. In this study, country of origin effect was invalid; this is much different from existing results of the studies. On the other hand, the result that estimate valuation products in different localities demonstrates very valid consequences. We can see that the respondents do feel differently in different localities and till now, this has not been treated in the world of international marketing heavily. If Chinese consumers also evaluate products differently in the different localities in China like the conclusion of this research, this shows us a big practical point of current event.

3 - Vertical Transmission of Innovative Brands - An Empirical Multilevel Analysis

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Due to market saturation and competitive pressure innovative products often fail in the market. The Marketing discipline offers brand extension and brand management concepts that aim to raise the chances of success. In addition to the usually focussed manipulation of brand features (e.g. price and image) and external communication through advertising, concepts focussing on internal brand identity have been discussed more recently. The internal brand identity is especially important in service industries as employees are directly interacting with customers and therefore become brand representatives. Thus (1) the brand adoption of customer-contact personnel is influential for the brand adoption of potential customers. Following this rationale it therefore (2) becomes important for the management to govern the brand adoption of the salespeople. Both aspects have not been addressed in empirical studies so far. Authors conducted a multi-level-study to gain insights into the brand-adoption transmission through the sales manager—salesperson—customer—chain. Data of 156 sales managers, 391 salespersons and 193 customers were evaluated. In order to minimize the inherent risk of misinterpretations in multilevel datasets, hierarchical linear modelling was used as the analytical tool. Results indicate that the brand adoption of salespersons strongly influences the buying intention of potential customers. The salesperson adoption is in turn triggered by the brand attitude of the sales management, whereas the overt behavior has no effect. Overall results underline the notion that brand success in service industries is not only driven by brand features and direct communication but also mediated by vertical transmission processes.

4 - State Space Modeling Approach for Decomposition of Daily Sales of a Restaurant into Multi Factors

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Daily sales of catering establishments are affected by various factors: The day of the week, national holidays, weather, events taking place near the site, etc. Therefore, it is beneficial to construct a model decomposing a time series of the sales into such factors. Such a model will allow us to predict future sales with good accuracy and extract useful knowledge in order to plan various management strategies such as purchasing, staff assignments, new store openings, etc. In this study, we propose a prediction method for the daily sales of a catering establishment based on a state space model framework in which an optimal model is selected by an information criterion; we then apply it to 2-year daily sales data of a restaurant that is adjacent to a large-scale convention center and office buildings.

■ FB11

Heidelberg

Competition & Game Theory 03

Chair: Yu Wang, PhD Student, University of Michigan, Business School, Doctoral Studies Program, 701 Tappan St., Ann Arbor, MI, 48109, United States, yuwz@bus.umich.edu

1 - Dynamics of an Auction Marketplace with Forward-Looking Bidders

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Auctions are often conducted in the context of other auctions for similar goods. On eBay, for example, similar goods are often sold in a sequence, one after the other. In such an auction-driven marketplace, both buyers and sellers can benefit from strategies that take the existence of other relevant auctions into account. Forward-looking buyers can 'underbid', i.e. bid less when they anticipate a future option to buy a substitute good. The sellers, on the other hand, can interpret the information contained in past prices, and strategically withhold their goods when they expect relatively lower profits. Therefore, the buyers are engaged in a game not only with each other as in standard auction theories, but also with the sellers. This paper considers the case of a single seller facing overlapping generations of short-lived buyers, and characterizes the equilibrium that emerges as both sides of the marketplace attempt to secure surpluses from the transactions. Bidders' bargain-hunting not only decreases current revenue of the sellers, it also makes the prices more interpretable as signals of the future revenues. Therefore, the seller does not always want to discourage bargain-hunting by threatening to withhold future supply. In particular, bargain-hunting can co-exist with non-trivial strategic selling. On the other hand, the bargain-hunting phenomenon does not limit the size of the auction market in the presence of a competing marketplace, because in equilibrium, buyers stop bargain-hunting just when the existence of the auction market is threatened.

2 - Double Uncertainty and Signaling in Internet Auctions

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Internet auction grows rapidly since early 1990s. However, because of the separation of payment and transaction, bidders have double uncertainty about seller's credibility and the quality of the products they are bidding for. The asymmetric information about product quality and seller's credibility could eventually drive credible sellers selling high quality items out of auction market. In this paper, we try to answer the following research questions: How can a credible seller with high quality items sufficiently differentiate herself from other incredible sellers in the presence of these two different types of uncertainty? What signal instrument(s) should be used? How are the signal instrument(s) going to impact bidders' bidding strategy, final winning price, their surpluses, and hence seller's profits in equilibrium? We develop a signaling model under double uncertainty and show that a credible seller with high quality items can set high minimum starting bid to signal her product quality and choose third-party payment option such as through Paypal to signal her credibility at the same time. Simply using either minimum starting bid or third-party payment option is not sufficient for separation due to the different nature of the two uncertainties. Seller's high ratings from previous buyers could mitigate the information asymmetry and hence reduce the need for signaling. But it will not eliminate the information asymmetry because of its noisy nature. Our research has important managerial implications that may benefit Internet auction firms, online sellers, bidders as well as the academia who are interested in Internet auctions.

3 - Pricing of Information: The Interaction of Competitive Externality and Information Quality

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Information plays an increasingly important role in firms' decision making processes. Recent studies in this area have indicated the special characteristics of information products. In particular, two types of externalities have been explored. On one hand, information product may be combined, thus affecting each other's value (Sarvary and Parker 1997, Sarvary 2002). On the other hand, the value of information may also be influenced by the level of competition between buyers (Iyer and Soberman 2001). In this paper we develop a model that combines these effects and explore their interactions. Our game-theoretic model consists of two competing information sellers selling imperfect information to

two competing information buyers. The model analyzes how information pricing is affected by the interaction of 1) seller competition, 2) downstream buyer competition, and 3) information quality. On the buyer side, the analysis indicates that, when there is information asymmetry between buyers, the single buyer's competitive advantage and the non-buyer's competitive disadvantage, which differ in magnitude, drive seller's pricing strategy. We also find that under certain conditions, an information buyer may distrust high quality information in order to mitigate the effect of competition. On the seller side, the results indicate that, sellers choose exclusive selling contract (sell to one buyer only) when competition is moderate, but sell to multiple buyers when competition is either strong or weak. If buyer competition is really high, the seller may even drive one buyer out of the market through exclusive contracts.

4 - Timeshare Exchange Mechanisms

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This paper focuses on a class of one-sided matching problems—the assignment of indivisible items to agents where 1) each agent has prior claim to one of the items, 2) some of the items have no prior owners, and 3) not all agents get their final assignments simultaneously. As a running example, we will investigate in a real-life scenario the resort allocation mechanisms used by the timeshare industry. The goal of our research is to understand and improve the existing timeshare exchange mechanisms. As such, the research question we are interested in is two-fold: 1). Given the resources and agents in a system, can the current exchange mechanisms realize the best allocation outcomes? 2). If the answer to the first question is negative, then is there a better way to allocate the resources to the agents? We address these questions from both theoretical and empirical perspectives. We investigate two major mechanisms that are being used by timeshare exchange companies: the Deposit First (DF) mechanism and the Request First (RF) mechanism. We show theoretically that both mechanisms can cause efficiency loss, and propose to use the Top Trading Cycle and Chains (TTCC) mechanism to increase the efficiency of the allocations. We also test the three mechanisms (RF, DF and TTCC) using lab experiments. The main purpose is to see whether the theoretically superior mechanism remains superior in practice when all the mechanisms are implemented among boundedly rational agents.

■ FB12

Lund

Retailing 03

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1 - Retail Category Management and Store Brand Pricing

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Over the last decade, the nature of consumer goods retail business has changed dramatically due to two significant developments: the growth of store brands and the adoption of Category Management (CM). However, a recent IRI report suggests that many retailers are not optimizing the performance of their store brands, continuing to market and merchandise these brands separately rather than as an integral component of the category. To shed more light on this issue, the present paper analyzes competitive price-setting in a channel comprised of a common retailer with a store brand serving two national brand manufacturers. The results establish the conditions when a retailer's adoption of partial or integrated CM in a product category (a) increases the average unit price of both the national brands and the store brand; (b) expands or shrinks the price gap between them and (c) increases the market share of the store brand and its share of category profits. Several of these propositions are then empirically tested using weekly data on prices and sales of all brands in multiple product categories that were moved to CM by a major US supermarket chain a few years ago. The dataset includes 45-50 weeks of pre-CM data and a similar number of weeks of post-CM data, offering a rare opportunity to study the longitudinal effects of CM adoption as well as how CM effects vary across categories. The authors discuss the implications of the findings for practitioners and future research.

2 - Excess Shelf Space in Retail Stores: An Analytical Model and Empirical Assessment

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Marketing and operations responsibilities meet in retail stores on the shelves. The shelf is the location where any product meets the consumer, whereas the shelf is also the final inventory location in the retail supply chain. Marketing assumes that the presence of inventory drives demand and therefore requires excellent operations. In operations, the main concern is with the trade-off between inventory holding cost on the shelf and the cost of replenishment. We gathered empirical data at a grocery retail chain and were able to combine marketing and operations data into a single database. This provided us the opportunity to conduct a unique analysis. We could compare the results of the space allocation decisions of the marketers with a basic analytic model that incorporates aspects of marketing and operations. Based on this comparison, we argue that significant amounts of excess shelf space exist for a large part of the assortment of a retailer. Excess shelf space is retail space that is not required to carry out the current operations with respect to customer service and costs. We also observed that the cost of replenishment is non-linear and dominates the inventory holding cost. Therefore, excess shelf space cannot easily be eliminated. Instead, excess shelf space in the presence of a non-linear cost of replenishment offers enormous opportunities for the development of new supply chain coordination mechanisms.

3 - Clean Up the Barn: The Impact of Assortment Reductions on Category Sales

Laurens M. Sloom, Erasmus University Rotterdam, PO Box 1738, Rotterdam, Netherlands, sloom@few.eur.nl, Dennis Fok, Peter Verhoef

Cluttering assortments and new product introductions are important reasons for retailers to 'clean up the barn' (Boatwright and Nunes, 2001). Therefore, assortment reductions are a regular phenomenon for retailers. But not every assortment reduction is the same. For example: de-listing one item in a category is not the same as de-listing many items in the same category. Further, the impact of a de-listing of (one item of) a brand may depend on the availability of alternatives. Also, the reactions of consumers towards an assortment reduction may change over time. In our study we research the effect of several types of de-listings on the household's category sales at retailer X. We develop and test hypotheses with regard to the type of de-listings. For example, we assume that de-listing of one single brand, has a larger effect on category sales than the de-listing of one item. We also include factors, such as brand equity, and brand uniqueness. We use individual household available from a retailer's loyalty card system data to estimate the effect of several de-listings on a household category sales. We conducted a field-experiment, where we de-listed items and single brands at two stores. We observe weekly category sales of individuals for a long time period before and after the de-listing. We also observe category sales in two similar stores, in which no de-listings occurred. We first present an aggregated analysis on the development of category sales, before- and after the de-listings. Subsequently, we estimate a model at the individual household-level using hierarchical bayes. In doing so, we also consider the long-term effect of de-listings on individual category sales of brand de-listings. Our first results indicate that consumers' reactions to de-listings depend on the type of de-listings. Furthermore, our aggregated analysis shows that the effect of de-listings declines over time.

4 - How Assortment Variety Affects its Attractiveness: The Role of Time Pressure and Product Complexity

Eline van Ketel, PhD Candidate, Erasmus University Rotterdam, Room F1-48, Burg. Oudlaan, Rotterdam, 3000DR, Netherlands, eketel@fbk.eur.nl, Ale Smidts, Gerrit van Bruggen

Assortment composition is a vitally important issue retailers face. Retailers are continually trying to make their assortments maximally attractive to consumers. The focus of this study is on a key characteristic of assortments, namely variety, a topic that has received considerable attention in marketing (e.g., Boatwright and Nunes 2001; Hoch et al. 2002). More variety brings benefits to consumers, such as decision freedom, but also costs, such as information overload. The trade-off between benefits and costs predicts an inverted U-shape between variety and assortment attractiveness. In a first experiment we empirically tested a framework for grocery products in which the effect of variety on attractiveness is explained on the basis of the underlying benefits and costs. We found that more variety indeed leads to more attractive assortments; this relationship shows decreasing marginal returns and can be

explained on the basis of the benefits of variety. Interestingly, variety did not have a significant negative impact on attractiveness through its effect on costs, which would imply that assortments could be extended indefinitely without negative consequences (e.g., in online shops). This counter-intuitive finding leads us to question what the relationship between variety and attractiveness will be in situations of high cognitive load where the costs of high variety are potentially much higher, such as in a hurried shopping trip (an external factor inducing cognitive load) or for an assortment of complex products (an assortment inherent inducer of cognitive load). In a number of follow-up experiments we, therefore, test how (1) time pressure and (2) product complexity affect the relationship between variety and attractiveness.

Friday, 13:30pm - 15:00pm

■ FC01

Forum

Special Session: Virtual Customer Initiative

Chair: John Hauser, MIT, Sloan School of Management, MIT, E56-314, 38 Memorial Drive, Cambridge, MA, 02142, United States, jhauser@mit.edu

1 - Improving Choice-Based Polyhedral Methods by Taking Response Error into Account

Olivier Toubia, MIT, Sloan School of Management, MIT, E56-345, 38 Memorial Drive, Cambridge, 02142, United States, toubia@mit.edu, John Hauser

Polyhedral methods have been proposed recently for metric paired-comparison conjoint analysis (Toubia, Simester, Hauser, and Dahan 2003), as well as for choice-based conjoint analysis (Toubia, Hauser, Simester 2004). Polyhedral methods have been shown to be particularly useful for the design of conjoint questionnaires, although they can also be applied to the estimation of the respondent's Utility function. A polyhedron characterizes the space of parameters of the Utility function that are consistent with the respondent's answers. Questions are designed to reduce that space as quickly as possible, and the analytic center of that space is used as a working estimate of the respondent's Utility function. One major limitation of the polyhedral methods proposed so far is that the algorithm used to design the conjoint questionnaires assumes that there is no response error. Analytic center estimation does take error into account, but typically underestimates the level of noise. In this paper we investigate how choice-based polyhedral question selection and estimation can be improved by taking response error into account. Instead of being represented by a single polyhedron, the respondent's preferences are represented by a mixture of polyhedra when response error is considered. A probability density function can be associated with each polyhedron in the mixture. Then, for example, a uniform prior on the parameters of the respondent's Utility function yields a posterior distribution that is a mixture of uniform distributions supported by these polyhedra (other priors can be used as well). We study the relevance of the approach and the performance of the proposed techniques by simulation. An empirical test is planned for the Spring of 2004.

2 - The Dream Versus Reality of CRM

Glen L. Urban, Professor, MIT, E56-332, MIT, 38 Memorial Drive, Cambridge, Ma, 02142, United States, glurban@mit.edu, John Hauser, Mahesh Kumar, Eric Bradlow

The dream of CRM was to build an enduring relationship with consumers, but unfortunately most CRM efforts have not produced significant benefits. The reality of many CRM applications often means a short-run push marketing campaign rather than long-run relationships. In this paper we describe and evaluate campaigns designed to build long run trust. We describe a 2x4 factorial experiment labeled 'Dream CRM' by General Motors. The treatments are: (1) fair and unbiased advisor which suggests the best car for the customer, (2) competitive drive system where customers test drive cars versus other manufacturers' cars in an no pressure environment, (3) on-line community designed to build positive interpersonal relationships, and (4) information mailings based on customer's most salient needs. The experiment is conducted in a panel setting (1000 respondents). We measure monthly customer consideration, preference, choice, and trust and collect purchase data at the end of the six-month study. We model customers' behavioral response (current state) with a continuous-time Markov process model (CTMP) of transition flows among unaware, consideration, dealer visits, and purchase. Transitions are modeled as a function of the experimental treatments with sub-models for perception, preference, and trust. We extend the CTMP analysis with hierarchical Bayes methods to account for consumer heterogeneity. In the paper we report the results of the treatments, their interactions, the process of trust building, and examine the strategic implications of a trust-based CRM strategy

3 - Information Scoring of Opinions, with Application to Purchase Intent

Ray Weaver, PhD Student, Sloan School, MIT, E56-345c, 77 Massachusetts Ave., Cambridge, MA, 02139, United States, rweaver@mit.edu, Drazen Prelec

Most market research methods presume a good-faith effort on the part of the customer—there are no incentives for better information. We present a new approach to market research, one that converts the opinion elicitation process into a competitive game so that consumers compete with each other to provide superior information. We first describe a

simple scoring system (Prelec, 2003), which rewards 'surprisingly common' answers. Under 'ideal conditions' (large samples, rational participants), truth-telling is the optimal, score-maximizing strategy (truth-telling is a Bayesian Nash equilibrium). We review several studies in which these optimality properties were empirically tested. In one study, respondents rated the likelihood that they would buy each of several new products, and predicted the distribution of ratings among men and women peers. Respondent's actual scores were then compared with the scores they would have received had they engaged in several deceptive strategies, such as substituting their best guess of the 'average response' for their actual response, or misreporting their demographic characteristics (in this case, gender). All deceptive strategies that we explored had the effect of reducing average score. Our provisional conclusion is that the scoring system is difficult if not impossible to game, and hence constitutes a Bayesian 'truth serum' for survey responses.

4 - Non-compensatory Consideration-then-Choice Adaptive Conjoint Analysis

Michael Yee, MIT Operations Research Center, Building E40-149, 77 Massachusetts Ave, Cambridge, MA, 02139, United States, myee@mit.edu, John Hauser, James Orlin

Evidence in the psychology, consumer behavior, and marketing science literatures suggests that consumers use (constructed) two-stage consideration-then-choice decision processes in a variety of product categories. Furthermore many consumers are likely to use a "fast and frugal" heuristic, such as a lexicographic ordering, to simplify the first stage judgment when the initial set of products is large. This evidence contrasts to typical conjoint analyses that estimate a one-stage compensatory model. We propose a data collection and analysis scheme that mirrors this two-stage process. The first stage asks respondents which products they would consider, while the second stage requires respondents to rank the products under consideration. We reduce respondent burden in stage two by using linear programming to adaptively construct choice sets that prevent inconsistent choices. After data collection, we use techniques involving Greedoid languages and dynamic programming to identify the best non-compensatory process consistent with the respondent's choices (in either or both stages). We also use analytic-center estimation to find the best compensatory process. Greedoid and AC estimates are compared to identify the nature of the underlying decision process for each respondent. The methods are compared to baselines, e.g., fully compensatory processes and hierarchical Bayes estimation, using both Monte Carlo simulation and an application to PDAs. Interesting scientific and managerial implications are discussed.

■ FC02

Tokyo

Innovation 02

Chair: Lutz Hildebrandt, Professor Dr., Humboldt-University Berlin, School of Business and Economics, Institute of Marketing, Spandauer Str. 1, Berlin, D, 10178, Germany, hildebr@wiwi.hu-berlin.de

1 - Innovation Effects on Firm Value

Dominique Hanssens, Bud Knapp Professor of Marketing, The Anderson Graduate School of Management, UCLA, 110 Westwood Plaza, Los Angeles, CA, 90095-1481, United States, dominique.hanssens@anderson.ucla.edu, Shuba Srinivasan, Koen Pauwels, Jorge Silva-Risso

Several studies have identified innovation success as a key contributor to long-term firm sales and financial performance (Pauwels et al. 2004). However, new-product failure rate is high (ranging from 33% to over 60%) and has not improved over the last decades (Boulding et al. 1997). Consequently, 'an increase in our understanding of how and why firms benefit from new product activity relative to industry competitors is an important area for future research' (Bayus et al. 2003). Which brand, category and firm characteristics, and which market and environmental conditions impact the long-term effects of product innovation and price discounting on firm sales, profit and stock market performance relative to industry competitors? These questions are the focus of our study. We answer these questions by performing a large-scale empirical study on new-product introductions in the automobile industry. We proceed in two steps. First, we investigate the over-time impact of product introductions and promotional incentives on financial performance and firm value of car manufacturers relative to industry competitors by quantifying short-term and long-term effects based on Vector Error Correction models. Second, we estimate regression models, in function of various brand, firm, category, market and environmental characteristics. A key finding is that new-product introductions can be managed strategically for competitive advantage in the investor markets, since there are important brand- and market- specific factors associated with their effectiveness. On the other hand, there are no such systematic drivers for promotional effectiveness. We discuss the managerial implications of our findings for firms in the automobile industry.

2 - Organizational Capabilities and Firm Survival Strategy in New Product Alliance

Fang Wu, Assistant Professor, Michigan State University, Department of Marketing & Supply Chain, East Lansing, MI, 48824, United States, fangwu@msu.edu, Roger Calantone

In the increasingly competitive marketplace, a growing number of firms are engaging in new product alliance activities in order to address the rising costs of R&D, resource constraints within a firm and the high risks involved in new product development. From a resource-based view, firms possess different levels of marketing and technological capabilities when jointly developing new products. The dynamic competitive environment adds more risks for the survival of new product alliance. In this article, we aim to find out how firms develop their new product alliance strategy based on their organizational capabilities and environmental conditions. Data was collected based on a group of firms involved in new product alliance listed in the Federal Register. Using a cluster approach, we classify the firms into three groups according to its marketing and technological capabilities as well as the environmental uncertainty. We find, for example, under high environmental uncertainty, firms tend to focus on the exploration of new technology in order to proactively shape the environment. Under low environmental uncertainty, firms tend to focus on exploitation of existing technology in order to earn more profits. Under medium environmental uncertainty, firms tend to use a combination of exploration and exploitation strategy in order to stay alive. In addition, firms possessing both higher marketing and technological capabilities tend to perform better in a high level of environmental uncertainty. Our results also show that firms employ different approach in managing the knowledge flow and relationship between the new product alliance partners. Our study provides some guidelines for more rigorous study of managing new product alliance.

3 - Pricing Mechanisms for Personal Digital Networks

Ward Hanson, Stanford University, SIEPR, Mailstop 6015, Stanford, CA, 94305, United States, hansonw@stanford.edu

This paper investigates pricing mechanisms possible within strong digital rights systems, focusing on the concept of a personal digital network. The U.S. FCC is attempting to define a personal digital network. This definition must recognize a heterogeneous consumption environment, involving individuals, households, work and home users. It must recognize a variety of consumption platforms, such as home entertainment centers, mobile devices, networked consumption locations within the home, and remote access to media over the general Internet. For content owners, the combination of DRM and personal digital networks creates a rich environment for nonlinear pricing and product design. Rather than simply pricing music CDs or video DVDs for a one time sale, there are many combinations of access rights and possible prices. Previous research indicates that nonlinear rental pricing with low transaction costs is more profitable than simple sales. However, there are many different mechanisms possible. This paper develops a methodology for rights based pricing in a world where: (1) Households are composed of related individuals that potentially share media, (2) Households have access to both local and wide area networks (such as WiFi and broadband Internet), (3) A variety of (partial) authentication methods exist (such as password, registered devices, smart cards) that can be used as the basis for pricing mechanisms. (4) Piracy is costly to content owners, (5) Privacy is desired by content users, and (5) Pricing complexity is undesirable, so that simple and explainable pricing mechanisms are preferred.

4 - The Relationship of Innovativeness of R&D Efforts and Subsequent Marketing Spending

Lutz Hildebrandt, Professor Dr., Humboldt-University Berlin, School of Business and Economics, Institute of Marketing, Spandauer Str. 1, Berlin, D, 10178, Germany, hildebr@wiwi.hu-berlin.de, Paul Farris

One of the major problems in marketing and management is to create long term profitability of a brand, a business unit, or a firm. There is however only little knowledge how certain well known strategic input factors interact between each other and with firm specific factors in a competitive environment. In our research we will investigate the impact of marketing spending and the investment in R&D associated with new product activities in companies. Based on accounting data from the Compustat and the PIMS-data base we develop a set of indicators for some strategic input variables. The relationship of these variables are tested in a structural model which takes into account the development over time and the effect of firm specific unobservables. The structural model is tested both on older data from the PIMS-data base and the Compustat data base between 1970 and 1985 as well as on Compustat data between 1990 and 2000. First we will show how the key variables are related and second we will show that the results in both time periods are comparable if some data base specific attributes are taken into account.

■ FC03

Athene

Internet 03

Chair: Kanghyun Yoon, Assistant Professor, University of Central Florida, Department of Marketing, College of Bus. Adm. POBOX 161400, Orlando, FL, 32816, United States, kyoon@bus.ucf.edu

1 - The Impact of Online Opinion Forums on Competition and Marketing Strategies

Chrysanthos Dellarocas, Associate Professor of Management, MIT Sloan School, MIT Room E53-315, Cambridge, MA, 02139, United States, dell@mit.edu

Online opinion forums are Internet-based communities where individuals share opinions on companies, products, services, and even world events. Empirical evidence suggests that consumers are increasingly influenced by such forums before making a variety of purchase decisions. This paper offers a theoretical analysis of the impact of online forums on competition and marketing strategies in a setting where two firms simultaneously introduce imperfect substitute experience goods of different qualities. Firms attempt to influence consumer beliefs about their respective quality through dissipative advertising and online forum manipulation. Our analysis concludes that: (a) Although both firms will engage in forum manipulation, forums will retain their informativeness; at equilibrium, the relative amounts of manipulation will allow consumers to correctly infer the quality differential of the two firms. (b) Forum manipulation initiatives will increase the marketing costs of both firms but will not substantially improve their sales revenues (because consumers cannot be fooled). (c) Forum operators can help reduce such manipulation activity by installing technological solutions that increase the unit cost of forum manipulation and the amount of honest feedback contributed to such forums by consumers. (d) The introduction of online forums will result in a reduction of advertising expenditures and a shift of marketing resources into forum manipulation initiatives. (e) If the unit cost of forum manipulation is sufficiently high, the introduction of online forums provides net benefits to high quality firms because it allows them to increase prices and market share, as well as to decrease their net marketing expenditures.

2 - Shopping Cart Abandonment at Retail Websites — A Multi-Stage Model of Online Shopping Behavior

Patrali Chatterjee, Assistant Professor, Rutgers University, 180 University Av., Newark, NJ, 07090, United States, patrali@andromeda.rutgers.edu, Shibo Li

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. While many commercial reports have proposed reasons why online shoppers abandon their carts, predicting shopping cart abandonment based on website navigation behavior is an under-researched topic. In this research we study the incidence and frequency of shopping cart abandonment in the context of the entire website visit. We examine at the level of each click by individual consumers the extent to which session navigation behavior and dynamics of product items placed in shopping carts by online users represent a conversion potential. We posit a four stage online purchase model starting with shopping page view where users can add items to their shopping carts conditional on site visit decision, followed by decision to place/remove the item in the virtual shopping cart, decision to view shopping cart prior to site exit and finally decision to purchase item(s) in shopping cart. Consumer heterogeneity is accounted for within a hierarchical Bayesian framework. Additionally, our model incorporates a mixture process whose multiple states are governed by a hidden Markov switching chain, to capture time varying, within user heterogeneity. Our results show that simple aggregate statistics have little predictive value, and web page contents and consumer's navigation behavior have different impacts on consumer's attrition at the four different stages, which is also affected by consumer's unobserved purchase intention captured by the hidden Markov process. Managerial implications on how to reduce the attrition at each stage and reduce shopping cart abandonment are discussed.

3 - Who Benefits From Reverse Auctions?

Ram Rao, Founders Professor, School of Management, SM 3.2, The University of Texas at Dallas, PO Box 688, Richardson, TX, 75080, United States, rrao@utdallas.edu, Eman Haruvy

Reverse auctions are an increasingly popular price determination mechanism for B2B procurement. In reverse auctions, as opposed to forward auctions, the buyer posts requests for prices and the sellers submit bids. This mechanism is typically welcomed by buyers and resisted by sellers. According to one executive, 'buyers love reverse auctions but if suppliers have to use them, they will fight, kick and scream before they participate.' Our investigation aims to discover why sellers resist reverse auctions and whether there are conditions under which sellers would find it advantageous to participate in reverse auctions. We investigate several scenarios under both transactional and relational exchanges and examine both short run and long run implications. In transactional exchanges, relationships do not come in, and in relationship exchanges they do. We extend and apply auction and matching theories to examine whether sellers should expect to be harmed by reverse auctions in the two different types of exchange. We find that in the transactional exchange, sellers would benefit from the reverse auction relative to a forward auction but not necessarily relative to a non-auction assignment. Auctions are particularly detrimental to sellers when the auction assignment is purely price-based but sellers have substantial quality difference. Similarly, in the relational exchange, sellers would stand to lose much of their surplus. The three questions we attempt to answer are: (1) Why are reverse auctions increasing in popularity as opposed to forward auctions and non-auction assignments? (2) Who benefits from reverse auctions relative to forward auctions and non-auction assignments? (3) What are long-term implications of the move to reverse auctions?

4 - An Investigation of Bid-Timing Decisions in Online Auctions: Single-Item vs. Multiple-Item Formats

Kanghyun Yoon, Assistant Professor, University of Central Florida, Department of Marketing, College of Bus. Adm. PO Box 161400, Orlando, FL, 32816, United States, kyoon@bus.ucf.edu, Purushottam Papatla

Online auctioneers have introduced various types of auction formats. For instance, eBay, which has more than 64% of the online auction market, has introduced at least three types of auctions, i.e., traditional English auction, Dutch auction and reserve price auctions. Given the use of a variety of so many different formats, an important question for research is: how does the behavior of bidders vary across formats? This is the issue that we focus on in this paper. Specifically, we examine the entry timing decision of bidders in two different formats: single- and multiple-item English auctions and the question that we focus on is whether the timing and evolution of bids by bidders differ between these two formats. We use a hazard function approach for this analysis and propose a finite-mixture discrete-time proportional hazard model, coupled with a Bass model, as the baseline hazard. Our results suggest that there can be two types of bidding patterns depending on the bid timing decisions of bidders. Further, our findings indicate that experienced bidders tend to bid very early or very late while novice bidders typically bid after the auction has been in progress for some time but neither very early nor too late in the auction. We also find that, the closing prices in single-item auctions tend to be low, while the final prices for the multiple-item formats are generally higher. Our results also suggest that multiple-item auctions tend to attract less experienced bidders.

■ FC04

Rochester

Choice 06

Chair: Sha Yang, New York University, 44 West 4th Street, Suite 9-77, New York, NY, 10012, United States, shayang@stern.nyu.edu

1 - Estimating Disaggregate Model using Aggregate Data: A Bayesian Data Augmentation Approach

Yuxin Chen, Associate Professor, Leonard N. Stern School of Business, New York University, 44 West 4th Street, Suite 9-78, New York, NY, 10012, United States, ychen@stern.nyu.edu, Sha Yang

We propose a Bayesian method of estimating disaggregate choice models using aggregate data. Our approach takes advantage of the low cost and easy access nature of aggregate data, and enjoys desirable features of discrete choice model such as being parsimonious, structural, and often devoid of the wrong sign problem. Our Bayesian procedure introduces latent choice data that are consistent with the observed aggregate data. Once the augmented choice data are available, analysis can proceed using a variety of models of consumer choice and the impact of purchase history can be modeled explicitly. We demonstrate the accuracy

and validity of the method with two data experiments (one with simulated data and the other with real purchase data). As shown in our empirical application using data from liquid laundry detergent category, the proposed method is attractive to managers for better understanding brand price competition at store level but with limited access to household scanner panel data.

2 - Repeated Binary Logit (RBL): A Practical Approach to Modelling Loyalty

Gilles Laurent, Carrefour Professor of Marketing, HEC School of Management, 78350, Jouy-en-Josas, Pa, France, laurent@hec.fr, Cam Rungie

Rather than using explanatory variables to predict the outcome of a specific choice by a consumer, we attempt to use such variables to predict loyalty over a series of consecutive choices by the same consumer. This leads, of course, to completely different interpretations of the role of the variables, and of their coefficients. In practice, the beta binomial distribution provides classical and related measures of loyalty: Kalwani's coefficient of polarization, Hendry's k or Goodhardt and Ehrenberg's Dirichlet S . In this paper, we fit explanatory variables to the parameters of the beta binomial distribution, and therefore to these measures. This provides a regression-like approach to loyalty, in the form of a Repeated Binary Logit (RBL) model, which can be presented as a generalization of logistic regression. The outcomes of the statistical analyses are substantial in terms of assessing the causes of loyalty, and of segmenting on the basis of loyalty. We demonstrate the estimation of the model on several product categories, on the basis of scanner panel data made available by GfK and MarketingScan. We discuss how to interpret the results. This allows us to investigate possible empirical generalizations on the causes for behavioural loyalty.

3 - Who buys Private Labels? A Cross-Category "Willingness-to-Pay" Analysis

Andrew Ainslie, Assistant Professor, UCLA, 110 Westwood Plaza, Los Angeles, CA, 90095, United States, andrew.ainslie@anderson.ucla.edu, Garrett Sonnier

We use panel data available on 4 different categories to determine to what extent one can find individuals who have a high valuation for private label products in multiple categories, and furthermore what their demographic characteristics are. We use a Bayesian hierarchical choice model, and demonstrate that the answer is very sensitive to how one identifies the consumers' valuation of the private label.

4 - Accounting for Individual Level Demand Shocks in a Structural Analysis of Firm's Pricing Behavior

Sha Yang, New York University, 44 West 4th Street, Suite 9-77, New York, NY, 10012, United States, shayang@stern.nyu.edu, Yuxin Chen

Almost treated as a standard in the New Empirical IO literature, the demand shocks correlated with price in consumer utility are assumed to be product and time specific but common across consumers. In this paper, we challenge this assumption and allow the demand shocks to be not only time dependent but also varying across consumers. We find that incorporating individual level specific demand shocks is important in making inference on the type of pricing strategy the retailer uses and improves the model fit in the two product categories investigated. In addition, we show that ignoring the individual level dimension in the demand shocks biases the estimates on demand model parameters including price coefficient, estimates on heterogeneity distribution, and variance-covariance of the demand shocks. Methodologically, we make an important contribution NEIO literature by proposing a Bayesian method of estimation on a simultaneous demand and supply system using aggregate data. The essence of our proposed Bayesian method lies in the data augmentation where individual choices are augmented to be consistent with the observed aggregate shares and demand shocks are treated as latent variables to be drawn in MCMC approach. The proposed Bayesian method is based on the likelihood specification and therefore does not rely on instrument variables to account for price endogeneity once an assumption is made on the competitive structure.

■ FC05

Santander

Advertising 01

Chair: Subrata K. Sen, Professor, Yale School of Management, 135 Prospect Street, Box 208200, New Haven, CT, 06520-8200, United States, subrata.sen@yale.edu

1 - The Consequences of Attention to Branding in TV Commercials

Michel Wedel, Dwight F. Benton Professor of Marketing, University of Michigan Business School, 701 Tappan Street, Ann Arbor, MI, 48109, United States, Wedel@umich.edu, Josephine Woltman Elpers, Rik Pieters

Although television advertising is frequently considered the prime communication medium to build and sustain national and international brands, research to date has taught us surprisingly little about the brand's role in consumers' attention to TV commercials. This study is the first to assess attention to the brand in TV commercials, and its impact on consumers' decisions to terminate commercial exposure, using infrared eye tracking and self-controlled exposure time data. It proposes a conceptual framework of the brand's functions in commercials, which allows specific predictions about brand identification effects on commercial avoidance. It develops a novel methodology to assess consumers' identification of the brand in foveal as well as in parafoveal vision, which is based on consumers' spatiotemporal pattern of attention to the TV commercials, as assessed via eye tracking. The methodology takes into account the dynamic character of the brand's appearance in commercials (in presence, location, size, frequency, duration and timing). Our study reveals how the brand's first and subsequent identifications in foveal and parafoveal vision, but not its auditory identifications, drive consumers' decisions to continue viewing a TV commercial at each point in time. The findings demonstrate the new insights that can be gained from tracking consumers' spatiotemporal attention patterns to dynamic stimuli such as TV commercials; they counter received knowledge in advertising, and have managerial implications for branding and message structure decisions and for advertising testing.

2 - Effects of Pre-Launch Advertising: Why Advertise When You Have No Product to Sell?

Jason Ho, University of British Columbia, Sauder School of Business - Marketing, 2053 Main Mall, Vancouver, BC, V6T1Z2, Canada, jason.ho@sauder.ubc.ca, Tirtha Dhar, Charles Weinberg

Pre-launch advertising—advertising before a new product is available for sale—accounts for a significant portion of a new product's marketing budget. Since by definition it cannot cause immediate sales, a critical question is: what does it accomplish? While a few theoretical studies have examined this issue, there are even fewer empirical studies. The objective of this paper is to study empirically how pre-launch advertising can influence (directly or indirectly) the subsequent product sales. We hypothesize that pre-launch advertising can influence the initial product demand in three ways. First, it would directly affect the initial product demand through a carry-over effect. Second, the pre-launch effort may generate buzz about the new product, which would then influence the product demand. Third, the pre-launch advertising would increase the distribution coverage at the time of product launch by functioning as a signal to the downstream channel members that the new product is of high quality. Empirically we decompose and identify these three effects and test for their significance with a proprietary panel data set from the US movie industry, including a measure of buzz. Characterized by heavy pre-launch advertising efforts (over 80% of our three-year movie samples spent half of their total TV expenditure in the pre-launch period) and minimal retail price variation, the movie industry is a natural laboratory for understanding the various effects of pre-launch advertising on the subsequent product demand.

3 - Are Late Entrants in Television Advertising Markets Breaking News?

Marcel Kornelis, dr. WUR, hollandseweg 94, Wageningen, 6706ks, Netherlands, marcel.kornelis@wur.nl, Peter Leeftang, Marnik Dekimpe

Managers spend billions of dollars on advertising each year, and, even more important, advertising expenditures affect the economic decision making of the consuming audience. Hence, advertising markets are an integral part of the economic system. Previous studies that analyze the underlying determinants of aggregate advertising demand all assumed that historically observed patterns would replicate themselves into the future. However, a number of major events, including the arrival of late entrants have disrupted the stable advertising markets of the past, resulting into a much more dynamic market place. Such events may have permanently altered the outlook of the industry. We study the size, sign, timing, and duration of a late-mover entry effect on the growth potential of the Dutch national television advertising market, its incum-

bents, and its related markets. To accurately quantify this impact, it is necessary to control for other potential structural breaks in the market. Therefore, we propose a testing framework that first identifies all structural breaks that exist in the demand for advertising, after which we concentrate on the break(s) attributable to our key event of interest. Our main finding is that the long-run growth potential of the incumbents is slowed down by the entry, while also the primary demand for television advertising was negatively affected. Advertising spending markets are not the sole domain for (potentially) disruptive late-mover entry. Other environments include store brand, retail, and durable markets. Our proposed methodology is flexible enough to study those events as well.

4 - Are Firms Still Over-Advertising?

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We have reviewed the relevant academic literature to find if there is evidence of any systematic over-advertising. Aaker and Carman (1982) have already reviewed papers published until the early 1980s. Therefore, we examine the papers that have appeared after that period and compare our findings with those of Aaker and Carman to highlight what has happened in the twenty or so years following the publication of their paper. Though the econometric studies report mixed findings, the experimental evidence does point to continued over-advertising by firms. Difficulties in identifying effective advertisements, organizational inertia in taking new approaches, and internal incentive schemes that favor higher advertising budgets, could all lead to excess spending. Most studies on the budget-setting process do not consider uncertainty and the willingness of managers to take risks. The studies that have considered these factors have found that risk-averse managers often make sub-optimal decisions in situations of uncertainty, leading to higher than optimal advertising budgets. Finally, a comparison of international advertising budgets shows significant differences in advertising practices across countries.

FC06

Shanghai

CRM 05: Satisfaction and Loyalty

Chair: Murali Chandrashekar, Professor, Australian Graduate School of Management, University of New South Wales, Sydney, NS, 2052, Australia, muralic@agsm.edu.au

1 - The Dynamics of Relationship Satisfaction—A Panel Study Applying a GMM-Estimator

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Especially in business-to-business situations, buyers and sellers often develop long-term relationships, which necessitates a dynamic approach also in customer satisfaction research. This paper examines satisfaction dynamics based on empirical panel data in the area of professional logistics services. The study was conducted in four yearly iterations, and the customers were asked to indicate their overall relationship satisfaction, their satisfaction with four satisfaction-relevant dimensions and their satisfaction with single attributes within three of the four dimensions. The analyses were conducted in a two-step regression model, integrating dynamic aspects with the help of lagged variables. We used a dynamic GMM-estimator that is able to deal with the difficulties arising when lagged dependent variables are included in a regression equation. The results indicate that dynamic effects in relationship satisfaction occur as well on the overall relationship satisfaction-level, as on the level of satisfaction-relevant dimensions. On the level of overall relationship satisfaction, the carry-over effects are strongest. Furthermore, only on the level of overall relationship satisfaction dynamic effects stemming from the satisfaction evaluation lagged two periods can be found. In a last step, we analyze whether positive or negative satisfaction scores have a greater impact on future satisfaction. We find that positive satisfaction scores from an earlier point in time have a greater impact on current satisfaction than negative ones. These results point to a certain tolerance customers have towards their logistics service provider, as negative experiences are not weighted as heavily as positive ones.

2 - The Satisfaction-Loyalty Link: How Robust are the Findings

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Customer satisfaction has long been viewed as one of the principal factors that determine important behavioral and economic consequences for the firm (Kotler, 2002). Specifically, customer satisfaction is believed to provide the essential link between fundamental marketing action—segmentation, positioning, and the marketing mix—with the firm's ability to achieve its goals. A vast body of empirical research has linked customer satisfaction to several measures of financial performance. The rationale for this research rests on the finding that satisfied customers are likely to be loyal customers. Loyalty is deemed a driver for profitability and superior financial performance. However, the robustness of the satisfaction-loyalty relationship has to be interpreted in conjunction with the nature and strength of this relationship. This paper examines the association between customer satisfaction and customer loyalty, and investigates how robust this association is to variations in customer, firm and structural characteristics. A hierarchical Bayes methodology is used to investigate the premises of this research using the American Customer Satisfaction Index (ACSI) database. Preliminary findings indicate that although the association between satisfaction and loyalty remains strong across the sample, it is far from a one to one linear relationship.

3 - JUMPing Through Uncertainty in Consumer Trust Judgments

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Increasingly, organizations are gravitating toward consumer trust as the foundation for long-term relationships with their customers. Building, maintaining and growing consumer trust presents many uncharted challenges. One such challenge involves uncertainty in consumers' trust judgments. This research centers on uncertainty in consumer trust judgments and the implications it has on shaping consumer loyalty. By bringing together theories of trust and emerging research on modeling judgments, we build a conceptual framework which addresses the following questions: What are the factors that determine the magnitude and uncertainty of consumer trust in a service provider? What are the consequences of uncertainty in trust judgments for consumer loyalty? Can uncertainty in trust judgments be used to identify managerially relevant segmentation approaches for managing consumer relationships? We employ the recently developed JUMP model to simultaneously isolate the antecedents of trust magnitude and trust uncertainty. We also use a latent class segmentation model to investigate the heterogeneity in the relationships involving trust magnitude and uncertainty, and consumer loyalty. We test the conceptual model using data from the real estate industry involving 697 consumers and find strong support for our theory. The results indicate that well established drivers of trust (organizational trustworthy behaviors and practices) have differing mechanisms through which magnitude and uncertainty of trust judgments are shaped. Further, trust uncertainty is found to decrease subsequent consumer loyalty, despite stated high level of trust. Finally, there is a significant heterogeneity in the effects of trust magnitude and trust uncertainty on consumer loyalty.

4 - The Impact of Satisfaction Strength on the Satisfaction-Loyalty Link

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Despite the belief that satisfaction is linked to loyalty, empirical and anecdotal evidence reveals that some customers who state that they are very satisfied with a service provider frequently defect. We propose that an important reason for the fuzzy nature of the satisfaction-loyalty link is the fuzzy nature of satisfaction. We draw on the emerging perspective to modeling individual judgments and recognize that individuals differ in the strength (i.e., conviction, uncertainty) with which judgments are professed. We first decompose a customer's stated satisfaction into two related but independent facets—satisfaction level and satisfaction strength—and then examine the role of satisfaction strength in the translation of satisfaction to loyalty. We report results a study set in a B2B service context, in which we analyze data obtained from an ongoing customer satisfaction tracking study being conducted by a large service organization in the US. Data from over 25,000 customers are used to calibrate the satisfaction model and examine the impact of satisfaction strength on one index of customer loyalty—likelihood of recommending the service provider to other customers. The results are validated in a hold-out sample of over 20,000 customers. Results strongly demonstrate that the covert satisfaction strength plays a central role in the translation of satisfaction to loyalty—while satisfaction does indeed translate to loyalty when the satisfaction judgment is strongly-held, the translation is

significantly lowered, by over 60%, when the same stated satisfaction is more weakly-held. Overall, the findings provide insight into an important psychological mechanism that may govern the translation of satisfaction to loyalty.

■ FC07

Hull

Pricing 04

Chair: Dinesh K. Gauri, Doctoral Student, University at Buffalo, 234 Jacobs Center, School of Management, Buffalo, NY, 14260, United States, dkgauri@buffalo.edu

1 - Market-Structure Effects in Dynamic Markets: Initial/Repeat Choice and Asymmetric Price Competition

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Since asymmetric price competition typically arises in grocery markets with multiple national brands and a single store brand, two choice experiments were conducted to test if this structure itself contributes to choice and brand switching. Respondents first chose from a set of brands in one of two quality tiers and then went to a page where non-chosen brands discounted. Whether the lower-quality or higher-quality tier included multiple brands (at the same price/quality points) or a single brand was manipulated between-subjects, as was whether one (within-tier dominance) or all (no within-tier dominance) brands in non-chosen multi-brand tiers discounted. The two experiments occurred: Within-tier dominance was strongly associated with asymmetric switching, but only when it arose within higher-quality tiers. Dominance within lower-quality tiers only blunted (did not reverse) the asymmetry. Experiment 2 further found that (1) choosers of higher-quality (Time-1) were farther from their indifference points than were choosers of lower quality, (2) respondents preferred brands in clusters over lone alternatives, and (3) price/quality weights were correlated with switching (implicating heterogeneity). None of these latter mechanisms, however, could account for the observed asymmetries since (1) clusters alone failed to produce reliable asymmetries, (2) no asymmetry emerged in Experiment 2's control condition (single-brand tiers), and (3) statistical controls for preferences and price/quality weights failed to eliminate asymmetries. The results suggest that market structure itself and resulting patterns of within-tier dominance contribute to asymmetric price competition, though other causes are implicated as well (e.g., general confirmation biases toward higher-quality).

2 - Using a Menu of Geographic Pricing Plans

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In a menu plan of geographic pricing, the retailer allows a customer to choose either a free on board origin (FOB origin) plan, or a zone pricing plan. In the FOB origin plan or self delivery, the customer pays the exact cost of transportation plus the price at the origin. In the zone pricing plan, the retailer divides the market served into zones, and all customers within a given zone pay the same delivered price. In the simplest instance of the menu plan (simple menu plan), the customer selects either an FOB origin plan, or a uniform delivered (single zone) plan where the delivered price is same for all customers. We show how to construct the profit maximizing menu plan for a given number of zones. We find: • The menu plan is equivalent to adding another zone to the zone pricing plan. • The menu plan should be so designed that the lowest transportation cost customers elect self delivery (FOB origin plan), and the higher cost customers are served by the zone pricing plan. • The menu plan allows the retailer to serve a greater market area, and also charge a price closer to the profit-maximizing (spatially discriminating) price for each customer. • A menu plan with a relatively small number of zones can generate a contribution to profit close to that of the spatially discriminatory plan. For example, the simple menu plan can generate 96% of the contribution of the spatially discriminatory plan, and a two-zone menu plan can generate 98% of the contribution of the spatially discriminatory plan. The consumer surplus and social welfare implications of the menu plan are discussed.

3 - Buy Now or Bid: Why do Sellers and Bidders use Fixed Price Options in Auctions?

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Most previous research studying buy now prices has assumed a monopoly situation, with a single auctioneer selling a unique item. These models do not provide explanations for the widespread usage of buy now options in competitive market places, or the large difference in usage frequencies across product categories. In this paper we enrich the literature by developing, and empirically testing, a model of buy now prices in a competitive market place. We propose that auctioneers' and bidders' incentives to use buy now options are different, but both depend on the competitive market structure and the bidders' ease of assessing the value of a good. Bidders can use the buy now option to reduce waiting cost or to ensure that they are the winner (e.g. for scarce items). Sellers on the other hand tend to use buy now prices to segment buyers with different waiting cost, or use buy now prices as a signal of the quality or value of an item. We derive a mathematical model of the use of buy now options, including competition among sellers of differentiated and undifferentiated products, through sequential and simultaneous auctions. The number of bidders in every auction is modeled endogenously and bidders are characterized through two dimensions: their willingness to pay and waiting costs. Waiting costs are modeled as a function of both the auction duration and the bidders' inherent propensity to wait. We report the results of a controlled field experiment and an empirical test of our model using data on completed auctions collected from eBay. We test alternative usages of buy now prices, e.g. the signal effect and heterogeneity in propensity to wait in different product categories. The results of a controlled field experiment provide strong support for our signalling hypothesis.

4 - Searching Hard or Hardly Searching: Insights into Consumers' Patterns of and Returns to Price Search

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Relative to that for durable goods, the consumers' information search literature for frequently purchased goods like retail groceries has been limited. The focus of the few studies has been on what drives grocery shoppers' propensity to search for price information. A natural extension of this research stream and an equally interesting research issue is what comes out of such propensity to search for price information in terms of actual price paid by consumers. In other words, what are the returns to price search for grocery shoppers? The answers to the question provide more direct insights into market outcomes in terms consumers' price search efficiency and consequent strategic implications in competitive retail grocery markets, whose size is over \$500 billion in the US alone. Based on the cost-benefit theory of consumers' information search, this research will develop and empirically test a theoretical framework of grocery shoppers' expected patterns of price search behavior, determinants thereof and consequent implications for returns to price search (RTPS), price search efficiency (PSE) and 'lock-in value' (LIV). It will explicitly investigate the hitherto unexplored but the expected critical role of the spatial relationship between a consumer and the competing stores she patronizes on her patterns of price search and consequent RTPS, PSE and LIV. It will also lead to the development of meaningful operational definitions and measures of grocery shoppers' cherry picking behavior and understanding of the key drivers of such behavior.

■ FC08

Baltimore

Marketing Research 05: Survey Methods

Chair: Elisabeth Deutskens, Universiteit Maastricht, PO Box 616, Maastricht, 6200 MD, Netherlands, ec.deutskens@mw.unimaas.nl

1 - A Multilevel Assessment of Response Variation and Stability in Survey Research

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Survey methodology is well-established in the marketing discipline, and continues to play a prominent role in the assessment of both individual-level and firm- or group-level constructs. Not surprisingly, therefore, a rich body of literature has developed on ways to minimize the most common types of survey error—sampling, coverage, non-response, and measurement error (Graves 1989). While the first three of these error components have received considerable attention from survey researchers, "relatively little attention has been paid to the problem of

measurement error" (Couper 2000; p. 475). An additional issue of concern to survey researchers is test-retest reliability—the extent to which responses are stable over time. The few reliability assessments undertaken (cf. Peter 1979) have found survey responses to be inordinately unstable over time. The present study seeks to assess the extent to which informant-, construct-, and attempt-specific factors systematically affect (1) survey responses obtained in an organizational context, and (2) the stability of responses over multiple attempts. We use a unique data set generated from the online survey responses of 1300 salespeople working for four separate retail chains. The extent of cross-sectional and temporal variation in responses is assessed, using a multilevel, random-intercepts, cross-classified regression model, estimated by a Gibbs sampling-based MCMC estimation technique. The combination of the rich data and model specification allows us to draw conclusions about how measurement error can be affected in survey research.

2 - The Optimal Design of Split Questionnaires

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We investigate how to design split questionnaires as efficient tools to collect large amounts of customer level information in marketing research. Instead of the heuristic methods to design a split questionnaire as is currently done in applied and academic research, this study develops a methodology to generate the split questionnaire in a way that minimizes informational loss. Because the number of possible questionnaire designs is exponential in the number of questions, we apply the Modified Federov algorithm, using Kullback Leibler Distance as a design criterion, to find the optimal splits. First of all, we illustrate an efficiency of the Modified Federov Algorithm on a fairly small synthetic questionnaire, which enables the enumeration of all possible designs for comparison. Second, we compare the efficiency of split questionnaires generated with the proposed design criterion to randomly generated designs in a Monte Carlo study using synthetic data. Finally, we apply our design generating procedure to an empirical dataset to further investigate its performance. Our conclusion is that optimally splitting questionnaires is definitively worth consideration for improving the efficiency of questionnaires in practice.

3 - Response Bias due to Mode of Data Collection:

Validation and Application of a SEM model

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In this study, we investigate bias of marketing survey results due to response styles. A response style is a respondents tendency to (dis-)agree with items irrespective of the content of the specific item, e.g. yeah-saying or acquiescence bias. We compare and validate two operationalizations of response styles (Greenleaf 1992; Baumgartner and Steenkamp 2001) with the aim of assessing the bias they cause in different modes of data collection. While both typologies originally used single indicators for each response style, we compute multiple indicators in order to validate the measures. We assess discriminant validity and internal consistency. This shows the superiority of a two-dimensional operationalization of response style for our purposes: intra-subject mean and intra-subject standard deviation. We provide a method to specify a structural equation model operationalizing these response style measures as latent constructs with multiple indicators. The model allows us to compare the level of bias among four comparable samples. These samples filled out the same questionnaire via different modes of data collection: a mail survey, a survey by telephone, a web survey among a panel of respondents and a web survey with banner recruitment. We find that the latter sample shows the severest bias due to response styles, especially yeah-saying. The telephone survey shows the highest intra-subject standard deviation (or response range).

4 - An Assessment of Measurement Invariance between Online and Mail Surveys

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Ko de Ruyter, Martin Wetzels

One of the latest trends in marketing research is the increasing use of Internet-based surveys, which offer lower costs and faster responses (e.g. Green et al. 2003; Illieva et al. 2002). However, one of the core concerns with respect to Internet-based research has not yet been addressed adequately: is data collected in online surveys equivalent to data collected via traditional mail surveys? Since we will continue to conduct online surveys 'in the dark' until we know whether on- and offline data is indeed comparable, it is imperative that the measurement invariance of on- and offline surveys is examined critically in the context of marketing research. Existing evidence from the comparison of mail and online surveys is inconclusive, has methodological limitations, and was conducted in research contexts different from marketing (e.g.,

Epstein et al. 2001; Stanton 1998). To rigorously examine measurement invariance in a marketing research context, we used a real-life customer satisfaction survey (mail and online) from a large office equipment manufacturer in the US. Measurement invariance was assessed with a multigroup confirmatory factor analysis using increasingly restricted models (Steenkamp and Baumgartner 1998; Vandenberg and Lance, 2000) employing the Satorra-Bentler Scaled χ^2 test (Satorra and Bentler, 2001). Our findings support both measurement invariance and structural invariance between online and mail surveys.

FC09

Leuven

Branding 02

Chair: Daniele Dalli, Professor, Università di Pisa, Dipartimento di
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1 - A Psycho-Linguistic Approach to Explain Consumer's Inference of Associations From Brand Elements

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Building customer-based brand equity is a key concern of brand management, because brands that possess strong, favorable, and unique associations are often preferred in purchase decisions. Brand associations are conveyed through the communication of brand elements which may include the brand name itself, the visual logo, verbal slogan, possibly a brand character, and if a tangible product, packaging. Effective and efficient conveyance of targeted brand associations through the brand elements is especially important for the success of new brands. Previous research on brand association effects has focused on each element in isolation. Research on the interaction of verbal and visual brand elements has measured memory effects, not attribute associations. Up to now, no theories or models have been proposed to explain the interaction of brand elements, and in particular how consumers derive attribute associations from the conjoint perception of verbal and visual brand elements. Integrative theories are essential, since the brand name and visual logo are perceived conjointly, not separately, by the consumer. Recently developed psycho-linguistic theories for the explanation of people's interpretation of conceptual word combinations provide a basis for the examination of the interaction of verbal and visual brand elements. Following these theories four techniques to integrate brand name, brand logo and product are developed. Reaction time measurements and association tests show that the techniques presented are an effective and efficient means to convey a brand's image. We will present the results of five experiments with 275 subjects.

2 - A Brand Value Metric for Balance Sheets

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This research proposes a simple metric to calculate the financial value of a brand that can be reported in balance sheets. The metric offers desirable properties to support acceptance by the accounting community. It is objective, simple, cost effective, consistent with accounting principles and applicable to a wide range of industries. In particular, a straightforward heuristic that measures the brand equity share in the brand's sales equity assures the cost effectiveness and easy application. This paper focuses on the theoretical basis and empirical validation of the heuristic with respect to the car industry.

3 - Which Brands Gain Share From Which Brands?

Inference From Store-Level Scanner Data

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Market share attraction models are frequently used to gain insights into competitive structures. However, there is at least one thing these models cannot do, and that is, to help understand which brands lose share to which brands when only sales or shares data are available for analysis. We therefore propose a method to infer unobserved share-switching from widely available store-level scanner data. A second contribution of our model is that it allows for a decomposition of own and cross price elasticities. For example, a decrease of the own price is likely to result in an increase of the own market share, due to (i) increased own customer retention (less switching away from the own brand) and (ii) additional share captured from the other brands (more switching towards the own brand). The elasticity decomposition from our model makes it possible to quantify these partial effects. We apply our model to weekly store-level scanner data for catsup and peanut butter in two markets. Our model performs well compared to the traditional market share attraction

model, both in terms of in-sample fit and out-of-sample forecasting. The elasticity decompositions show that the majority of the increased market share after an own price reduction is caused by capturing additional share from competing brands, and not so much by increasing own customer retention. We also investigate the possibility of asymmetric price competition. The findings seem consistent with a result of Bronnenberg and Wathieu (1996). Finally, we discover some interesting share-switching patterns in the data.

4 - Product Placements in Movies: More than Advertising

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The first evidence about product placement in movies appears in African Queen (1951), in which Humphrey Bogart and Katherine Hepburn are portrayed together with a bottle of Gordon's Gin. Basically this is an example of advertising: time by time, product placements have become an important tool within the marketing mix of small as well as global companies to reach the audience in such a way to escape from the over-saturated and fragmented advertising landscape. Product placement has become so important that agents and entertainment marketing directors must collaborate, in some cases, with television and movie writers and producers to get their brands a starring role in their shows. Product placement can hence be regarded as a marketing tool whose effectiveness can be measured and controlled. On the other hand, product placement can be regarded as an example of the ongoing process of commercialisation of modern western culture: western consumption landscape is more and more filled up with branded products, advertising, and the like. One of the consequences is that products and brands can be viewed, and actually are, as vectors of meaning. Word-of-mouth is full of references to products, brands and advertising: they have definitely entered our vocabulary. Movies and moviemakers that represent real life use branded consumer goods to describe situations, characters and events. It is not (only) an advertising weapon, nor a way to grant movie production, it is necessary to represent modern consumer society. But sometimes, the use of branded products is not merely representational: they can be used in a metaphorical sense and the result can be seen as paradoxical. In the paper the literature will be reviewed and some examples from actual and past movies will be discussed.

■ FC10

Bergen

Marketing Strategy 02

Chair: Frans Verhees, Assistant Professor, Wageningen University, Hollandseweg 1, Wageningen, 6706KN, Netherlands, frans.verhees@wur.nl

1 - Understanding the Market Orientation-Customer Satisfaction-Business Performance Chain

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Recent literature on market orientation has focused on its potential to positively impact business performance, and examined constructs like innovation and culture that mediate this impact. Our study extends this literature in three respects: it (a) showcases customer satisfaction as a causal bridge between market orientation and performance, (b) integrates perspectives from service-profit-chain (SPC) and return-on-quality (ROQ) literatures to link specific firm operations with performance metrics, and (c) estimates a structural equation model depicting the influence of market orientation and innovation both in the context of a specific strategy area (i.e., customer product returns, an under-explored topic) and more generally, across the entire firm. Our empirical approach provides managerial guidance about the extent to which a given strategy area assimilates the firm's market orientation and contributes to business performance.

2 - Market Orientation and Business Performance: A Meta Analysis

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Many research have shown that there exists a positive relationship between market orientation and business performance. However, scholars disagree on the effect size of the relationship due to differences of companies operating in different countries, different cultures, industry sectors and many other factors. The purpose of this study is to explore whether there exists a 'universal' relationship between market orientation and business performance and to determine the magnitude of such a relationship. Searching studies published from 1990 to 2003, we checked over 1200 articles relevant to research into market orientation.

Twenty five studies were selected and entered the final data analysis representing 27 samples and 5180 observations. After correcting artefacts such as sampling errors and measurement errors, the correlation coefficient between market orientation and business performance was calculated as 0.47, showing a strong positive relationship. The correlation between market orientation and business performance is further analysed using multiple regression models adjusting the effect of different types of measures of market orientation, industry sectors, country and culture factors. The results showed that different measures of marketing orientation did indeed have an impact on the magnitude of the market orientation and business performance relationship. The latter is also influenced by differences in industry sectors and consistency of measures of business performance. The findings imply that a more consistent and focused definition of market orientation is required. To determine the relationship between market orientation and business performance, the consistency of measurement of business performance is vital.

3 - Business Strategy and Market Orientation Relationship: An Analysis of its Performance Implications

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Over the years, the relationship between strategy and its organizational dimensions has been studied in a sequential model where firms decide on a strategy and then introduce appropriate tangible organizational choices that support this strategy (Govindarajan and Gupta, 1985). At the same time, with the growing interest in resource-based theories of the firm, there has been increasing interest in the role of intangibles factors such as skills, capabilities and culture in strategy implementation. Therefore market orientation, as an organizational resource, should contribute to competitive strategy formulation (e.g. Guo, 2002; Homburg et al., 2003; Kumar et al., 2002). In fact, the understanding of market orientation's contribution to firms' competitive strategy formulation is a key step in the appropriate comprehension of this orientation's long-term benefits for the organization. In this paper, the authors conceptually and empirically examine the role of market orientation as a potential moderator of the relationship between business strategy and business performance. In addition, they develop a framework which links firms' market orientation to their economic results and their success marketing indicators. In this way, the findings, obtained by a structural equation model, are interpreted and explained in the context of the Spanish publishing sector. Implications for future research and managerial practice are discussed.

4 - The Influence of Success and Market Related Beliefs on Radical Product Innovation by Small-Firms

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It has been suggested that small-firms and large-firms are complementary with respect to radical product innovation (RPI). The initial invention and innovative activities take place in large-firms while small-firms play an important role in the diffusion of RPIs. RPIs contain a high degree of new knowledge and represents a clear departure from existing practices. It is important to understand adoption of RPI in small-firms, in order to be able to stimulate it. However, RPI adoption in small firms will probably be different from RPI in large firms because their resources are different. This study focuses on the adoption of RPIs by small-firms in the later stages of the diffusion process, i.e. less innovative small-firms. Two issues are particularly addressed: First, to what extent does success with the current product portfolio serve as a barrier for RPI adoption in small-firms and second, to what extent is RPI in small-firms driven by market related outcome beliefs. A model is presented, with hypotheses, where amongst others the small firm's current success, market related and non-market related outcome beliefs drive RPI in small-firms. A random sample of 200 Dutch small-firms in the poultry industry, particularly laying hens, is used to test the hypotheses in our model. The results show, amongst others, that success is a barrier for radical product innovation in less innovative small-firms and that radical product innovation in less innovative small-firms is grounded in market related outcome beliefs.

■ FC11

Heidelberg

Competition & Game Theory 04

Chair: S. Chan Choi, Rutgers University, 180 University Ave, Newark, NJ, 07102, United States, chancoi@rci.rutgers.edu

1 - The Linkage Between Downstream Demand and Competitive Structure in an Upstream Market

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Using a two-step approach and methods developed in the new empirical industrial organization (NEIO) literature, the competition between Intel, Motorola and AMD, the predominant firms in the US microprocessor industry, is studied. The analysis addresses the following questions: First, whether the key strategic variable in this industry is price or production quantity. Second, what is the competitive structure? Are decisions made independently, is one of the firms a leader, or is there tacit collusion? Third, whether there is a linkage between the upstream structure of competition and the demand factors in the downstream market for personal computers. During the time period of the data, the popularity of Apple Macs with Motorola components dropped significantly relative to the PCs which had Intel and AMD microprocessors. The study examines whether these demand shifts in the computer market had any impact on the competitive interactions between chip makers in the upstream market, with its derived demand. The empirical analysis is based on a model of competition with diffusion dynamics in the demand function. The empirical fit of a dynamic price leadership model is compared with the fit of the corresponding model of independent (Bertrand-Nash) pricing (developed by Eliashberg and Jeuland, 1986), and a model of price collusion. For some of the CPU competitor-pairs considered, a leader-follower model fits best, while in most cases an independent-pricing model has best fit. There is evidence that the higher the competitor's market-share in the downstream market, the more likely there is to be a leader-follower pattern in the upstream market.

2 - The Impact of Demand-Related Information on Marketing Decisions and Competitive Interaction

Vera Magin, Doctoral Student, University of Mainz, Germany, Jakob-Welder-Weg 9, Mainz, D-55099, Germany, magin@marketing-science.de, Oliver Heil, Reinhard Selten

This paper investigates how the provision of market research information on market demand influences competitive behavior, product development, and demand exhaustion in an oligopolistic market. We argue that more information about demand increases product innovation and exhausts the consumer demand to a larger degree. We also argue that more information leads competitive intensity to decline. We designed an experiment that entailed the market simulation 'Sinto Market'. Over 130 graduate business students participated in several runs. The game was played under two different conditions: In one condition, all three firms of the Sinto market received the same market research tool enabling each firm to predict future demand based on present data and predictions about competitors' future actions. Thus, no firm should enjoy an information-based competitive advantage. In the control group condition, the firms had almost no information at all about demand. In each condition, the game was played a total of 15 periods, each period comprising one business year. Our data analysis focuses on the number of products offered by the three firms, the degree of product differentiation/substitutability, demand exhaustion, advertising levels, pricing decisions, capacity levels, and aggregate profits. Our results show that the number of products and demand exhaustion increases as more demand information is provided. Interestingly and contrary to common belief, we find that competitive intensity increases as the availability of demand-related information grows.

3 - The Interaction between Consumers, Retailers and Manufacturers: A Multi-Agent Simulation

David Midgley, Professor, Area Coordinator, INSEAD, Marketing Area, Boulevard de Constance, Fontainebleau, 77305, France, david.midgley@insead.edu, Robert Marks

Our previous work has used the genetic algorithm to look at the competitive interaction between the manufacturers of branded, frequently purchased products. In these earlier models the behaviors of the remainder of the system—in particular the consumers and retailers—were modeled through empirically derived linear equations. This had the benefit of providing empirical grounding for the environment in which manufacturers compete but the drawback of representing individual consumer and retailer agents by aggregate equations rather than their own decision rules. In this paper we use the RePast platform to model all three sets of agents and their interactions through individual agent specifications. We ground these specifications and their decision rules on

the consumer psychology and behavioral decision-making literatures. We present some preliminary results from our simulations and compare these with our earlier work. We also discuss our on-going attempts to embed the complete simulation in an empirical estimation and testing framework, using ideas from the conditional simulation literature. Our ultimate goals are to assess the validity of our agent specifications when tested against real data but also to draw some insights on the nature of the phenomena generating these data.

4 - Duopoly Pricing under Risk Aversion and Parameter Uncertainty

S. Chan Choi, Rutgers University, 180 University Ave, Newark, NJ, 07102, United States, chancoi@rci.rutgers.edu, Sharan Jagpal

Most pricing models unrealistically assume that firms have complete information about demand functions, including their functional forms and parameter values. In practice, managers must make decisions given incomplete information about the demand for their own products as well as those of their rivals. This paper develops a duopoly pricing model in which each firm is risk-averse and faces parameter uncertainty about the demand for its own product as well as the demand for the rival's product. We address two basic managerial issues. How do parameter uncertainty and risk aversion affect firms' choice of behavioral mode (i.e., whether to play the Nash or Stackelberg games)? How is price strategy affected by simultaneous parameter shifts (e.g., changes in parameter uncertainty and in risk aversions)? The main results are threefold. First, the standard predictions of pricing models may not hold when firms face parameter uncertainty and are risk-averse. In particular, under well-defined conditions, there may be a "first-mover" disadvantage to the firm that attempts to be the Stackelberg price leader in the market, especially in a market where demand is highly uncertain. Second, uncertainty generally decreases equilibrium prices when firms are risk-averse. Third, although both prices and the variabilities of profits decrease when firms become more risk-averse, realized profits are generally higher.

■ FC12

Lund

Retailing 02

Chair: Dan Putler, Assistant Professor, University of British Columbia, Marketing Division, 2053 Main Mall, Vancouver, BC, V6T 1Z2, Canada, putler@sauder.ubc.ca

1 - A Model of Multichannel Retailing

Xubing Zhang, PhD Candidate, the University of Toronto, 105 St. George St., Toronto, ON, M5S 3E6, Canada, zhang@rotman.utoronto.ca

This theoretic research attempts to shed lights on the increasingly important phenomenon of multichannel retailing. I look at a multichannel retailer as one who has both a conventional channel and a delivery channel. A delivery channel offers convenience; it is where a consumer does not bother to pick up the goods at a store but instead places an order online, through telephone or fax, and waits for the goods to be delivered. My objective is to develop a framework that accommodates important factors so that pros and cons associated with the clicks-and-bricks model are highlighted. Key findings of the paper include: 1) the delivery channel has the differentiation mitigation effect (it mitigates stores' differentiation due to locations), but this negative effect can be offset by the differentiation enhancing effect (adding the delivery channel enhances retailers' differentiation on target segments and pricing), and 2) whether going multichannel is optimal hinges on consumer heterogeneity in price sensitivity. When consumer heterogeneity is small, adding a delivery channel may reduce one's market share, and a conventional retailer shall not go multichannel even if the cost of delivery is zero. The bigger the market heterogeneity is, the severer conventional retailers suffer from the competition for price sensitive consumers, the stronger the delivery channel's differentiation enhancing effect is, and thus the more likely going multichannel is lucrative. This paper examines the impacts of delivery channel's market coverage, vertical differentiation and information disparity between channels on retailers' multi-channel strategy. It offers important managerial implications.

2 - Contending With Demand Fluctuation and Missed Appointments: A Source of EOS in Service Industries

Scott Fay, Assistant Professor, University of Florida, 211 Bryan Hall, PO Box 117155, Gainesville, FL, 32611, United States, faysa@ufl.edu, Deb Mitra

Optimal scheduling plays a key role for many service industries, ranging from medical care to automobile repair. It is often difficult to ensure that supply is equated to demand since service retailers frequently face both anticipated and unanticipated demand shocks. Anticipated demand shocks come in many forms ranging from seasonal fluctuations to peak demand for service during certain periods of the day. Unanticipated

demand shocks may result from inconsistent walk-in rates or missed appointments. For physical products, overestimating demand may result in substantial inventory costs. However, oversupply for services poses even more severe financial risk since excess services are not storable. However, undersupply is also costly (both for products, in the form of stock-outs; and for services, in the form of prolonged waiting times and/or turning away potential clients). This research examines how differences in the cost of oversupply and undersupply affect scheduling decisions. For example, for a wide range of parameters, we find that undersupply is likely to be more prevalent for services than for products. More interestingly, we demonstrate that aggregating demand across individual service providers can mitigate the effect of demand shocks. Thus, a medical practice that contains a large number of physicians will be better able to handle unanticipated demand shocks than a smaller practice would be. Furthermore, we present empirical evidence that economies of scale play a vital role for a wide range of services.

3 - Something About Franchises Nobody Noticed

Roger Betancourt, Professor of Economics, University of Maryland, Department of Economics, College Park, 20742, United States, betancou@econ.umd.edu

We show that most business format franchise contracts require a substantial initial investment by the franchisee. We also show that the theoretical literature on business format franchises has ignored this feature. Similarly, we show that the empirical literature on business format franchises has also ignored an important implication of this feature. Namely, the endogeneity of the initial investment by the franchisee in determining the choice of mode of operation in a channel. We also show how the earlier literature on product trade name franchises, however, provides a simple explanation for this phenomenon. For instance, in the case of gasoline stations a royalty fee is a main feature of the franchise contract which ensures that the manufacturer provides a desired level of a distribution service. Similarly, and more importantly, in the case of automobile dealers the substantial initial investment in showroom and repair facilities by the franchisee is a mechanism to ensure that the retailer provides a desired level of a distribution service. In the case of business format franchises a substantial initial investment by the franchisee plays exactly the same role as in the case of automobile dealerships.

4 - Geodemographic Market Analysis Methods for Niche Marketing Strategies

Dan Putler, Assistant Professor, University of British Columbia, Marketing Division, 2053 Main Mall, Vancouver, BC, V6T 1Z2, Canada, putler@sauder.ubc.ca, Kirthi Kalyanam

Increasingly, organizations that have marketing programs elements that are carried out at specific locations are using geodemographic based estimates of household spending potential to develop their marketing and business plans. Currently, geodemographic data suppliers provide total spending and average per household spending estimates for very small areas. While these figures are useful to firms following a mass marketing strategy, other firms follow a niche-oriented strategy in which they target customers within certain spending ranges. For instance, 'high-end' retailers are interested in the number of households in an area that spend over some threshold amount. In these situations, firms are more interested in the expected distribution of spending on a category, not just the average level of spending. It would seem that the expected average per household spending level should be highly correlated with the expected percentage of households with spending above a given threshold level, our results indicate that this correlation is fairly low. We present methods to estimate the expected distribution of household spending in an area. As with current potential spending estimates, the methods begin by estimating a household spending equation for a category using expenditure survey data. Unlike these estimates, our models allow us to assess not only the level of spending, but also the variance in spending. We use two different approaches, the first is an extension of Amemiya's Type II Tobit model that allows for a non-constant error-variance in households' conditional spending amount. The second approach uses a probabilistic mixture of log-normal distributions.

Friday, 15:30pm - 17:00pm

■ FD01

Forum

Special Session: The Immediate and Longer Term Impact of Different Promotion Tools

Sponsored by Erasmus Food Management Institute

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

Co-Chair: Karen Gedenk, Professor of Business Administration & Marketing, University of Frankfurt/Main, Department of Marketing, Mertonstr. 17, Frankfurt, 60054, Germany.

1 - How Promotion Profitability Varies: Role of Promotion, Brand, Category, and Market Characteristics

Kusum Ailawadi, Associate Professor, Tuck School at Dartmouth, 100 Tuck Hall, Hanover, NH, 03755, United States, kusum.ailawadi@dartmouth.edu, Bari Harlam

A retailer runs hundreds of promotions each week on a subset of the thousands of items across multiple brands and categories it carries in each of its stores, and must decide what to promote, when, in which store, and using what kind of promotion. The retailer is concerned with the sales and margins of all the brands in the category, including its own store brand, and, indeed, with the total sales and margin across all categories in the store. Evaluating the impact of individual promotions and designing profitable ones are therefore challenging tasks. The purpose of this paper is to predict the profitability of a promotion to a retailer. Using data on promotions offered by a major retail chain over a two year period, we (a) quantify the immediate bump in unit sales of a promoted brand; (b) decompose this bump into current period and pre-emptive switches from other brands, pure stockpiling of the promoted brand, and increased primary demand for the store; (c) estimate the "halo" effect of the promotion, i.e., the extent to which it increases sales of other products in the store; (d) account for margin differences across brands, implementation costs, and the monies provided by the manufacturer to estimate the total profitability of the promotion; and (d) develop a model to predict the total profitability of a promotion and each of the above sales components based on the characteristics of the promotion, brand, category, and market.

2 - Are Consumer Spoiled by Promotions? An Assessment of Time-Varying Promotion Sensitivities

Baohong Sun, Assistant Professor, University of North Carolina at Chapel Hill, Chapel Hill, Chapel Hill, NC, United States, sunb@bschool.unc.edu, Woosong Kang, Bill Putsis

Both theoretical and empirical works have shown that consumers' sensitivities to promotions are not stable. Assuming constant promotion sensitivities, most existing choice models examine the persistent effects of promotions on consumer choices by allowing promotions to affect purchase feedback, reference price, consumption increase, perception of product quality etc. However, not enough attention has been given to studying whether consumer price and promotion sensitivities change over time. In other words, it is unclear whether consumers can simply be trained to be more price and promotion sensitive over time. In this paper, we propose an individual choice model allowing the vector of promotion variables to be adaptive in nature, subject to permanent and transitory changes (Cooley and Prescott 1973). We are interested in studying whether promotions alter consumer promotion sensitivities. And if they do, how do promotion sensitivities evolve over time and how do they vary across different promotion tools? We are also interested in separating permanent change of promotion sensitivities from temporal change and examining what proportion of the change stays persistently. In addition, we examine the spillover effect or the co-movement effect of different promotion tools. Applying the model to a frequently purchased product category with new product introduction, we explore and compare the evolution of sensitivities to various promotion tools for the new and existing products. The empirical findings guide managers to select the most effective promotion tools at different stages of product lifecycle.

3 - Price Cut Proxy or Consideration Set Screening: How Promotions Affect Consumers' Brand Choice

Jie Zhang, Assistant Professor, University of Michigan Business School, Ann Arbor, MI, United States, jiejie@umich.edu

Although many studies have documented that in-store displays and feature advertising can significantly increase brand choice probabilities, the mechanism through which they affect the choice decision process is not well understood. The marketing literature has suggested two plausible decision mechanisms through which their effects take place, which I call: the price cut proxy effect and the consideration set screening effect. The focus of this study is to examine these two decision mechanisms based on scanner panel data of actual purchase behavior. I construct a brand choice model based on the behavioral premises of each effect and assess the probability of using each decision mechanism by different consumers. The model allows consumers to use a combination of various decision processes with different probabilities, and accommodates the correlations in utilizing different decision mechanisms of display and feature ad. Results of the empirical analysis reveal distinct consumer segments with regard to their tendencies to use display and/or feature ad as price cut proxy or consideration set screener, and the pattern is consistent with consumer characteristics in each segment, such as degree of state dependence and price sensitivity. These findings shed light on some seemingly contradicting results on promotion interaction effects in the literature, and also have important implications for designing efficient in-store display and feature ad promotion decisions.

4 - The Effect of Multi-Item Promotions on Brand Choice and Purchase Quantity

Karen Gedenk, Professor of Business Administration & Marketing, University of Frankfurt/Main, Department of Marketing, Mertonstr. 17, Frankfurt, 60054, Germany, gedenk@wiwi.uni-frankfurt.de, Uta Mahler

From the price promotion literature we have accumulated a vast knowledge about temporary price reductions (TPRs) and coupons. However, we still know little about the effects of multi-item promotions on sales. Many retailers and manufacturers use these promotions, where consumers pay a lower price if they buy more than one unit of the promoted product. We investigate the effect of two different types of multi-item promotions ('Buy two—get one free' and 'Three for the price of two') on sales. Our analysis is based on experimental survey data from 4 product categories. We (1) compare the two multi-item promotion frames with each other as well as with TPRs, (2) analyze the effect of these types of promotions on brand choice and purchase quantity, (3) investigate the impact of consumer characteristics on the promotion effects.

FD02

Tokyo

Innovation 03

Chair: Arvind Rangaswamy, Jonas H. Anchel Professor of Marketing, Penn State University, 707D, BAB, The Smeal College of Business, University Park, PA, 16802, United States, arvindr@psu.edu

1 - The Economics of Self Destruction: Radical Bets and Strategic Hedging in Network Industries

Chander Velu, Judge Institute of Management, Trumpington Street, Cambridge, CB2 1AG, United Kingdom, c.velu@jims.cam.ac.uk, Jaideep Prabhu, Rajesh Chandy

New technologies can dramatically change established business models. The extent of this change is often uncertain. When responding to new technologies, incumbents firms in an industry are therefore confronted with important choices: 1) should they leverage the new technology to radically change the existing business model, or 2) should they use the new technology to merely make the existing business model more efficient? Firms also have to decide whether to hedge their bets: should they pursue both choices, or just one? They can either bet narrowly, and ensure a strong commitment toward the success of a particular investment, or hedge their bets, and ensure the presence of an alternative in case one investment fails. These choices are particularly challenging for firms in industries with network effects, which have a tendency to display 'winner-take-all' outcomes. We develop a game theoretic model to analytically derive propositions about these issues. We show that in the presence of network effects, dominant incumbents have an incentive to leverage the new technology to radically change the existing business model, as well as to make narrower bets. We also present a detailed empirical analysis of the behaviour of investment banks in the electronic trading of fixed income (bond) products to support our theoretical results. Our findings challenge some widely held views about how dominant firms respond to new technologies.

2 - Product Newness Characteristics and their Effects on Market Success over Time

Anne Michaut, Assistant Professor, HEC, School of Management, 1, Rue de la Libération, Jouy-en-josas, 78350, France, michaut@hec.fr, Hans C.M. Van Trijp

This study explores the effect of product newness assessed by consumers on new product market success. It hypothesizes that perceived newness is a two-dimensional (rather than unitary) construct and that its two dimensions (1) mere perceptual newness and (2) perceived complexity, have different effects on market success over time. We develop hypotheses and test them on a data set of 151 new packaged goods introduced into the market in 2000 for which we have access to monthly market share and promotion data up to 12 months after market introduction. Data were analyzed with hierarchical linear modeling to determine whether a differential effect of these two dimensions on market success can be identified over time. This should be of interest for new product development decisions, and new product marketing. Consistent with the hypothesis, the analysis revealed evidence for an inverted-U diffusion curve over time, independently from the level of mere perceptual newness or complexity. Our findings emphasize the negative effect of complexity in the short run for new products. In the longer run however, it appears that complex products keep gaining success. Specifically we find that after one year, complex products are still in the increasing part of the inverted-U whereas products initially generating a good comprehension are in a decreasing phase already. In addition, the mere perception of newness does not appear to have a significant effect on the shape of the diffusion curve.

3 - Disentangling the Dimensions of Radical Innovation

Stefan Wuyts, Assistant Professor, Erasmus University Rotterdam, Burgemeester Oudlaan 50, Rotterdam, SW, 3062 PA, Netherlands, wuyts@few.eur.nl, Shantanu Dutta

Inspired by the importance of radical innovation for technology-intensive markets, a rich innovation literature has developed in diverse disciplines including economics (Henderson 1993), management science (Dewar and Dutton 1986) and marketing (Chandy and Tellis 1998, 2000; Wind and Mahajan 1997). An overview of this literature indicates that two dimensions underlie radical innovation: technological novelty and superior need fulfillment (Chandy and Tellis 1998). More precisely, radical innovations incorporate a substantially different core technology and provide substantially higher customer benefits/efficacy relative to previous products in the industry. The need to excel in terms of both technological novelty and superior efficacy turns radical innovation into a major challenge. We identify and address two important gaps in the radical innovation literature. First, even though there is a general understanding that technological novelty and superior efficacy represent two distinct dimensions (Gatignon et al. 2002), there has been no research into their respective drivers. We disentangle both dimensions and hypothesize on each dimension's distinct drivers. Second, prior innovation studies have typically focused on either firms' internal knowledge development processes or on their external knowledge sourcing activities. We consider internal knowledge development and external knowledge sourcing jointly and study their respective roles in generating radical innovation. An empirical test in the pharmaceutical industry supports our claim that technological novelty and superior efficacy are distinct dimensions with different drivers. Our findings provide clear guidelines as to how firms might excel along both dimensions.

4 - A Model of the Emergence and Evolution of Dominant Designs in Networked Markets

Arvind Rangaswamy, Jonas H. Anchel Professor of Marketing, Penn State University, 707D, BAB, The Smeal College of Business, University Park, PA, 16802, United States, arvindr@psu.edu, Gary Lilien, Raji Srinivasan

In many markets, technological developments result in a single product design which emerges as the dominant design. The emergence of the dominant design is especially important in winner-take-all networked markets. In this paper, we investigate the factors that influence the timing of the emergence of the dominant design in networked markets. We develop a model for the evolution of the dominant design in a networked market that simultaneously models the probability of emergence of the dominant design and the timing for the emergence of the dominant design, conditional on its emergence. Our model incorporates the effect of characteristics of the product on the process of dominant design evolution including network externalities of the product, radicalness of the product innovation, appropriability regime of the product design on the emergence of the dominant design. We estimate a split population hazard model using data on sixty seven office and consumer durables products using a parametric accelerated failure time model.

The results of the model estimation support our model indicating that the characteristics of the products influence both the probability of emergence of its dominant design and the time to emergence of the design. Our findings have important implications for theory and managerial practice which we discuss.

■ FD03

Athene

Internet 04

Chair: Romana Khan, Kellogg School of Business, 2001 Sheridan Road, MKTG/Leverone, Evanston, IL, 60637, United States, r-khan@northwestern.edu

1 - Automatic Construction of Personalized Customer Interfaces

Bob Price, Post Doctoral Fellow, University of Alberta,
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price@cs.ualberta.ca, Gerald Häubl, Russell Greiner

Customer interfaces, whether physical retail outlets or online storefronts, help shoppers to search the assortment of products sold by the store. The design of an effective interface requires careful tradeoffs between products and navigation structures. The standard approach is to create a single interface that is identical for all shoppers, guided by what is deemed to be most suitable for the average customer. Naturally, such an interface tends to be suboptimal for almost all shoppers. Electronic shopping environments, however, offer the opportunity to create personalized customer interfaces with a unique store layout for each individual customer, tailored to his or her needs, preferences, and interests. We show how such personalized interfaces can be constructed automatically and in real time using a model of the shopper-interface interaction and a record of the customer's past buying behaviour. This technology will tend to be most useful in the presence of (1) a large product assortment, (2) multi-item purchases, and (3) a substantial amount of preference heterogeneity among shoppers. We introduce a sufficient set of features for representing a personalized customer interface, show how the interface can be viewed as a dynamic language created between the user and the system, and demonstrate how formal decision-theoretic techniques can be used to optimize this language. We illustrate the proposed technology in a typical repeated multi-item purchase setting (grocery shopping), and show how our approach can be used to optimize the online grocery shopping experience for consumers through minimizing, on a user-by-user basis, the effort required to fill their weekly shopping baskets.

2 - Market Experimentation and Adaptive Design of Sites

Mahesh Kumar, MIT, E56-345F, MIT, 38 Memorial Drive,
Cambridge, MA, 02142, United States, maheshk@mit.edu,
Glen L. Urban, Iakov Bart, Fareena Sultan

We propose a methodology to continuously improve Internet sites. It builds upon the adaptive learning methods used in quality assurance. Experiments are designed, market experimentation is done, analysis is conducted with Logit regression based on click stream measures and attitude survey analysis, the site is revised and new experiments are done. We have applied our methodology to Intel's customer support site (over 1 million visitors per month) and conducted five experiments over two and a half years at the PC Camera portion of the site. Customers come there to download basic PC camera drivers, plug-ins, or add-ons. Only 66% of the visitors are successful in this task. In the experiments, we added sequentially: 1. trust seals, 2. navigation tips, 3. a wizard (logic and picture to ID cameras), 4. a persona called Rosa (static picture with wizard logic), 4. a talking persona (Rosa with audio). We analyzed the click stream data to determine treatment effects and the survey data to determine what website and consumer characteristics drive trust, and how trust building contributes to download success. We examined the trust building mechanisms underlying users' response and experimental treatment effects by a Markov model of the transition from correct identification of the product to actual transmission of the download. The treatment effects for the wizard and Rosa with audio were significant and raised the success rate from 66% to 84%, resulting in savings of millions of dollars by averted calls to the service center and visits to channel members.

3 - Newspaper Readership in a Multichannel Environment: Reader's Motivations, Behavior and Channel Choices

Raquel Gurra Sarasa, Profesor University of Zaragoza, Gran Vía, 2,
Zaragoza, Z, 50005, Spain, gurra@unizar.es, Carlos
Flavián-Blanco

Press business is one of the activities which has had a strong influence on the development of the Internet as a means of communication. The emergence of new digital media has entailed substantial changes in this activity and companies are bound to face new challenges and opportunities due to the advantages the electronic media offers, both for supply

and demand. Despite the advantages of the format, we have to consider that the increasing digital information offer along with free access have produced a fear of a possible cannibalisation of readers by both information formats. However, in the present work we do not deal with the problem in terms of the offer as in previous works (Deleersnyder, Geykens, Gielens and Depimke, 2002), but from the perspective of the demand. This enables more analysis opportunities and knowing better the readers' reactions to both offers, the motivation for each format. All in all, an important number of questions related the press reader's behaviour in both traditional and digital formats. Considering the remarkable interest of this research field, the present work focuses on analysing: the readers' reasons to choose one of the formats; the possible relation between reading objectives and the format, and the effect of the creation of a new digital edition on the readers of the paper edition. The information compiled enables us to progress in the analysis which is developed with a structural equation model to establish and know the relations between different scales designed to measure the concepts.

4 - Customizing the Marketing Mix in a Digital Environment

Romana Khan, Kellogg School of Business, 2001 Sheridan Road,
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Internet retailers have the ability to customize key elements of the marketing mix, such as exposure to banner ads, targeted email, shipping and handling fees, and price promotions. Using data from an online retailer, we analyze the impact of these factors on the interpurchase time and basket size. Results show that each element of the marketing mix influences purchase behavior, but there is significant heterogeneity in responsiveness to each element of the marketing mix across individuals. Overall, the structure of shipping and handling fees has the most significant impact on purchase incidence and the distribution of order size. We demonstrate the impact on total orders and sales from customizing the marketing mix to each customer.

■ FD04

Rochester

Choice 05

Chair: William Putsis, UNC Chapel Hill, CB 3490, Chapel Hill, NC, 27599, United States, William_Putsis@unc.edu

1 - Linking Marketing and Engineering Product Design Decisions via Analytical Target Cascading

Fred Feinberg, Associate Professor, University of Michigan Business School, 701 Tappan Street, Room 2422, Ann Arbor, MI, 48109, United States, feinf@umich.edu, Jeremy Michalek, Panos Papalambros

Firms design products that appeal to consumers and are feasible to produce. Resulting marketing and engineering goals are driven, respectively, by consumer preferences and engineering capabilities, two issues which are conveniently addressed in isolation from one another. However, this convenient isolation will typically not result in optimal product decisions when the two problems are interrelated. A method new to the marketing community, Analytical Target Cascading (ATC), is adopted to explore such interrelationships and formalize the process of coordinating marketing and engineering design problems in a way that is proven to approach the joint optimal solution. The ATC model is built on top of well-established marketing methodologies, such as conjoint analysis, discrete choice modeling and demand forecasting. The method is illustrated in the design of dial-readout household scales, using choice-based conjoint data and a parametric engineering product design model. Results indicate that the most profitable achievable product can fall short of predictions based on marketing alone, but well ahead of what engineering may produce based on original marketing specifications. A number of extensions—particularly, using Hierarchical Bayesian techniques to account for heterogeneous preferences and product line optimization—can be readily accomplished using techniques from the extant marketing and design optimization literature.

2 - How to do Better than Recommending the k-Highest Expected Utility Items

Paul Messenger, University of Alberta School of Business, 3-20E School of Business Bldg, Edmonton, AB, T6G 2RB, Canada, paul.messenger@ualberta.ca, Bob Price

We improve on current e-commerce practice of providing recommendations ranked solely in order of highest expected utility. Our search algorithm (which we call 'Best Subsets'), instead, displays a targeted, but diversified, set of product recommendations that is more likely to help websites satisfy customer needs.

3 - Decomposing Brand Equity into its Breadth and Depth Dimensions

John Roberts, Professor, Australian Graduate School of Management and London Business School, University of New South Wales, Sydney, NS, 2052, Australia, johnr@agsm.edu.au, Murali Chandrashekar, Pamela Morrison, Alistair Gordon

With the recent emphasis on the power of brands and the source of that power in terms of consumer-based brand equity has come an increased trend to calibrate and track brand equity. For example, A C Nielsen has computed brand equity indices for hundreds of products and services using its Winning Brands methodology. However, it is possible for two brands of equal overall strength to derive their position in the consumer's mind in very different ways. One brand may have a reasonable preference across the whole population, while the other may be highly preferred by a small segment of the population. It is critical to brand managers to understand not only their brands' overall market power but also how it is divided between breadth (a wide target appeal) and depth (strength of appeal amongst that target). This study uses cross sectional data to analyse the distribution of brand equity in terms of these variables of depth and breadth issues. It then proceeds to look at the distribution of consumer tastes and beliefs to establish the relationship between this two dimensional brand centric view of the market and a segmentation-based consumer centric view. We examine the characteristics of niche brands (highly preferred in a small segment), everyday brands (moderately preferred across the whole market), and brand leaders (highly preferred across the whole market) in terms of strength and uniqueness of associations, consideration and awareness levels, and brand equity outcomes.

4 - Analyzing Consumers' Perceptions of Genetically Modified v. Non-Genetically Modified Foods

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Genetically modified (GM) foods represent a controversial topic in agricultural trade, particularly between US and Europe. Prior research shows that consumer attitudes toward GM foods in US and Europe generally mirror the sharp difference in respective government policies i.e., US consumers hold more favorable views than their UK counterparts. Using a web-based UK research panel, we sought respondents' perceptions of GM foods. Panel respondents were randomly assigned to choice based conjoint tasks involving one of three food categories: breakfast cereal, milk, and beef steak. The categories were deliberately chosen to accommodate the following: a food that may be (a) produced from GM crops (breakfast cereal), (b) produced by an animal fed with GM crops (milk), and (c) an animal fed with GM crops (beef steak). The conjoint attributes included price, percentage of GM component in the food, brand, calories per serving, and whether or not a food label containing risk/benefit information was provided. Using theories from psychology, we propose and test hypotheses that predict variations in consumers' perceptions and utilities across the three chosen categories. We also analyze relationships between respondents' conjoint utilities and their (a) attitudes toward GM foods, (b) responses to two broad questions involving the contingent valuation method: willingness to pay (WTP) a premium for Non-GM foods, and willingness to accept (WTA) a discount for GM foods. We formally test whether these relationships are moderated by respondents' weekly consumption of these foods and other demographic characteristics. Implications for forecasting demand for GM foods in Europe are presented.

■ FD05

Santander

Advertising 02

Chair: Puneet Manchanda, University of Chicago, Graduate School of Business, 1101, E. 58th Street, Chicago, IL, 60637, United States, puneet.manchanda@gsb.uchicago.edu

1 - Informative Advertising in U.S. Pharmaceuticals

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Traditional models of consumer choice assume consumers are aware of all products for sale. This assumption is debatable in an industry such as the pharmaceutical industry where markets are characterized by a high degree of innovation and learning is important in drug maintenance therapies. I present an empirical discrete-choice model of limited information on the part of patients and physicians, where advertising influences the set of drugs from which a purchase choice is made. Multi-product firms choose prices and advertising to maximize their profits. I apply the model to the U.S. antidepressant market. The antidepressant market has experienced an impressive stream of innovations over the last three decades and available data on antidepressants are exceptionally rich and accurate. The estimation technique incorporates both macro- and micro-level data. Preliminary estimates indicate that pharmaceutical firms use advertising media to target high-income households and households with more comprehensive prescription drug insurance schemes through their physicians or directly.

2 - The Role of Sales Effort in Physician Learning and Drug Prescription Behavior

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Prescription drug market is characterized by constant changes. New drug launches, drug benefit extensions, and continuous clinical findings affect physicians' efficacy perceptions over time. We develop a model of physicians' learning behavior and study the role of personal selling in the learning process. We find that physicians are characterized by differential learning tendencies. Increased learning tendencies are associated with decreased detailing responsiveness. High volume prescribers have higher learning tendencies than others.

3 - Estimating the Effects of Direct-to-Consumer Advertising for Prescription Drugs: A Natural Experiment

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In August 1997, the FDA allowed brand specific advertising on TV. Since then Direct-to-Consumer (DTC), as well as total sales of these drugs have gone up substantially. This simultaneous rise in DTC spending and prescription drug sales has resulted in a heated debate among medical practitioners, in the US Congress, and the popular press. One side claims that DTC ads create demand for drugs that may not even be necessary while the other side claims that DTC ads increase consumer knowledge and information. The first view has been called the persuasive view of advertising and the second the informative view of advertising. It is not clear whether DTC ads are informing the consumer about the product or are simply persuading them to buy the advertised brand. In this paper we ask, Is DTC advertising informative or persuasive? We build a structural model to address this issue. In the model we start with an individual's choice between competing brands and aggregate up to market demand. We use monthly data on four Statins (cholesterol reducing drugs) to estimate the model and compare the price elasticity of demand before and after the 1997 policy change on DTC. We find that DTC advertising increases price elasticity of demand. Thus, our results suggest that DTC advertising plays an informative role.

4 - Multi-Category Prescription Behavior: A Brand-level Analysis

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A major focus of marketing activity in the pharmaceutical industry is on the largest segment of physicians—primary care physicians, family practitioners and general physicians. This is because these physicians write prescriptions across a wide variety of product categories and account for a significant proportion of all prescriptions in large therapeutic categories such as anti-histamines. In order that firms can target these physicians optimally, it is important to understand the differences across physicians that lead to differing levels of prescriptions. For example, it is possible that some physicians are intrinsically heavy prescribers while

others prescribe only in response to marketing activity. Another reason could arise from differences in the level of competitive detailing across physicians. However, there is little research that has investigated this question systematically. The number of prescriptions written by a physician in a given time period is usually represented by a non-negative integer. To investigate this question, therefore, we develop a correlated count data model (in a hierarchical Bayesian framework) at the individual physician and brand level. The model allows for physician response to be correlated across different therapeutic categories via both observed and unobserved factors. We estimate our model on a new and unique physician-level dataset that provides us information on marketing activity (such as detailing, sampling and meetings), physician characteristics and patient characteristics. We discuss the implications of our findings for resource allocation and physician targeting.

■ FD6

Shangai

CRM 06

Chair: Eitan Gerstner, Professor, University of California, Davis, GSM, University of California, Davis, CA, 95616, United States, egerstner@ucdavis.edu

1 - A Multi-Level Model of the ROI of Relationship Marketing Investments

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Relationship marketing (RM) in business practice and as a focus of academic research has undergone 'explosive growth' over the past decade. The implicit belief is that RM efforts are somehow linked to improved financial performance. In 2002, 'assessing marketing program productivity/ROI' was the top-rated topic among several important research domains considered by the Marketing Science Institute. The purpose of this study is to empirically examine the ROI of different types of RM programs and to investigate strategies that firms can employ to leverage these investments. We investigate the relationship between RM investment and profit including moderators of this relationship across three levels of nested data (customer, salesperson, and selling firm) utilizing hierarchical linear modeling (HLM). HLM allows the effects of explanatory variables at all three levels to be tested simultaneously in a single model. We show that financial RM investments generate higher levels of ROI when customers are more committed to the seller and structural RM programs have higher levels of ROI when customers interact more frequently with the seller. Salesperson's ownership interest in the selling firm and the selling firm's employment of a customer relationship management (CRM) system are shown to positively moderate the relationship between financial RM investment and profit. The sample is especially appropriate to test our multi-level conceptual model as data was collected from three different sources on 313 customers covered by 143 salespeople from 34 selling firms. We also discuss implications for optimally allocating investments across the three components of the RM mix.

2 - Evaluating the Impact of Sales Channels on Customer Profitability

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The objective of this presentation is to identify the sources of profitability differences between offline and online customers in order to allow for the development of efficient and effective channel management strategies. Therefore, we distinguish between the profit contribution due to the self-selection effect and due to the so called channel effect. The former effect occurs if online customers have always been the more profitable customers, whereas the latter arises if online customers are more profitable because they started to use the online channel. The distinction between those two effects allows us to evaluate the impact of the online channel on customer profitability. If the self-selection effect exists a simple comparison between the profitability of online and offline customers is misleading. One way to account for selection biases is the use of matching algorithms that evaluate the causal effect of a treatment which is here represented by the use of the online channel. We conduct a large empirical study together with a German retail bank. The preliminary results indicate that both effects exist and that selection bias is a serious issue in the area of performance measurement. We contribute to the existing research by eliciting the self-selection effect and channel effect with matching algorithms and by evaluating the true impact of an online channel on customer profitability.

3 - Investments in Customer Relationships and Product Competition

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Advances in information technologies and increasing adoption of such technologies by firms and consumers have opened a myriad of possibilities for firms. Armed with information on consumer preferences firms now have the ability to target their marketing-mix to individual consumers. Recent research has examined how the use of such information in customizing prices (Chen and Iyer 2002, Villas-Boas 2003) and products (Syam and Kumar 2004) affects competition between firms that employ such strategies. However, in these studies the cost of acquiring such information and firms' investments in technologies that provide incentives to consumers to reveal their preferences has not been explicitly incorporated. Understanding the strategic forces that influence firms' decision to make investments in customer relationships is important as there is a trend in the business community to devise strategies that recognize that very often, interactions with customers are repeated and so incorporating the lifetime value of consumers should be factored into the decision making process. We define relationship scope as the set of consumers that firms target to customize their marketing mix and relationship intensity as the investment that firms make to lower consumers' costs of interacting and exchanging preference information. Our analysis sheds light on how market factors and lifetime value of consumers influence firms' choice of relationship scope and intensity in a competitive setting and the effect that these factors have on the nature of competition.

4 - Service Escape: Profit from Customer Cancellations

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This paper explores the benefits of letting customers escape from pre-purchased service contracts by offering refunds for cancellations. We show that such a policy creates opportunities for multiple selling in a capacity-constrained service (i.e., collecting cancellation fees from advance buyers who cancel, and then reselling the freed slots). The better the alternative that motivates a cancellation, the higher the optimal cancellation fee and the resulting profit from offering refunds for cancellation. Such refunds can be profitable even when advance buyers would be willing to abandon the service for no refund. Compared with a no-refund policy that 'locks-in' customers, refunds-for-cancellations can improve capacity utilization and lead to a "win-win" situation where both the seller and buyers gain and social welfare increases. In contrast to previous research on money-back guarantees for durable goods, we show that offering refunds for service cancellations (a) can be optimal even if the optimal price under refund is less than that under a no-refund policy, (b) motivate service providers to decrease rather than increase the hassle cost associated with customer cancellations, and (c) allows service providers to benefit rather than lose from customers who cancel.

■ FD07

Hull

Pricing 05

Chair: Tarun Dewan, Associate Professor, School of Business Management, Ryerson University, 350 Victoria Street, B-722, Toronto, ON, M5B2K3, Canada, tdewan@ryerson.ca

1 - Separating Informational and Allocative Effects of Price

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It is well known that prospective buyers use the price of a brand both as a signal of quality as well as a monetary constraint in the brand choice. These two distinct roles of the price in consumers' evaluation of alternative offerings in the marketplace can be labeled as the informational (signal) role of price and the allocative (constraint) role of price (Rao and Sattler, 2003). While these roles are conceptually distinct, their measurement becomes confounded due to the difficulties of empirically isolating these two contrary effects. In practice, only the net effect of price is estimated (for example by using conjoint analysis). The two main objectives of our research are 1. to present a new methodology in a choice-based conjoint setting to isolate and estimate separate effects of price and 2. to test the proposed model in an empirical setting in a large representative sample. The analysis requires collecting choice data from

three alternative scenarios: a setting with budget constraint, another without budget constraint and a further scenario with the elimination of the informational role of price. Based on the three consequential estimated preference functions price elasticities respectively price effects can be inferred. We estimate the price effects using three different approaches: an aggregate multinomial logit model, a latent-class approach and a hierarchical bayes estimation.

2 - A Cross European Comparison of Price Levels and Price Dispersion Among Bricks-and-Clicks, Pure Play and Multichannel Retailers

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Despite the initial predictions on the emergence of a frictionless economy on the Internet, prior research shows price levels and dispersion are generally no lower online than offline and that price dispersion is persistent among e-tailers. We empirically analyze the differences in price levels and dispersion among three different type of retailers, bricks-and-mortar, pure play Internet, and multichannel retailers, using a dataset of more than 16,000 price quotes in the book category from two European countries, France and Italy. Our results show that although list prices are lower online than offline, the difference is very small. When shipping costs are included, prices are higher online than offline. The lower online list prices may be due to increasing product maturity online and growing Internet efficiency. Our results are consistent with prior research in that price levels at pure play e-tailers are lower than they at multichannel retailers. This result is invariant to the computation of prices. With regard to price dispersion, however, there are interesting differences across countries. When list prices are considered, standard deviation is slightly lower online than offline in France, but higher in Italy. Price dispersion, however, seems to be persistent online. We conclude that although the Internet has an efficiency effect on price levels and dispersion over time, the results still do not confirm the frictionless online commerce hypothesis and that there are interesting differences across countries.

3 - The Differences in Price Elasticity among Segments using Two-Part Tariff

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Although the existence of price elasticity under linear pricing is well documented, the attempt to explore the price elasticity among segments under non-linear pricing schema for a given brand has been relatively rare. Focusing on the two-part tariff in non-linear pricing, we estimate the differences in price elasticity among segments. To test our findings under consumer behavior perspective, we use two types of data set, purchase intention and purchase data in the Korean stock market and mobile phone traffic data, respectively. First, to estimate the differences in price elasticity among segments, we develop a conjoint and mixture-based model. Using the conjoint based questionnaire reflecting the two-part tariff, we collect the transaction intention data from 400 samples. By testing the differences in mean choice probabilities in the South Korean on-line stock market from conjoint measurement approach, we can identify that among 4 segments, one of them show the price elasticity to only fixed charge, while one of them show price elasticity to only marginal price. Others show the unique price elasticity to both fixed charge and traffic price. Second, to test the differences in price elasticity among segments using mobile phone traffic data, we collect 1000 mobile phone traffic data from four endorsed brands of SK Telecom in 2000-2003. The four brands have the typical two-part tariff (i.e., the fixed charge plus the traffic price). The mixture model identifies eight segments showing the unique price elasticity within four brands. Among 8 segments, two of them show the price elasticity to fixed charge, while the others show price elasticity to traffic price.

4 - Pricing a Bundled Menu: Is More Consumer Choice Profitable?

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Bundled Price Menus are offered to consumers by phone, wireless and cable companies. This paper examines the profitability of bundled price menus in a competitive setting. We discuss conditions under which greater consumer choice and flexibility is more profitable for the firm.

■ FD08

Baltimore

Marketing Research 06

Chair: Jörg Henseler, Lecturer, University Of Kaiserslautern, Department of Marketing, Gottlieb-Daimler-Str. 1, Kaiserslautern, 67663, Germany, henseler@sozwi.uni-kl.de

1 - Who is Afraid of Changes? - Risk Attitude, International Market Orientation & Export Performance

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Information is an increasingly important input in international marketing. Cadogan & Diamantopoulos (1995) offer an export-oriented measure of the well-known concept of market orientation, consisting of four components, namely export intelligence generation, dissemination, responsiveness, and a coordinating mechanism. Cadogan et al. (1999) find international marketing orientation to improve export performance. Much research in this area is based on SMEs. However, little is known about the role of the owner-manager in this information collection process. We focus on the manager's risk attitude, the manager's information behavior, and the SME's export performance. We use the Interstratos data set, consisting of three year panel data on 1125 European SMEs. To account for the item non-response a multiple imputation approach is applied. Using a Bayesian approach, NORM (Schafer 1997) simulates three times, creating three versions of the complete data. One data set is input for model building and testing; the other two serve to validate the robustness of the parameters found. After imputation, the constructs are validated. The second step consists of building two structural MIMIC models to test the integral framework. The respondents used only a small part of all possible information providers, with an emphasis on formal information sources on the domestic market and on intelligence sources in the foreign environment. We also find that (foreign) export information improves export performance. Risk attitude impacts information behavior, but export performance only partly. Information collected in the previous year has a lagged effect on export performance, and previous export performance positively affects the amount of information sought in the year hereafter.

2 - Learning from Self and Learning from Others: A Case of Inter- and Intra-firm Diffusion

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The adoption patterns of new technological products, especially consumer durables, have received a great amount of attention in the past few decades. A common assumption in this literature is that each decision-making unit adopts the product only once (and then exits the market). However, such a simplification is not possible for industrial goods (e.g. fax machines, copiers etc.), for which firms make multiple purchases over time. Initially, firms might purchase the product in limited quantities (to try out) and then slowly increase the purchase rate as per requirement. In this paper, we investigate the factors that govern the initial and subsequent adoption rates of industrial products by firms. We assume that, at the outset, firms are uncertain about the profitability of a new product. This uncertainty creates a hurdle for the initial adoption of a new product. As number of adoptions of the new product increases (both within and outside the firm), the decision-making entities are better informed (i.e. they learn) about the product's benefit. Moreover, as the price of the new product falls over time, the net benefit of the product further increases. Hence, the rate of adoption increases over time. We calibrate our model on a data set that contains the adoption pattern of a new product by individual firms. The results provide important insights into the interaction of 'tangible benefits' and the learning process that govern the diffusion of new industrial products. We find that the initial adoption (inter-firm diffusion) is largely governed by the learning process. The intra-firm diffusion, on the other hand, is governed more by the temporal evolution of the net benefit from the product.

3 - Formative Measurement Models under Multicollinearity Conditions - The Case of Service Quality

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Structural Equation Modeling (SEM) is widely used in empirical studies, but few studies use formative indicator measurement models, even though they should (Jarvis et al., 2003). In contrast to reflective indicators, where the latent variable causes the observed variables, formative indicators "are observed variables that are assumed to cause a latent variable" (Bollen, 1989, p. 65). Bollen and Lennox (1991) specify the formative indicators measurement model. Based on a multiple regres-

sion, this model is subject to multicollinearity, "and therefore the stability of the indicator coefficients (γ_i) is affected by the sample size and strength of the indicator intercorrelations" (Diamantopoulos and Winklhofer, 2001, p. 271). If the indicator coefficients are of research interest, we recommend to use PLS-Regression for handling collinearities (Tenenhaus, 1998). In PLS-Regression, "(c)onsecutive estimates (rank 1, 2, ...) are obtained using the residuals from previous rank as a new dependant variable y " (Wold et al., 1984, p. 735). We illustrate the use of PLS-Regression in a formative indicators measurement model using a modified SERVQUAL scale (for SERVQUAL see e.g. Parasuraman et al., 1985; 1988). Recent research regards SERVQUAL as a second order formative index (Rossiter, 2000). As the SERVQUAL scale is prone to multicollinearity due to its underlying satisfaction-like factor (Dabholkar, 1993), it is a good example for the application of PLS-Regression. We compare the different possibilities to estimate the regression weights in formative indicators measurement models and draw respective conclusions.

■ FD09

Leuven

Branding 03

Chair: Lawrence L. Garber, Jr, Associate Professor, Marketing Department, Appalachian State University, Boone, NC, 28608, United States, garberll@appstate.edu

1 - Brand Architecture—A View of Practitioners

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As a result of mergers and acquisitions, indirect brand extensions using sub-brands and the introduction of new products and services, the management of brand architecture has become one of the most important brand-related problems. Based on a qualitative study with senior brand managers and brand consultants this paper analyses the view of practitioners on different brand architecture strategies. In this study practitioners of 53 mainly internationally operating companies identify their branding strategy, evaluate its advantages and disadvantages, and specify persons as well as the departments and factors affecting the brand architecture strategy in future. The results of the conducted study showed that the main responsibility for the strategic handling of the brands and the management of the brand architecture strategy is borne by the marketing management (84% of the respondents), the management/board of directors (76%) and, in the case of internationally operating companies, by the headquarter (62%). The results of the questions regarding the advantages and disadvantages of different brand strategies showed a partial agreement between the theoretical approaches and the view of practitioner's knowledge, but the new and most interesting finding of the study is the result of the correspondence analysis showing the dimensions "identity" vs. "flexibility" and "synergy" vs. "interaction". These dimensions show that every branding strategy involves a clear set of advantages and disadvantages.

2 - A Measure of Asymmetries in Brand Dominance: Correspondence Analysis of Matched Matrices

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Relevant literature related with brand-attribute associations has been recognized as "incomplete", when it just measures brand-by-brand tables, (with respect to a set of attributes) or, if complete, (also considering attribute-by-attribute tables for a set of brands), to be quite conceptual (Farquhar & Herr, 1992). For example, in measuring advertising effectiveness, we need to assess effects on both, brand and attribute dominance (i.e. measuring new, positively evaluated associates now evoked by the brand after a new advertisement is introduced (attribute dominance) and measuring new cues that are likely to evoke the brand (brand dominance)) (Holden & Lutz, 1992). We present correspondence analysis (Greenacre, 1984) as a visual tool that let to consider both analyses separately, showing strength and uniqueness in brand associations, as well as simultaneously, due to a particular way of coding data named CA of matched matrices (Greenacre, 2000). In this case we can capture asymmetries in strength between brand-by-brand and attribute-by-attribute analyses. This facilitates the adoption of the most efficient managerial decisions. We expose, as an illustration, a study of brand associations for a set of brands of deodorants.

3 - Dynamic Brand-Image-Based Production Location Decisions

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The location of production has generally been viewed as a function of transaction costs and country-specific attributes such as cost of raw materials and wage rates. Thus, in most, if not all production location studies, the emphasis has been on the supply side, ignoring the effect of location on the demand side, that is, on brand-image and its implications. In this paper, we examine location of production as a function of production costs, of country-image and its effect on brand-image, as well as the short and long term effects of price. We consider a monopolist manufacturer that needs to decide where to locate the production of a certain branded product. We posit that the perceived quality of a given product is based on its brand-image, country-image and price all of which determine sales of the particular product. Considering brand image as a form of goodwill, we extend the well-known Nerlove-Arrow dynamic model by adding both country-image and price. Formulating an optimal control problem for a group of countries in which the cost of production is convexly increasing with country-image, we are able to develop optimal decision rules for a manufacturer regarding the location of production and pricing over time.

4 - Consumer's Evaluation of Brand Extensions May Not be Extensive After All: An Empirical Test Among Consumers in India

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We develop a model of consumer evaluation of brand extension which shows to paths of transfer, a functional and an affect path. Transfer is a function of brand affect, similarity between parent and extension product categories, and the relevance of brand specific associations in extension categories. We calibrate our model at two levels: using aggregate data (across brands) and disaggregate brand-specific data collected from experimental conditions using real consumers in India. Our model does not incorporate marketing mix variables and only focuses on consumers' intrinsic perceptual constructs that influence evaluations of brand extensions. Our results suggest that brand affect is unequivocally the single most powerful factor that influences evaluation of extensions. This suggests that a prerequisite to a successful brand extension is a strong positive equity of a brand in its parent category. We find evidence that strong relevance of brand specific associations in the extension categories may enhance this process of affect or equity transfer. However, we do not find any support for the claim that consumers engage in any similarity matching of parent and extension categories in making this affect transfer. Another significant finding of our research suggests that this process of affect transfer from a parent brand to an extension may be dampened if the brand is prototypical of its category. We also discuss specific implications of our findings for brand managers.

■ FD10

Bergen

Marketing Strategy 03

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1 - Integrating Segmentation, Positioning and Managerial Applicability

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Issues of segmentation and positioning lie at the heart of marketing management ever since. In recent years much methodological progress has been achieved to carry out these two tasks simultaneously, i.e. to combine some types of clustering algorithms with appropriate multidimensional scaling procedures. Whereas the properties of each of these two methods viewed separately are quite well-known the link between them (in terms of a common objective function) is far from obvious. When trying to provide managers with a tool supporting marketing decision making in terms of segmentation and positioning still another point of view has to be considered: applicability. Extensive experience has shown that managers only accept fairly simple, two dimensional perceptual maps of products' attributes combined with a spatial representation of customers' segments. Moreover these segments should be 'nicely separated' in order to be used for marketing management. The researcher then has to balance the claim of formal rigor which probably results in higher dimensional spaces against the claim of simplicity. The problem might be even more pronounced in the case a satisfying solution (in terms of conventional statistical fit measures) exists in a higher dimensional space but this configuration can not be appropriately represented in two dimensions. We want to tackle this problem by integrat-

ing these managerial aspects into an approach which simultaneously segments and visualizes competitive structures of the market under consideration. The method proposed is tested by means of empirical as well as simulated data.

2 - Competitive Crisis Management and Pricing Leading to "Crisis-in-Crisis" Constellations

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Terms like 9/11, Y2K, or BSE have become synonymous for crisis. More precisely, such dramatic incidents have a fundamental effect on both, consumers and managers alike. For example, in the aftermath of 9/11 consumers simply were afraid of flying. Managers in the airline industry, however, responded to 9/11 using the pricing variable and, more precisely, by reducing price. As a result, those consumers afraid of flying were not tapped. Those willing to fly were offered prices that were too low. In short, there is seemingly the danger that managers' responses to a crisis over-emphasize the pricing variable and/or are, thus, sub-optimal. To illustrate: Overemphasis on pricing is likely to increase price competition thus increasing the likelihood that a price war emerges. As a result, managers' response to a crisis (e.g., 9/11) may lead to another crisis (e.g., a price war). Thus, it is the managers' behavior that can lead to a crisis-in-crisis constellation. Therefore, a comprehensive understanding of crises and their impact on competitive pricing and marketing behavior is crucial for a better performance. >This study uses primary data collected through the help of a major German airline. More precisely, the data are based on surveys with senior airline managers coping with 9/11 around the world. The study focuses on marketing decisions and pricing issues immediately following an initial crisis and assesses to which degree these immediate (pricing) decisions lead to subsequent crisis. Results include that the initial crisis increases the occurrence of myopic and "emotional" (pricing) decision, thus causing much of managers' competitor orientation to vanish. Next, we found competitive intensity to grow sharply and that the competitive interaction pivoted toward price wars. Managerial implications focus on avoidance of over-reactions to a crisis to prevent that an initial crisis leads to a second crisis, i.e. the crisis-in-crisis. Research implications include the distillation of crisis features that are generalizable across crisis situations, products, and industries.

3 - Externalities of Targeting

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Assume a market of heterogeneous consumers accessed at a fixed marketing cost. The ability to economically access a less heterogeneous subset of consumers is usually referred to as targeting. When targeted consumers receive competitive offers and leave the market, the remaining consumers are harder to access as a consequence, because the fixed marketing cost is spread over a smaller number of consumers. This externality of targeting affects out-of-target consumers in one of several possible ways: price increase, demand neglect, or reduced product variety. Price increase and demand neglect provide firms with an increased incentive for further access innovation (e.g., new retailing or media devices). In those cases, the interests of consumers and firms appear to be dynamically aligned towards a resolution of the externality of targeting. However, in those cases where the externality of targeting takes the form of a reduction in product variety, analysis reveals that firms may experience a drop in the incentive to invest in marketing innovation, leaving a specific subset of consumers (those for who have had to shift away from their first best choice) in a permanent state of frustration. This theory can be used to reconcile paradoxical facts in contemporary marketing, e.g., the fact that improvements in targeting technologies seem to consistently coincide with the growth of mass merchandisers.

4 - Incomplete Mix and Match in Systems Markets: Theory and Test

Sourav Ray, Assistant Professor, Marketing, Michael G. DeGroote School of Business, McMaster University, 1280 Main Street, Hamilton, Ontario, L8S 4M4, Canada, sray@mcmaster.ca,
Mark E. Bergen, George John

Systems are products that require two or more components to be functional. Two manufacturers' systems are compatible if components from different manufacturers can be readily mixed and matched without significant loss of performance in comparison with single manufacturer systems. A priori, these mix and match systems should expand the choice set of the consumers. However, when manufacturers sell their systems through distributors, the latter has the opportunity to restrict the mix and match choice set of consumers. If they do, then we cannot take a number of assumptions about compatibility including choice expansion and complementarity effects, for granted. Unfortunately, in the existing literature on compatibility, this distributor role is not very well developed. But why should distributors restrict such choice, if at all? In this paper we show that indeed distributors have their own pri-

vate incentives at "incomplete" implementation of the feasible set of mix and match systems. We show that this decision has strategic dimensions. In particular, we illustrate how systems characteristics and level of distributor competition may be important determinants of the distributor strategy. We present our arguments with a formal economic model, which is followed by an empirical test of its key propositions, using primary survey data.

■ FD11

Heidelberg

Competition & Game Theory 05

Contributed Session

Chair: Sungsoo Han, Senior Researcher, ETRI Convergence Strategy Team, 161, Kajung-Dong, Yusung-Gu, Daejeon, South Korea, sshan@etri.re.kr

1 - Passthrough Timing

Sergio Meza, Assistant Professor, University of Toronto, 105 St. George street, Toronto, on, M5S 3E6, Canada,
sergio.meza@rotman.utoronto.ca, K. Sudhir

Trade promotions are the most important promotional tool available to a manufacturer. However trade promotions can achieve their objective of increasing short-term sales only if the retailer passes through these promotions. Empirical research has documented that there is a wide variation in retail passthrough across products. However little is known about the variations in passthrough over time. This is particularly important for products with distinct seasonal patterns. We argue that extant methods of measuring passthrough are inadequate for seasonal products. We therefore introduce a measurement approach and illustrate it using two product categories. We find interesting differences in passthrough for loss-leader products versus regular products during high demand and regular demand periods. We find that retailers use a deep and narrow passthrough strategy (high passthrough on loss-leader products, but small passthrough on regular products) during periods of regular demand and broad and shallow passthrough strategy (smaller, but similar passthrough on both loss-leader and regular products) during periods of high demand. Loss leader products continue to obtain higher passthrough in high demand periods, if the category's high demand period is also a high demand period for other product categories as well.

2 - Do Store-brands Create Store-Loyalty?

An Empirical Investigation

Karsten Hansen, Assistant Professor, Northwestern University, Kellogg School of Management, 2001 Sheridan Rd., Evanston, IL, 60208, United States, karsten-hansen@northwestern.edu,
Vishal Singh

One of the most important activities for supermarket managers is the creation and maintenance of their store brands. A well developed private label program can not only contribute directly to retailer profitability, but also have indirect positive effects such as creating a low-price image and improved bargaining power with the manufacturers. Another strategic role of store brands that has recently been brought to attention in both the academic literature (Corstjens and Lal 2000) and business press (see for example a 2003 report by Food Marketing Institute), is the positive impact of store brands in enhancing store loyalty. On the other hand, researchers have also found store brand buyers to be more price sensitive (for example, Hoch 1996, Hansen et al 2003), which could make them vulnerable to switching to a discount store. In this paper, we test the notion whether store brand buyers are indeed more store loyal in the context of market entry by a competitor store. We use a unique frequent shopper data that records purchases of over 10,000 households before and after the entry of a competitor store. The new entrant to the market in our study is a discount store (Wal-Mart Supercenter) which is likely to attract price sensitive customers. Using choice data from a large number of food and non-food product categories, we test the role played by household specific price sensitivity and store brand preference in determining their propensity to defect to the discount store. Implications for the store managers are discussed.

3 - The Effect of Product Line Renewal and Proliferation on Competitors

Marion Debruyne, Assistant Professor, Emory University, 1300 Clifton Road, Atlanta, GA, 30319, United States,
Marion_Debruyne@bus.emory.edu, David Reibstein, Karl Ulrich

Companies face conflicting forces in deciding on their product line's size and characteristics. A bigger product line enables them to better answer to different consumers' tastes. However, the proliferation of product line sku's drives up manufacturing and inventory costs. A third influence stems from competitive considerations. Focusing on the latter, we set out to explore a number of straightforward research questions regarding the reaction of incumbent competitors to product proliferation in the

market. The question of central focus is the imitative behavior of each of the competitors. Looking within an industry, do competitors work in 'lock-step' with each other, leading to a convergence of their product lines? Is this driven by exogenous factors, or is it more the result of each of the competitors not wanting to be left too far behind their rivals? Or do competitors attempt to differentiate their product lines, leading to a divergence of their product lines? Preliminary results on the laser printer market indicate that the competitive effect of product line proliferation occurs not as a result of atomistic competition but at the level of the product line.

4 - Entry Order, Marketing Capabilities and Performance: Evidence from Broadband Internet service market

Sungsoo Han, Senior Researcher, ETRI Coverage strategy team, 161, kajung-dong, yusung-gu, Daejeon, South Korea, sshan@etri.re.kr, Sungho Choi, Chuhwan Park

In contemporary literatures, the first firm to introduce a new product gains an advantage by securing a temporary monopoly market position due to the imitator's lag. However, whether these first-mover advantage are temporary or more durable will be determined by the responses of rivals. By quickly imitating new product introductions, rivals can adversely affect the durability of the first mover advantages by sharing and/or reducing their potential profits. Moreover, in some instances, a fast second move can produce result superior to those of the first mover. While the first mover literature argues in favor of moving first, a number of scholars have promoted early imitation as a profitable alternative to moving first. Early imitators may learn from the first mover's experience, such as reducing or avoiding development and testing costs and pricing mistakes. And if latecomer has more capabilities, first move advantage quickly lessened. That is, effect of entry order on performance moderated by latecomer's capabilities. We are concerned with role of marketing capability on relationship entry order and performance in Internet service market. We will try to evaluate effects of entry order and marketing capabilities (Advertisings, sales promotion etc). The result that first mover in broadband internet market in Korea take a advantage of monopolistic benefit, but the advantage eroded by early late-comer possess more marketing capabilities. The result implies that for retaining the first move advantage, first mover must develop marketing capability continually, if not, Advantage from first entry collapsed easily. In sum, the effects of entry order on performance are moderated by marketing capabilities.

■ FD12

Lund

Retailing 04

Chair: Sindy Chapa, Ph.D. Student, University of Texas-Pan American, 1201 West University Dr., Mission, TX, 78572, United States, control57@aol.com

1 - Stores as Learning Places:

An Experiment of Category Management

Chiara Mauri, Associate Professor, Bocconi University, Via Bocconi, 8, Milan, 20136, Italy, chiara.mauri@sdbocconi.it

An experiment is run in three pharmacies to test the hypotheses that stores are places where consumers may improve their knowledge of product categories, and that better knowledge translates into increased category sales. The category of food supplements was classified into segments using three sources of knowledge, the first two "demand-oriented", the third "supply-oriented": Expert consumers' category knowledge. Experts were identified on the basis of their familiarity toward food supplements, and their knowledge was extracted using qualitative research (observation and interviews). Their main task was to create groups of food supplements according to their similarity, and to label the different groups. Pharmacists' category knowledge. The main contribution of pharmacists as experts has to do with sub-category labels and with in-store cues that facilitate consumers' category accessibility; - Institutions that provide data and classifications of food supplements (Nielsen, Health State Department). These three perspectives were integrated; a display of 69 food supplements was configured according to specific criteria of space allocation, and tested in three pharmacies. POP material was added to help consumers in their choice. The test lasted three months. During the test expert consumers were interviewed to measure the improvement in brand recall and category accessibility. Category sales have grown 65% compared to last year; an increase significantly greater than sales in the control group. One of the unexpected results of the experiment has been that it is pharmacists that improve their category knowledge with a better display; pharmacists then transfer their knowledge to consumers.

2 - Let's Make it Virtual: Developing Modular Prototypes for Store Environments' Experimental Research.

Francesco Massara, Doctoral Student, IULM University, 8, Via Carlo BÙ, Milano, 20142, Italy, francesco.massara@iulm.it, Giovanni Peloso

A variety of techniques have been used to simulate store environments. Latest studies tried to improve the realism of the simulation by proposing videotaped scenarios (Baker et al. 2002). However, the use of multimedia apparently make for the realization of results which concur with previous findings. If, on the one hand, the verbal descriptions that bypass the direct sensory system might use value-laden wording, on the other hand the use of projections as stimuli provide a frame of reference which lacks the kinetic dimension of orientation. Studies on cognitive spatial psychology (Guerraz, Poquin and Ohlmann 1998) assess the three main frames of reference in spatial orientation: • the gravito-inertial force of the body perceived in static activities; • the kinematic due to movements in the optical frame without subjective forces (e.g., like looking a movie); • the kinetic due to the subject movement. The projection of stimuli on a screen does not reproduce the whole spatial orientation frame increasing random error. We develop a virtual reality methodology with the use of computer graphics and digital imaging software which includes the kinetic frame of reference. The technique allows to measure browsing times and to track customer movements covertly on the computer. We provide an application of the method by varying lighting, colors and music, in time constraint and no-time constraint conditions, measuring the response in terms of approach/avoidance behavior. The technique can be flexibly applied to a wide range of marketing experiments and be of use to both researchers and practitioners.

3 - A Model for Brand Assessment in a Category

Takuya Satomura, Osaka University, Graduate School of Economics, 1-7 Machikaneyama, Toyonaka, Osaka, 5600043, Japan, satomura@econ.osaka-u.ac.jp

Evaluating the brand is an important operation for retailers. Brands with high sales volume are important because these brands meet most customers' needs. But brands which satisfy specific needs are also important for assortment of category, so understand the brand role in a category is also important information for retailers' assortment. A simple but useful method to understand the brand role in a category is to decompose the sales amount of brand into two elements, number of customers (or penetration rate) and purchase frequency, using scanner data. Of course we can find Double jeopardy (DJ) phenomena which mean that high purchase frequency brand has high penetration rate and low purchase frequency brand has low penetration rate, so DJ can define the normative relationship between the purchase frequency and penetration. But previous methods were not easy to estimate parameters from scanner data. We modeled brand purchase behavior in a negative multinomial distribution which is based on the Poisson purchase frequency and the independent gamma distribution assumption. Negative multinomial distribution is easy to estimate the parameter by using maximum likelihood method. Our mixture negative multinomial model can explain the brand purchase behavior of heterogeneous customer in a category. The normative relationship between penetration and purchase frequency are calculated, and the brand roles are interpreted by a deviation from the normative value.

4 - Understanding Family Members' Influence in Grocery Shopping Decisions: The Case of Chilean Consumers

Sindy Chapa, Ph.D. Student, University of Texas-Pan American, 1201 West University Dr., Mission, TX, 78572, United States, control57@aol.com

This study identified the potential decision-makers within Chilean family members shopping in supermarkets. This research draws from the ethnographic research method based on participant observation, interviews and focus groups conducted over a ten day period. The ethnographic method allowed us to conduct observation of grocery shoppers in the natural setting rather than asking consumers to comment about what they usually do. The data set consists of field notes from 63 hours of participant observation, and two focus groups conducted among Chilean males and females. First, the results indicated that Chilean men participate actively in grocery shopping. Second, it was found that Chilean women are actually more concerned with the product's price attribute than Chilean men. Third, it was confirmed, based on the traditional sex-role orientation approach, that mostly the husband is who pays at supermarkets. Fourth, as expected, it was found that children have influence in the decision making for a variety of products, especially those that are less expensive and for their own use. Finally, it was found that children's influence in the decision making increases in the mother's presence.

Saturday, 8:30am - 10:00am

■ SA01

Forum

**Special Session:
The Post-Purchase Effects of Promotion**

Sponsored by Erasmus Food Management Institute

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

Co-Chair: Scott Neslin, Albert Wesley Frey Professor of Marketing, Tuck School at Dartmouth, 100 Tuck Hall, Hanover, NH, 03755, United States, scott.neslin@dartmouth.edu

1 - An Integrated Household-Level Model for the Decomposition of Sales Promotion Effects

Harald van Heerde, Associate Professor of Marketing, Tilburg University, Faculty of Economics, Tilburg, Netherlands, heerde@uvt.nl, Sachin Gupta

Sales promotions typically lead to a large sales bump for the promoted item. This sales bump is due to various consumer responses, such as switching stores, switching brands, switching SKUs within brands, buying more or earlier than normally, increasing consumption, and anticipating the sales promotion. Previous studies have measured some of these responses jointly or in isolation. This study provides an integrated conceptual framework and a coherent set of models for comprehensively assessing the contribution of each response to the overall bump. We model the responses at the household level, and allow for heterogeneity. Using the models, we compute the decomposition based on shifts in unit sales caused by each response by comparing the situations with and without sales promotions. Basing the decomposition on unit sales allows us to quantify the contribution of each source in a comparable and managerially relevant way. We present the results for multiple scanner panel data sets.

2 - Market-Source Decompositions of Demand

Thomas Steenburgh, Assistant Professor, Harvard Business School, Harvard University, Boston, MA, United States, tsteenburgh@hbs.edu, Dick Wittink

For additional marketing investments, managers want to know the source of incremental demand. Will it be obtained from rivals or will the market expand? Does the nature of the source vary between alternative investments? We refer to decompositions that answer such questions as market-source decompositions of demand. We decompose the own-brand elasticity of demand into primary demand and secondary demand components. We show that our decomposition is mathematically equivalent to van Heerde et al's (2003a) unit-sales decomposition, and we compare our approach with existing decompositions, such as those suggested by Berndt and Wood (1977) and Gupta (1988). We also show how the assumed model of demand may constrain the results of a decomposition. We find that whether and how the outside good is treated is crucial in determining what can be learned. For example, if we use a model with no outside option, then the proportion of demand created by market expansion does not depend on the extent to which consumers are already in the market for the good. We estimate the effects of consumer- and physician-directed marketing investments on the demand for a type of pharmaceutical drug. For the preferred model, we find that the proportion of incremental demand attributable to market expansion is higher for consumer-directed marketing investments than it is for physician-directed ones. We also show how these proportions change as a greater part of the market is served and as the market shares change among brands.

3 - The Impact of Promotion Induced Stockpiling

Christian Lutzky, Doctoral Student, University of Frankfurt/Main, Frankfurt, Germany, lutzky@wiwi.uni-frankfurt.de, Kusum Ailawadi, Scott Neslin, Karen Gedenk

It is well known that consumer stockpiling accounts for a significant portion of the immediate sales bump that a brand receives when it is on promotion. If this stockpiling only shifts the brand's sales temporally, then there is no benefit to the brand. Consumers substitute a promotional purchase today for a regular priced purchase of the same brand that they would otherwise have made later. However, promotion-induced stockpiling may benefit a brand in three ways: (1) the extra inventory that the consumer has at hand may increase consumption; (2) the opportunity to consume more of the stockpiled brand may build brand loyalty; (3) the consumer may be taken out of the market for a competing brand in a subsequent period in a 'pre-emptive brand

switch'. The consumption effect has been established at least for some categories, but the other two effects have not been studied. We quantify them in a model of purchase incidence, brand choice, and purchase quantity, estimated using panel data from two product categories. We examine the loyalty effect by modifying the impact of the 'last brand purchased' in the brand choice model. We allow its coefficient to be affected by whether the last brand purchased was on promotion and by whether the consumer stockpiled more than their average purchase quantity. We quantify the pre-emptive brand switching through a simulation in which we examine the effect of an additional promotion on pre-emptive switching as well as on current period switching, pure stockpiling, repeat rates, and consumption.

4 - Dynamic Price Competition Between Firms in the Presence of Consumer Switching and Inventory Costs

Seethu Seetharaman, Assistant Professor, Washington University, Olin School of Business, St. Louis, MO, United States, seetharaman@olin.wustl.edu, Tat Chan, Gautam Gowrisankaran

Using scanner panel data on consumer packaged goods, empirical researchers have consistently documented the presence of consumer switching costs in their brand choices over time (also called "demand inertia"). In other words, consumers show an intrinsic reluctance to switch between brands in the short term. This suggests that a price promotion of a brand has not only a current impact on brand sales but also a carryover effect on future sales. Furthermore, it is well known that product inventory drives consumers' category purchase decisions, which suggests a second source for the inter-temporal effects of promotions. A natural question that then arises is how such demand dynamics affect firms' promotional pricing behavior over time. This study seeks to answer this question. We propose a household-level demand model of category purchase and brand choice that incorporates the effects of product inventory and lagged brand choices. The parameters of this model are estimated using household-level scanner panel data, and then used to obtain a predictive model of store-level brand sales, conditional on brand pricing decisions. Taking this predictive model of brand sales as an input to firms' pricing decisions, we estimate a supply-side model of promotional price competition between firms, using store-level scanner data. Based on the estimated results from the demand- and supply-side models, we perform policy experiments to illustrate how exogenous changes in demand (for example, switching costs and stockpiling tendencies) and cost parameters will affect the expected equilibrium promotional prices of firms. These results will be useful to researchers in understanding the important factors underlying the nature of promotional price competition between firms.

■ SA02

Tokyo

Innovation 04

Chair: Steven Shugan, Professor, University of Florida, 2030 NW 24th Avenue, Gainesville, FL, 32605, United States, sms@ufl.edu

**1 - Optimal Timing of Introduction of New Car Models:
A Dynamic Model of Temporal Cannibalization**

Tulika Khunnah, PhD Student, Kellogg School of Management, 2001 Sheridan Road, Evanston, IL, 60208, United States, t-khunnah@kellogg.northwestern.edu, Lakshman Krishnamurthy

We model the phenomenon of "temporal cannibalization"- how future generations of products may cannibalize current generations, and how this affects timing of next-generation launches. Car manufacturers increasingly rely on new product models to meet evolving customer needs and to build sustainable competitive advantage in the marketplace. There exist 'forward-looking' car buyers who evaluate future models in their consideration set, and are willing to wait to purchase the latest vehicle or to purchase the current car model at a discount. Manufacturers seem to be aware of this and introduce radically different new car models earlier in the year than new car models similar to last year's model. We use individual level data on 'future' and existing car models considered by consumers over time, and the requests for dealer quotes submitted by them, along with brand model level data on actual prices paid by customers in the market and sales volumes from a large automobile web-site to estimate demand parameters for each model of a set of leading brands in three chosen car segments over time. We develop a dynamic structural model of customer purchase behavior to determine the relative size of the forward looking customer segment(s), the extent of temporal cannibalization in a car category, and the optimal timing of introduction/ announcement of a new car model. This research supplements existing literature on successive generations by taking into account the effect of forward looking consumers, and by using individual level data on the actual consideration set of each consumer.

2 - The Feedback Effects of Innovation: What can lead to 'Innovation Momentum'?

Amit Joshi, Anderson School of Management, UCLA, 110 Westwood Plaza, Suite B 412, Box 951481, Los Angeles, CA, 90095, United States, amit.joshi@anderson.ucla.edu, Dominique Hanssens

Past research in marketing and strategy has drawn conflicting conclusions about the impact of firm domination on innovation generation. However, very little effort has been devoted to learning about the possible momentum effects of innovation. Papers in economics and strategy suggest that innovation by itself may be capable of creating a process-based change within firms, which is persistent. Further, innovation leads to firm-level learning, which also causes the momentum to strengthen. It is our hypothesis that this process based change and learning enables the better utilization of firm resources geared towards innovating, hence allowing the firms to produce even more innovations in the future. Further, we also study the impact of the magnitude of past innovation and the success of past innovation on this momentum. Automobile innovation data from J. D. Power Associates (JDP&A) allows us to qualitatively rate innovations (from minor modifications to major changes in product). We model future innovation as a function of past innovation, and other related variables, such as R&D spending, all of which are treated as endogenous, using VAR modeling methodology. To enable the inclusion of qualitative variables (innovation) in the VAR model we use recently developed techniques of QUAL-VARs. Thus, the binary innovation variable is treated as the observed result of an underlying continuous latent innovation variable. Our results provide insights into the long-run feedback effects of innovation. Further, we quantify the momentum imparted by successful innovations (versus unsuccessful ones) as well as major innovations (versus minor innovations).

3 - A Predictive Model of Movie Sequels

Vanitha Swaminathan, Assistant Professor, University of Pittsburgh, 344 Mervis Hall, Pittsburgh, PA, 15090, United States, vanitha@katz.pitt.edu, Srinivas Reddy, Carol Motley

We hear of spectacular successes of some movies (e.g., Titanic, Jurassic Park), however approximately 65% of films produced annually are not profitable. In addition, production and marketing costs associated with making movies are escalating. Leveraging the equity of an existing movie and producing sequels appears to be one strategy used to reduce financial risk and improve the possibility of financial success. That is, we conceptualize a movie as a core brand, and the leading actors, actresses, directors, and the plot as brand attributes. A movie sequel is then a line extension of the original core brand. The equity of the core movie can then be transferred, if only partially to the sequel. We use sequels released during the 1988-2002 period to develop a comprehensive model that identifies the key determinants of sequel success. Our findings indicate that core movie revenues and the similarity of sequels with their core movies could significantly impact sequel success. The results also suggest that sequel characteristics (e.g., star power, critics' reviews) are important predictors of line extension success. Our model explains 89% of the variance in sequel success. We also demonstrate the predictive validity of the model using a holdout sample.

4 - New Products, Product Reviews and Marketing Strategy: An Analysis for Movies and Automobiles

Steven Shugan, Professor, University of Florida, 2030 NW 24th Avenue, Gainesville, FL, 32605, United States, sms@ufl.edu, Larry Winner

We provide empirical evidence that advertising can influence professional product reviewers. We find the bias is more subtle than expected. We find that advertising can influence which products are evaluated. Our empirical analysis shows, for example, that reviewers who use channels that accept advertising are less likely to provide negative evaluations than reviewers who do not accept advertising. The reason is that professional reviewers must balance competing concerns—increasing advertising revenue and providing accurate information to readers. Next, we develop several managerial implications of that finding. For example, optimal advertising levels are greater in markets with professional reviews than in markets without professional reviews. We show that optimal advertising should increase when bad reviews are more influential but not necessarily when good reviews are more influential. We show that as quality decreases, the influence of professional reviews on marketing strategy is greater. We also show that as competition among reviewers intensifies, the influence of professional reviews on marketing strategy decreases. In sum, we show both theoretically and empirically, that advertising can play multiple roles in markets with professional reviewers because advertising encourages many reviewers to only write reviews when they have something positive to say.

SA03

Athene

Internet 05

Chair: Arvind Rangaswamy, Jonas H. Anchel Professor of Marketing, Penn State University, 707D, BAB, The Smeal College of Business, University Park, PA, 16802, United States, arvindr@psu.edu

1 - Factors Affecting Website Visit Duration

Peter Danaher, Professor, University of Auckland, Department of Marketing, Private Bag 92109, Auckland, New Zealand, p.danaher@auckland.ac.nz, Skander Essegaier

An advertising effectiveness measure unique to the internet is the duration of a website visit. Due to its importance this measure is routinely reported by ACNielsen's Net Ratings, as well as Media Metrix/comScore. In this study we examine factors that impact on website visit duration, including user demographics, text and graphics content, type of site, presence of functionality features and advertising content. A random effects model is used to determine the impact of these factors on site duration. Our model is fit using one month of user-centric panel data. The results show that of the demographic variables, only user age is significant, with older people visiting a site for longer. Entertainment, bank and news sites have significantly longer durations than all other site types, while sites with too much advertising and too many functionality features have shorter durations. We also derive a response surface model which can be used to fine-tune a site's content and functionality to obtain longer visit durations. Lastly, we develop a 'market map' of the top 50 websites, showing their proximity in two intrinsic dimensions. The map can be used to choose a suitable subset of sites for an online advertising campaign

2 - An Etic Measure of Website Interactivity

Dana-Nicoleta Lascu, Chair, Department of Marketing, University of Richmond, Robins School of Business, Richmond, VA, 23173, United States, dlascu@richmond.edu

Interactive media has rapidly evolved into an essential marketing vehicle. For researchers, interactive media presents opportunities to redefine well-established measures in the context of the interactive structures that arise through interactivity, as well as to develop new measures of interaction (Stewart and Pavlou, 2002). Among examples of measures of interactivity are those developed by Stevenson et al. (2000), Bruner and Kumar (2000), Shankar et al. (2000)—none were validated. Wu (1999) developed a 10-item scale contaminated with affective response items, and Cho and Leckenby (1999) developed an interactivity scale confounded with behavioral intention (Liu 2003). Validated measures of interactivity have identified as dimensions of interactivity active control, two-way communication, and synchronicity (Ariely 2000; Bezjian-Avery et al. 1998; Sundar et al. 1999; Liu 2003). Only Cho and Park (2001) have attempted to draw on the ample body of research and related scales developed in the information technology area—in particular, the user information satisfaction (UIS) measure (Doll and Torkzadeh 1988)—but they limit the study of website interactivity to consumer satisfaction. This study develops and validates a multi-item scale that evaluates satisfaction with the website interaction, drawing upon the marketing literature on satisfaction, service quality, communication, and attitude-toward-the-ad, and upon the information systems literature on user information satisfaction. The study also advances an etic model of web site interaction satisfaction that addresses the multiple dimensions of website interactivity pertinent to both marketing and information systems.

3 - The Digitization of Firm Capabilities

Sundar Bharadwaj, Associate Professor, Emory University, 1300 Clifton Road, Atlanta, GA, 30322, United States, Sundar_Bharadwaj@bus.emory.edu, Devon Johnson

Digitization of firm capability is the transfer of activities previously performed by an employee to a technology-based channel such as a Web site, automatic teller machine or wireless technology that allows stakeholders to interact with the firm in a self-directed manner (Johnson and Bharadwaj, 2004). A desired objective in creating a digitized selling capability is to achieve a customer-technology interaction that is consistent with the experience customers realize from the firm's other touch points such as personal selling and in store retailing. Web-based channel implementation requires that selling knowledge be extracted from salespersons, teams, and organizational routines to inform the channel design process. However, the knowledge extraction process is prone to stickiness—the high cost of transferring certain types of information (von Hippel, 1988) — due to three characteristics that impair knowledge transfer: tacitness, complexity, and specificity (Reed and DeFillippi, 1990). This study examines the role of selling knowledge characteristics (tacitness, complexity, and specificity) as determinants of the degree to which firms digitize their selling activities and the role of procedural

fairness (formal procedures and interactional fairness) and centralization in moderating these relationships. The relationships are examined using cross-sectional survey data from 168 key informant salespersons. The results of hierarchical regression analysis find that tacitness and complexity inhibit the degree of digitization firms implement, whereas complexity has the opposite effect. Additionally, interactional fairness attenuates the adverse effect of tacitness, and formal procedures and centralization attenuate the adverse effect of complexity.

4 - Consumer Attitudes and Behavior When the Alternative is Free: Insights from the Music Industry

Arvind Rangaswamy, Jonas H. Anchel Professor of Marketing, Penn State University, 707D, BAB, The Smeal College of Business, University Park, PA, 16802, United States, arvindr@psu.edu, Michel Clement, Srikant Vadali

Penn State and Napster recently introduced a collaborative service under which Penn State students, faculty, and staff get free "tethered" access to over 500,000 songs, and are also able to buy individual tracks ("untethered" download) at 99 cents each. In this research we use the theory of planned behavior to investigate how this new service influences students' attitudes towards free file-sharing programs (e.g., Kazaa), as well as any changes to their actual music listening and purchase behavior. The theory of planned behavior posits that behavioral intention is the best predictor of actual behavior and suggests that a continuous relationship exists between behavior intent and behavior. However, it is reasonable to expect that, in many contexts, a consumer's intent should exceed an unobserved threshold before intent (e.g., to download free music using a file-sharing program) triggers the corresponding behavior. We develop a model to specify and measure the latent thresholds at the individual level. We then assess whether the new Penn State-Napster service changes consumers' attitudes and thresholds, such that the actual downloading of free music becomes less likely. We use a variety of methods to collect longitudinal data on attitudes and intent, as well as actual behavior. The proposed modeling approach can be applied in other contexts involving how interventions lower undesirable behavior, such as shoplifting and overuse of credit cards.

SA04

Rochester

Choice 07

Chair: Mark Uncles, Professor of Marketing, University of New South Wales, School of Marketing, Sydney, NSW 2052, Australia, m.uncles@unsw.edu.au

1 - Optimization Conjoint Models for Consumer Heterogeneity

Theodoros Evgeniou, INSEAD, Bd de Constance, Fontainebleau, France, theodoros.evgeniou@insead.edu

A new optimization based method for modeling consumer heterogeneity using conjoint analysis is presented. The method is based on recently proposed individual consumer preference models using polyhedral optimization methods and statistical learning theory. The method is experimentally compared with Hierarchical Bayes (HB) using standard, widely used, simulation data. The experiments show that the proposed method matches and often outperforms HB in terms of accuracy. Moreover estimation is computationally very efficient, therefore the proposed method can be used for very large datasets. Finally, the method can also be used, like the existing individual preference models it is based on, for modeling better than HB interactions among product attributes.

2 - Learning from Self and Others:

Empirical Study on 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. When there is uncertainty, consumer's choice/preference are often affected by two important factors. On one hand, internal factors such as consumer past experiences can help consumers to learn about the service quality and to update their quality perceptions of the service. On the other hand, consumers' preferences and choices can also be influenced by the choice behavior of others and choices can be interdependent among consumers. In this paper we study these two important influencers of consumer service usage behavior. First, consumers learn from their own past experiences and there are learning spillover effects across the services rendered by the same provider. We allow consumers to have priors about quality levels and to learn about quality levels over time through usage experience and update their quality perceptions using Bayesian rule. The interdependent preferences and choices are modeled using an autoregressive structure on preferences. We estimate our proposed autoregressive MVP model on consumer cell phone usage data. The data

contain consumer usage on a daily basis in five categories of services (email, stock, banking, download, and bet) for a period of three months, as well as consumer socio-demographics.

3 - Analysis of WOM Effects on the Consumer Product Choice Using Hierarchical Bayesian Probit Model

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Recently, the extant studies on the effect of word-of-mouth (WOM) have mainly focused on how WOM activities affect consumer's psychological changes (product attitude or purchase intention), while few studies explore how WOM activities affect consumer's behavioral changes (actual product choice or purchase). The main objective of this study is to explore the effect of WOM communication, specifically the types of WOM sources (WOM by friends, WOM by experts, WOM from internet), on individual consumer's product choice by comparing those with the effect of mass communication. This study makes contributions by (1) suggesting a more relevant choice modeling approach, Hierarchical Bayesian Probit, to incorporate the differential effect of WOM on consumer choice, (2) measuring and showing how effective each types of WOM and mass communication are on consumer choice behavior, and (3) exploring the differential effects of WOM source types on consumers' product (movie) choice behavior. For the empirical study, actual movie choice data from 295 consumers were collected: individual choice history on four movies (two domestic and two foreign movies) from each individual. The empirical analysis shows that it is necessary to incorporate the interaction effect between WOM variables and product-attribute variables, supporting the validity of the new modeling approach proposed in the study. Further, the study shows that WOM communication played usually positive roles-increasing the expected value of the products- in delivering product information to consumer, while mass communication played a weaker role, sometimes negative role, in the middle of delivering product attributes information to consumers.

4 - Descriptive Models of Buyer Behaviour:

Evidence from Chinese Panel Data

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Patterns of buyer behaviour have been described, modelled and used by Western researchers for at least fifty years, often making use of consumer panel data (Bucklin & Gupta 1999, Sudman & Wansink 2002). A considerable body of knowledge has emerged (see summary in Ehrenberg, Uncles & Goodhardt 2004). However, most of this knowledge has been derived from Western consumers and Western markets. By contrast, in this paper we report on analyses of Chinese buyer behaviour over the years 1999-2002. The focus here is on brand purchasing, although in a subsidiary project choice of store is examined using similar procedures. Descriptive stochastic models are applied to examine patterns of purchase incidence and choice, loyalty and sole-buying, repeat-purchase and duplicate buying, and aspects of consumer segmentation.

SA05

Santander

Technology Marketing 01

Chair: Nevena Koukova, PhD Candidate, University of Maryland, 3300 Van Munching Hall, Smith School of Business, College Park, MD, 20742, United States, nkoukova@rhsmith.umd.edu

1 - Moore's Law and the Experience Curve:

The Economics of Bits and Chips

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Beginning with the co-invention of the integrated circuit by Robert Noyce and Jack Kilby in 1959 semiconductor products—digital technologies—have grown denser at an exponential rate permitting an ever-increasing amount of information to be packed into a space of a fixed size with the result that computers, telecommunications devices, and many other applications have grown exponentially more powerful and less expensive. Digital products and technologies differ in fundamental ways from traditional products. The economic consequences of these differences have not been extensively analyzed in terms of the demand and supply of bits. In this paper we show that it is possible to derive economic laws based on learning with profound implications on the basis of properties of digital technologies

2 - Differentiation via Technology: Strategic Positioning of Services Following an Influx of Technological Innovation

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Many service industries (e.g., banking, retailing, airlines) have recently experienced an influx of technology that has provided firms with new ways to interface with customers while also providing customers new functional benefits. While technology offers new market opportunities, the initial influx of technology produces confusion in the marketplace for consumers and destabilizes the current market structure. In effect, technological innovation instigates a renegotiation of market positions as both incumbent firms and new entrants try to influence and address customer needs via the technological innovation. In this paper we focus on understanding the role of technology in this renegotiation process in a service industry immediately following an infusion of technology (i.e., the brokerage market). Based on prior literature (e.g., Parasuraman 2000), we identify six potential service element linkages that a service firm could use to emphasize (or de-emphasize) technology as a means of differentiating the firm. We conducted a multi-method, system level study of the television advertising of fifteen brokerage firms over a thirteen-month period to gain a more thorough understanding of their use of technology as a differentiation tool. Our study provides managers with a strategic approach to positioning in service markets experiencing significant technological innovations, and highlights both benefits and pitfalls associated with the specific roles for technology as a differentiation tool.

3 - Modeling the Marketing and Sales Process of High-tech Start-ups

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The customer decision of purchasing a new product is based on the marketing's 4P (Product, Price, Place, Promotion). To the best of our knowledge, there is no quantitative theory of high-tech start-up marketing and sales. This paper presents a concept of modeling the marketing and sales process of high-tech start-up companies. With such a model in mind we shall be able to understand how to allocate the investments in marketing's 4P to optimize the commercialization process of high-tech start-up products. First, the customer's buying decision process is modeled using a block diagram similar to that used in many engineering fields. Each block shall describe a phase or a factor influencing the buying decision, e.g. Promotion, Product characteristics, Price, Place. To each of these blocks a probability of success of the corresponding sales phase shall be ascribed. Thus, the sales process can be treated quantitatively by applying the formalism of probability block diagrams. The probability ascribed to the most of the 4P-blocks is proportional to the accumulated amount of already successfully sold products and services. For example, the product quality is proportional to the accumulated know-how, the value of the brand is proportional to the number of sold units, the word-of-mouth advertising is also proportional to the accumulated number of customers, and so on. By discussing the allocation of investments in the particular marketing elements of this model we shall come to better understand how management can achieve a rapid increase in sales and so accelerate the development of a high-tech start-up company.

4 - Marketing of Digital Products: Product Form Bundling

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In this paper we focus on consumer reactions to bundling of information products, and contrast these with consumer reactions to bundling of conventional products. In particular, we concentrate on communication and pricing strategies that might enhance the viability of selling the information goods as a bundle. We draw a distinction between content utility—provided by the product itself, and form utility—provided by the product form in terms of convenience, ease of use and the like. Content utility tends to be duplicated across different forms of an information product, making it less attractive to buy them as a bundle. However, suitability of different forms of an information product for use in different situations mitigates this effect. Consistent with this, we show experimentally that communicating different possible usages for the product forms may increase the likelihood of buying the items as a bundle. We also investigate consumer reactions to alternative pricing plans for product forms. Our subjects readily accept bundle discounts on conventional items that can be inventoried, but are generally unresponsive to bundle discounts on different forms of information goods that have the same content. However, emphasizing different uses for the forms does

increase their responsiveness to bundle discounts. Moreover, when no bundle discount is offered, we show that the likelihood of buying both print and electronic forms of an information product, holding the sum of their prices constant, can be increased by pricing the electronic form lower than the print form rather than pricing both at the same level.

■ SA06

Shangai

CRM 07: Datamining

Chair: Edward Malthouse, Associate Professor, Northwestern University, 1870 Campus Drive, Evanston, IL, 60208, United States, ecm@northwestern.edu

1 - Value-based Customer Relationship Management using Decision Trees

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In this paper we propose a general methodology for the segmentation of customers according to their lifetime value and consequently prediction of a customer future value segment given some known demographic and behavioral features (e.g., average transaction size, region of residence, age, etc.). We do not aim to predict the exact numeric lifetime value at an individual level, which is still an open issue in marketing research. On the other side, we do not evaluate an average historical lifetime value as done in most of the lifetime value models discussed in literature so far. Since customer lifetime value is not distributed uniformly among customers, our main focus is to identify and distinguish the high-value customers from the remaining customers. The use of decision trees allows to identify those features which mostly characterize a given value segment. Moreover, decision trees provide simple business rules according to which the segment of each customer can be determined based on the information that is available. We show and motivate our approach through a concrete case study involving a major European airline. We formulate rules predicting the future lifetime value segment in the case of: a) long-term customers, b) middle-term customers, c) new customers and, d) prospects. Once customers are discriminated according to their future value, marketing managers can allocate resources and design campaigns aiming to retain the most valued customers. On the other hand, marketing investments in customers which are not predicted to generate much value in the long term can be limited or avoided.

2 - Evaluating CHAID

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We propose two methods to compute confidence bounds around the predictions from the CHAID technique. These bounds are useful for exact target selection, as some clusters may or may not overlap substantially, and useful for ex-post evaluation of the predictive quality of CHAID. The methods are illustrated extensively using simulated data.

3 - Automobile Customer Profiling:

An Application of GIS and Data-Mining Techniques

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Auto marketers are keen to have a detailed picture of their markets, particularly in terms of identifying existing and potential customers, and learning who would be most responsive to marketing communications, sales efforts and promotional offers. In this paper geographic information systems (GIS) that combine attribute and spatial data with mapping systems and cartographic modelling tools, and spatial data-mining techniques that are designed to uncover patterns or trends in data, are used to profile auto customers in Sydney. Important elements of the procedure have come from outside marketing (from geography and decision-science mostly), however increasingly applications are to be found in marketing science as a complement to existing profiling and segmentation approaches. Each step of the analytical process is described and illustrated. First, data from various sources are warehoused and converted into GIS databases using the MapInfo package. Demographic variables (age, ethnicity, education level, gender, family type, income, etc.) are taken from Census data. Records from auto marketers indicate who purchased which auto brands and where these customers live. Second, the association between Census variables and existing customer information is examined using a Spearman rank-correlation model that is coded using MapBasic language and integrated into MapInfo with an easy-to-use interface. High correlations indicate that these variables are good predictors of potential customers. Third, the good predictor variables are used to identify potential customer households for each auto

brand within the study area. The procedure lends itself to graphical and cartographic presentations that are readily understood by marketing and sales managers. We acknowledge financial support from an ARC Linkage Grant (LP0348935) and data from Mapdata Interface International Pty Ltd.

4 - Data Mining and Marketing Strategy: What's the Connection?

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"Data mining" has been successful in optimizing existing processes, tasks, tactics, etc. in a wide variety of fields, including marketing. Optimizing such tasks can result in very large cost savings and/or incremental profit. But data mining has not been used in making high-level (marketing) strategy or policy decisions within an organization. This talk discusses whether data mining can and should play a role in such decisions. Based on a literature review statistics and computer science, we define data mining and contrast it with the traditional research process. We show how this definition can assist in identifying marketing problems where it should play a role. We give two examples from marketing: deciding whether a firm should (1) reward alleged "best customers" with perks/superior benefits and (2) customize product offerings and their promotion through subsegmentation.

■ SA07

Hull

Pricing 06: Consumer Behavior

Chair: Vicki Morwitz, Associate Professor of Marketing, Stern School of Business, New York University, 44 West 4th Street, KMC 9-71, New York, NY, 10012, United States, vmorwitz@stern.nyu.edu

1 - Consumers' Relative Price Preference Effect on Choice Behavior

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In the recent past, the notion of reference price was introduced to the marketing literature to better model consumers' choice. This literature has mainly compared past consumers' experience and behavior with the product category. Consumers' limited cognitive ability, however, is the main criticism of this approach. In addition, application of current reference price choice models to different purchasing environments might inappropriately reflect consumers' choice strategies. This is mainly a result of modeling price as an absolute rather than a relative construct. The purpose of this research, therefore, is to develop a theory that produces a benchmark relative price model that captures the dynamic nature of changing purchasing environments, and, at the same, acknowledges the realism of the reduced amount of cognitive effort required in forming reference prices. The model's underlying structure involves a matching between subjective and objective scales. Specifically, the model utilizes a prototype anchoring point and captures the substitutability between different brands by using: 1) a relative subjective preference scale, and 2) objective market data of actual purchases. The Relative Preference Price Scale model (RPPS) developed here is tested against four other rival models using data on three different categories. Our results show that the RPPS consistently outperformed the other models in predicting consumers' choice.

2 - Integrating Gains and Losses: Valence vs. Value Accounting

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In this paper, we investigate how people code and evaluate a series of events with mixed outcomes in various non-monetary domains. The prospect theory value function dictates that individuals code outcomes as gains or losses and assign some internal values to the outcomes. Therefore, when evaluating a series of outcomes, people may assign a value to each outcome and then aggregate the values into an overall assessment (what we call "value accounting" (r)). However, we propose that in evaluating a series of events that are difficult to evaluate, individuals use a simplified form of mental accounting called valence accounting. They simply code each event in terms of its valence and use the number of positive or negative events in making these judgments. In a valence accounting system, hedonic evaluation is driven by the net number of positive events (number of positive events minus number of negative events). We ran three experiments to test these ideas. In the first study, we show the existence of valence accounting by reporting that people's evaluation of a series of events is influenced by the net number of positive outcomes. In a second experiment, we show that individuals can be pushed from a valence accounting system to a value

accounting system if they are given sufficient information that allows them to scale events in dollar terms. In a third experiment, we test for the effects of motivation on what form of mental accounting systems are used.

3 - The Impact of Price Differentials on Consumer Aspirations

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In many categories, one or several brands are viewed as more 'aspirational' than others. Usually, aspirational brands are much more expensive than other alternatives, while featuring comparable levels on the core product attributes. According to conventional wisdom, aspirational brands are those brands normally favored by consumers of higher economic status, whose lesser price sensitivity justifies higher pricing. In contrast, this research investigates how the presence of high price brands in a set of comparable alternatives can cause a process of abstraction leading to new aspirations (where initial goals are replaced by super-ordinate goals), ultimately reducing the importance of price as a choice criterion. Symmetrically, this research also suggests that lowering the price of some otherwise comparable brands can induce consumers to strip down their initial goals and precipitate price sensitivity. A formal model is introduced to capture the impact of price differentials on the stimulation of consumption purposes away from basic levels of functional categorization. Consumers are assumed to approach a choice set with a goal in mind, but they are allowed to adjust their goal upon observation of the actual alternatives. The presence of unexpectedly high prices induces consumers to consider whether additional super-ordinate goals might be satisfied within the inspected product category. Conversely, the presence of unexpectedly low prices induces consumers to focus on particular sub-ordinate goals that would have otherwise remained neglected.

4 - Penny Wise and Pound Foolish:

The Left Digit Effect in Price Cognition

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This research provides a cognitive account of when and why nine ending prices lead to underestimation. Specifically, through five experiments, we demonstrate three properties of nine ending prices: the left-digit effect, the distance effect and domain invariance. First, lowering a round numbered price by one cent to a nine ending price affects the perceived magnitude only when the left digit of the price changes (e.g., pricing at \$1.99 instead of \$2.00 changes the dollar digit from two to one). When the nine ending leaves the left-digit unchanged (e.g., \$2.79 instead of \$2.80), then lowering the price by one cent has no effect on the perceived magnitude. Second, the nine ending effect depends not only on the left digit of the target price, but also on the perceived distance between the target price and a competing product's price. The closer the two prices being compared are perceived to be, the more likely is the left-digit effect. If the two prices being compared are perceived to be far apart from each other, then lowering the target price by one cent has no effect on the perceived magnitude. Third, the left digit effect is not restricted to the domain of prices; it also manifests with other multi-digit numbers.

■ SA08

Baltimore

Marketing Research 07

Chair: Margherita Pagani, Adjunct Professor, Bocconi University, via Bocconi, 8, Milan, 20136, Italy, margherita.pagani@uni-bocconi.it

1 - Development of Network Effects:

Measurement of Consumer Utility

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In the case of network products which are characterized by the existence of direct network effects, the utility depends on the number of individuals using the same or a compatible product (so-called installed base). Regarding the adoption of a network product it is therefore necessary that the network effects, caused by the installed base, exceed a crucial level. The result of which is that, for the first time, the use of the product becomes favorable for the individual. Besides the knowledge about the height of the crucial utility-level, the knowledge about the functional relationship between installed base and network effects is particularly essential to the successful marketing of such network products. Regarding the significance of network effects for the adoption and

diffusion of network products it is surprising though, that despite numerous publications on this topic, only a small number of them discuss the concrete development of network effects depending on the increase of the installed base. Instead, it is commonly referred to Metcalfe's Law and a highly simplified linear relationship is assumed. Moreover, it is noticeable that there are only a few publications dealing with the empirical measurement of the height of network effects. Thus, this contribution firstly examines on a theoretical basis possible functional forms of network effects, and illustrates their significance for the marketing of network products. By using the hierarchical limit conjoint analysis, a measuring procedure for the empirical analysis of these forms is consulted, which is able to measure network effects on the individual level. In addition, an empirical analysis is presented which, on the basis of UMTS-capable camera cell phones, examines the functional forms of network effects.

2 - Perceived Convenience of Meal Situations: A Conjoint Study with Military Rations

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In the past decade as consumers' demand for convenience has grown relentlessly, the literature on this topic has grown quickly. However, research that provides a fundamental insight to the complex convenience construct remains scarce. The present contribution, which seeks to help bridge this gap, concerns food-related convenience and focuses on meal situations within a military context. In a conjoint study with military field rations, perceived convenience, time and effort are found to be separate constructs. However, a complex relationship between perceived time and effort exist and the two constructs appear highly interdependent.

3 - On the Latent Class Model for Metric Conjoint Analysis.

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It is known that the latent class segmentation approach to metric conjoint analysis is an integrated procedure that performs best, in terms of parameter and segment recovery and predictive accuracy. The latent class segmentation procedure entails a likelihood optimization using the Expectation Maximization algorithm to estimate the parameters (including the part worths associated with the segments) of some finite normal mixture model. In our paper we show that the latent class procedure is equivalent to the application of a clustering algorithm on a projection of the original data on a linear subspace S in the space of response ratings. This leads not only to a better understanding of the latent class procedure but it also shows that an integrated method can be obtained by using an arbitrary clustering algorithm on the projected data in the subspace S . We also discuss a Monte Carlo comparison of several clustering algorithms applied to this projected data set.

4 - A Market Dynamics Model for Third Generation Mobile Multimedia Services

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Purpose of this paper is to define a simple conceptual model of market dynamics which attempts to predict the market consequences of 3G mobile service design decisions. The market dynamics model described is the output of a value/choice model based on factors that affect adoption of Third Generation mobile multimedia services. The superior research question is: given full awareness and equal availability (marketing strength, etc.) of services with given characteristics, what fraction of a representative subpopulation would prefer each service? The paper applies some of the tools econometricians (Choffrey & Lilien, 1980; Shocker & Srinivasan, 1979; Hauser & Urban, 1977; Oren, Ronthkopf & Smallwood, 1980) have developed to the problem of constructing choice theoretic market forecasts from experimental data. In this article, we: (1) first describe the homogeneous segments of mobile users population emerging from a quantitative survey conducted in Italy on a sample of 1000 mobile users, (2) present a brief overview of 3G mobile multimedia services forecasting system, (3) describe the dynamics model in that system. For ease both of explanation and of generalization, the dynamics model description is done in three phases: a. the value proposition model, b. the choice model, c. a simplified version of the dynamics model. (4) discuss the validation of the model applying it to a specific case study: TIM (Telecom Italia Mobile) adopters of MMS news in Italy. We concentrate in this article on more innovative uses of choice theory in the analysis of experimental market research data.

SA09

Leuven

Branding 04

Chair: Tatjana Sabel, PhD student, University of Muenster, Am Stadtgraben 13-15, Muenster, 48143, Germany, 03tasa@wiwi.uni-muenster.de

1 - The Importance of Brand Personality: An Empirical Investigation

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The idea that brands have personalities has great appeal for marketers as it is a potentially powerful basis for gaining competitive advantage. Research findings support the importance of brand personality and suggest that personality features are among the most widely mentioned features of a brand (Phau and Lau, 2000) and can influence consumers' choice, usage, emotional attachment (Aaker, 1997; Biel, 1993; Karnde, Zinkhan and Lum, 1997), trust and loyalty (Keller, 1998). Despite its importance however there is a lack of consensus among researchers regarding what brand personality actually is (Aaker and Fournier, 1995) and it remains an elusive concept. This paper aims to help clarify the nature of brand personality by focusing on the importance of brand personality features relative to other brand attributes under different choice conditions. We report an experiment in which consumers have to choose a restaurant to go out for dinner from among designed sets of restaurants. The restaurants are described as a combination of personality and non-personality attributes using a conjoint-analysis methodology. Involvement is experimentally manipulated by varying the task instructions across respondents. Two hundred participants completed the experimental questionnaire. The results confirm the impact of brand personality on consumers' choice intentions and furthermore confirm that involvement moderates this effect. The findings of this research thus help to broaden our understanding of the concept of brand personality and shed insight onto how brand personality operates when consumers evaluate brands.

2 - Measuring Brand Equity Using the New Empirical Industrial Organization

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There is a considerable literature in marketing on the measurement of "brand equity". There are currently three main methods for measuring brand equity: 1) Price premium (the cost of the brand relative to a generic product), 2) Choice premium (the likelihood of purchasing the branded good relative to an otherwise equivalent unbranded good), and 3) The difference between a company's measurable assets and its stock market value. We propose a new method of measuring brand equity based on economic principles. In particular, we define brand equity as excess profit due to the brand name. To do this, we build a simultaneous equation model of demand and marginal cost. We then determine how much demand and marginal cost shift due a brand-specific dummy variable. The brand equity is the change in producer surplus due to the brand. Using data on market shares and prices for 25 ready-to-eat breakfast cereal brands in 65 cities over 20 quarters (from the IRI Infoscan Data Base used by Nevo (2001)), we estimate a linear model of demand and supply as well as a more sophisticated model based on Berry, Levinsohn, & Pakes (1995). We use these models to estimate the producer surplus generated by each brand. Unlike other measures of brand equity, this measure allows for a calculation of revenue driven by the brand. Under certain assumptions on cost, it calculates profits driven by the brand while allowing for different brands to have different costs. We find that Kellogg's brands derive most of their brand equity from the "Kellogg's" name rather than from the cereal-specific names. General Mills, Post, and Quaker cereals, however, derive their brand equity from the individual cereal names.

3 - Measurement Factors Influencing the Stability of Brand-attribute Associations

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Brand image measurement is the key function of market research in branded industry. Millions of dollars are spent every year by industry to conduct studies of this nature, although many conceptual and methodological issues remain unsolved. Recent studies even suggest that brand images are unstable, thus threatening the basis of segmentation and targeting, the very foundations of strategic marketing. The assumption underlying our replication study is that brand image instability is a consequence of poor brand image measurement procedures, a consequence of measurement factors the effects of which have so far not been systematically investigated. The study was conducted with a university student sample including 357 undergraduate students in 2003. Students completed self-administered brand image questionnaires for the product categories of sports shoes (high involvement for this population) and laundry detergents (low involvement product category among university students) three consecutive times. The results show that very high stability levels can be reached. For the strongest sports shoe brand, 80 percent of the brand-attribute associations were identical over the three survey waves, although averaged over all attributes. Systematic variation of measurement conditions allows insights into the factors that cause low or high brand image stability values. Furthermore, disaggregate analysis reveals a number of interesting associations between brand image stability and brand preference, familiarity with a brand and similar constructs that contradict associations revealed and published in the past in relation to such constructs based on aggregate level.

4 - Brand Relevance for Business-to-Business-Markets— A Cross-Market Study

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The relevance of branding for Business-to-Business(B2B)-products and services is discussed controversially. It is often claimed that B2B-markets are traditionally technically oriented. However, in times of increasing product homogeneity and complexity, price erosion and less loyal customers brands can be important also in B2B-settings. In particular, branding is considered to be relevant in a market if two conditions are met: First, customers have to benefit from brands, e.g. brands fulfilling specific needs. Second, brands should have a positive impact on the company's revenue. We focus on the first aspect, as it constitutes the necessary condition for considering branding as a marketing tool. Our research examines the brand's relevance and functions in B2B-settings, comparing 20 different B2B-markets. We suggest that brands fulfil needs via three core brand functions, which can be deduced from neo-behaviouristic and neo-institutional theory: 'information efficiency', 'risk-reduction' and 'imaginary benefit'. The empirical results indicate that branding is a relevant issue for B2B-companies, as customers state that brands have a significant influence on their B2B-buying decision. This influence varies between different markets. While products with high product value and a high grade of individuality like switchgears yield scores indicating a high brand relevance with respect to all three brand functions, brands seem to be less important in markets with small quality differences, e.g. chemicals. Finally, we compare the importance of the brand functions in B2B- and B2C-markets. In B2B-markets, risk-reduction and information efficiency are most important, in B2C-markets the imaginary benefit has the highest impact on brand relevance.

SA10

Bergen

Marketing Strategy 04

Chair: Boris Durisin, Assistant Professor, SDA Bocconi, Area Marketing, via Bocconi 8, Milano, I-20136, Italy, boris.durisin@sdabocconi.it

1 - How Intangibility Affects Perceived Risk Regarding the Degree of Service Knowledge and Service Use?

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A central concept in services marketing, intangibility has long been an important subject for research. But, despite those numerous studies, it seems that there is no consensus about the content of this concept and how to measure it. So, we have intended in previous works to clarify the concept of intangibility, and developed a reliable and valid measurement scale of the degree of intangibility of a global service offering. This scale highlights both the mental and physical dimensions of the concept. Concurrently, the concept of perceived risk was also largely studied and

presented as a powerful explanatory factor of the purchase behavior. Many authors have suggested that service intangibility was positively correlated with perceived risk. So, the purpose of this research is two-fold. First, we test the relation between the two dimensions of intangibility and the global perceived risk. Moreover, we evaluate how service knowledge and the frequency of service use affect the perceived level of both physical and mental intangibility, and the relation between those two dimensions and the perceived risk. Results show that intangibility influences the global perceived risk. But, contrary to some suggestions, the dimensions of intangibility do not seem to have a simultaneous influence on perceived risk. According to the profile of the individuals, the additional perceived risk will be due either to the mental dimension of intangibility, or to the physical one. We largely comment those results, and suggest implications both for practitioners and future research.

2 - Organisational Culture Difference and University-Industry Relationships: An Exploratory Study

Carolin Plewa, PhD Candidate, The University of Adelaide, School of Commerce, Adelaide, SA, 5000, Australia, carolin.plewa@adelaide.edu.au, Pascale Quester

This exploratory study discusses the relevance of organisational culture differences (OCD thereafter) in the area of relationship marketing and more specifically in the field of university-industry relationships (UIR thereafter). The trend in marketing towards relationship development continues to grow. To date, however, we would claim that RM and its theoretical foundations in the business-to-business area have to the largest extent been developed around research of private sector enterprises. In this study, the authors undertake an exploratory study on relationships between public and private sector institutions, more accurately university-industry relationships. The objective of this study is to explore the relevance of OCD, overlooked in the largest part of RM research to date, for the management of UIRs. Following a literature review, a series of interviews is reported and analysed with QSR Nudist, to identify OCD dimensions and their effect on relationships. Besides confirming the existence of OCD in UIRs, four dimensions were revealed for this construct, namely time orientation, market orientation, motivation and the execution of teamwork. As expected, the effect of these dimensions on a relationship was negative. While organisational differences may be more distinct between entities of different sectors than between two organisations of the private sector, it is generally recognized that all organisations differ. Hence, the authors will propose that future RM studies may benefit from the consideration of OCD and its effect on relationships. The paper concludes with recommendations for academics and industry staff in the area of university-industry relationships as well as relationship marketing.

3 - Responsible Marketing: Why It Should Be Difficult For Coca Cola and Pepsi In India?

Makarand Gulawani, Professor, Audencia Nantes School of Management, 8 Route de la Joneliere, BP 31222, Nantes, 44312, France, mgulawani@audencia.com

This paper is a study and analysis of a case which raised an ethical question on double business standards of Coca Cola and Pepsi in India. The tests of soft drinks conducted in August 2003 by the Center for Science and Environment (CSE), an NGO in New Delhi, confirmed presence of much higher level of harmful pesticides than the norms of European Economic Commission (EEC) in 12 soft drink brands of Coca Cola and Pepsi. This news caused serious damage to the business and brand image of both the corporations in India. However, the government of India found that, though the level of pesticides in these soft drink brands was higher than the norms of EEC, it was within the limits of Indian norms. Hence, Indian government took prompt steps to improve regulatory norms for production and marketing of food and beverage products, applicable from January 2004. The paper suggests, a multinational corporation from developed country should help the host developing country in improving its weak regulatory norms instead of taking advantage of its weaker norms, especially, when weaker regulatory norms are harmful to health or for the environment in the host country.

4 - New Product Development Decisions: A Systematic Review of the Literature Empirically-based Literature

Boris Durisin, Assistant Professor, SDA Bocconi, Area Marketing, via Bocconi 8, Milano, I-20136, Italy, boris.durisin@sdabocconi.it, Giulia Calabretta

New product development is a major field of research. Many literature reviews of the topic already exist and are continuously stimulated by the opportunity of analyzing the process from many viewpoints, such as marketing, engineering, and organization theory. Moreover, other fields of research have emerged, Innovation Orientation and the Entrepreneurial Orientation. There are significant differences among papers within each perspective, not only in the methodology used and assumptions made, but also in the conceptualization of how product

development is executed. Our paper represents a tentative attempt of appraising the research streams, providing a systematic assessment of empirical studies, and organizing them into a framework covering aspects of new product development and launch. The presented framework is founded on a "decision perspective" (Krishnan and Ulrich, 2001). It allows a comprehensive approach to the topic, overcoming the inconveniences of function-focused or other partial perspectives and offering a viewpoint able to catch interdependences among the involved problems. The following six categories have been investigated: Output decisions, decisions in setting up a development project; Product development decisions within a project, Business Strategy types, attitude towards market uncertainty and environmental context; and Performance measurement. For each category, an extensive literature review has been carried out, with the purpose of detecting the most recurring constructs and variables, providing propositions, and suggesting some managerial implications and directions for further research.

■ SA11

Heidelberg

Advertising 03

Chair: Ingrid Poncin, Researcher Belgian National Fund of Scientific Research, FNRS-FUCAM, Chaussée de Binche, 151, MONS, 7000, Belgium, poncin@fucam.ac.be

1 - Ad Appeals in Print Advertising: Case of Poland

Elzbieta Lepkowska-White, Assistant Professor of Marketing, Skidmore College, 815 North Broadway, Saratoga Springs, 12866, United States, elepkows@skidmore.edu

The purpose of this exploratory study is to investigate the evolution of the use of functional individualistic, and social ad appeals in Polish print advertisements after 1989. Ads with functional appeals provide key product information such as price, quality, and style (Resnik et al. 1977). Individualist appeals emphasize ego-enhancement and ego-gratification, while collectivist appeals emphasize social needs of belonging to a group and friendship (McGuire 1976). To address the objective of this study 828 ads taken from the most popular Polish magazines published in 1988, 1993, 1998, and 2002 were content analyzed. The results show that advertising in Poland is becoming more persuasive and it is reaching higher levels in the advertising evolution (Leiss et al. 1990). This implies that international advertisers should be careful in designing their messages to make sure that they fit Polish consumers and their fast evolving needs and expectations. The study shows that Polish ads increasingly relate products to ego-gratification and self-actualization desires of consumers. This study also shows that the use of social ads has been very low overtime, an unexpected finding if one takes into consideration the socialist past of Poland that heavily promoted collectivist values. Finally, functional appeals remained popular overtime and are used more frequently when the economic situation in Poland worsens (Bierzynski, 2001). It seems that functional information has been always a safe bet in Poland since even in the very early 1990's Eastern Europeans looked for functional information in the ads (Boews, et al. 1990).

2 - Profits Sensitivity to Competitive, Dynamic Advertising: The Flat Maximum Principle Revisited

Dung Nguyen, University of Pittsburgh, KGSB, 240 Mervis Hall, Pittsburgh, PA, 15260, United States, nguyen@pitt.edu, Lei Shi

Tull et al. established that a monopolist's static profits are relatively insensitive with respect to changes in advertising spending around the firm's optimal advertising level. They suggested that the flatness of the profits function allows the firm to make leveraged decisions in setting advertising budgets; the phenomenon of overadvertising can thus be seen as a relatively inexpensive way to increase sales. Given these potentially significant managerial implications, it is important to see if such a notion of profits insensitivity to advertising continues to hold under more general conditions. Chintagunta examined the issue and concluded that under a number of well-established scenarios regarding the response functions, the competition dynamics and specific equilibrium strategies, the flat maximum principle continues to hold. While Chintagunta's paper extended the Tull et al. analysis into a dynamic, competitive framework, the author indicated that for the infinite horizon games, his analysis was mainly numerical instead of analytical and that for the most part open-loop instead of closed-loop equilibria were analyzed. Our paper seeks to address aspects of these particular issues. On the basis of the Fruchter-Kalish analytical solution to the duopoly advertising game of the Lanchester type and of our own research on its integration with market size dynamics characterized by the Bass process, we revisit the issue of the flat maximum principle by examining how sensitive a competing firm's profits are with respect to deviations from optimal advertising levels of its own and its competitor. We show that in responding to changes in (closed-loop) optimal advertising levels, profits

appear to be more sensitive than what has been maintained in the current literature.

3 - Regularities in Consumers' Scanning of Marketing Communication Material and Language Experience

Shun Yin Lam, Assistant Professor, Nanyang Technological University, Nanyang Business School, Singapore, 639798, Singapore, asylam@ntu.edu.sg, Albert Wai-Lap Chau, John Tsun-Hin Wong

When reading an article, people's eyes typically follow the direction in which the article is printed. An interesting question is whether people's reading habit shaped by their continued use of a language (language experience) is carried over to their viewing of two-dimensional images which contain only pictorials, or a mix of pictorials and text. In this paper, the authors investigate whether consumers exhibit regularities in their scanning direction when viewing print advertisements and web pages, and whether these regularities, if exist, are related to consumers' language experience. While an abundance of previous research investigates eye movement in reading, few studies examine consumers' scanning of non-text-based images, of which print advertisements and web pages are examples. This paper thus provides insights into consumers' scanning of non-text-based images. Using people with different language experience as participants, the authors conducted three experiments and collected eye-movement data to study the research issues. The results of the three experiments indicate that consumers' scanning of marketing communication material is not random and the regularities involved are related to their language experience. For example, the results indicate that consumers whose reading habit is predominantly from left to right show a stronger tendency of scanning marketing communication material from left to right than consumers whose reading habit is not predominantly from left to right. The research findings have several implications to management on where to place a print advertisement in a media vehicle, a brand logo on a print advertisement and an icon on a web page, in order to attract quicker and more attention.

4 - The Control of Commercials Targeting Children:

An Experimental Approach to Investigate Context Effectiveness

Ingrid Poncin, Researcher Belgian National Fund of Scientific Research, FNRS-FUCAM, Chaussée de Binche, 151, MONS, 7000, Belgium, poncin@fucam.ac.be, Claude Pecheux, Christian Derbaix

In February 2001, during its presidency of the European Community, Sweden argued in favor of a complete ban on advertising targeting children in the European Community. Although the Swedish position did not meet with the other EU-members' approval, in Belgium it triggered off new debates about the need to control advertising targeting children. This issue is not new and advertising restrictions have already been implemented in some European countries. We are particularly interested in those that restrict ad placement (ban on ads during kids' programs in Austria; ban on toys ads between 7 pm and 10 pm in Greece, etc.). In fact, commercials never appear in isolation. They appear in context and this context can influence ad effectiveness. This paper reports three experiments investigating the impact of the TV program surrounding commercials on the effectiveness of these ads among children from 8 to 12. In study 1, a 2*2 design is implemented in which affect induced by the program and involvement in the ads are manipulated on a between-subjects basis. The results show an impact of the affect induced by the program on ad evaluations, stronger in the case of low felt involvement. In study 2, program liking is taken into account as well as the target of the program. The results reveal higher ad evaluations for commercials placed in program non liked by kids that they nevertheless attend (i.e., the news). Finally, study 3 investigates the combined impact of program affect and program liking.

■ SA12

Lund

Channels 03

Chair: Jane Z. Gu, Marketing Department, Stern School of Business, New York University, 44 West 4th Street, KMC 9-170, New York, 10012, United States, zgu@stern.nyu.edu

1 - Examining the Role of Informational Advantages and Opportunism on Transaction Costs in Plural Forms

Humaira Mahi, Assistant Professor, Michigan State University, N370 N. Business Complex, Eli Broad College of Business, East Lansing, MI, 48824, United States, mahi@msu.edu, Carol Finnegan

A central concern in an increasingly complex world is whether firms can perform supply/distribution functions more efficiently. Literature suggests that one way firms can do this is by simultaneously keeping certain functions in-house and outsourcing certain others in the marketplace (Williamson 1985). In assessing their channel management choices, firm often utilize these plural forms of organization in developing a portfolio of governance structures in order to minimize total transaction costs (Bradach and Eccles 1989; Heide 2003). This study aims to understand how a firm's use of multiple or plural forms of governance structures differentially impacts agent opportunism. Moreover, we propose a model that examines the impact of informational advantages, technological uncertainty and the firm's transaction-specific investments on the tendency to use plural forms. For example, we propose that a firm will utilize plural forms when its management perceives that its agents' informational advantages (i.e., market knowledge), make it too costly to rely solely upon an outside partner. By continuously adjusting alternative governance forms, the firm should be able to employ an efficient plural forms strategy. Our theoretical framework extends research on plural forms in two ways. First, it provides a means to test assumptions about transaction costs associated with plural forms governance. Second, it explicitly looks at the differences between inside and outside agent's relative degree of opportunism and its consequences on three important types of transaction costs. This framework represents a theoretical advancement toward understanding the drivers and costs of governance choices.

2 - Asymmetric Information and Manufacturer-Optimal Wholesale Pricing

Charles Ingene, Professor, University of Mississippi, PO Box 1848, 320 Holman Hall, University, MS, 38677-1848, United States, cingene@bus.olemiss.edu, Mark Parry

Two fundamental tenets characterize most analytical research on distribution channels: channel coordination and irrelevance of fixed costs. Analyses of bilateral-monopoly models reveal that channel coordination is in the best interests of all channel members, and fixed costs are irrelevant for decision-making because they do not affect marginal decisions (although they alter participation constraints). We refute these beliefs with a bilateral-monopoly model in which channel members face high and low demand states-of-nature and possess asymmetric information when they make decisions. Asymmetry arises because the manufacturer commits to a wholesale price without knowing what quantity will be demanded in each time-period while the retailer knows the actual state-of-nature before it selects each time-period's price (including an infinite price associated with refusing to distribute in a state-of-nature). We prove that, in the absence of a fixed cost of non-distribution, channel coordination is incompatible with distribution in both states-of-nature.

In the presence of a fixed cost of non-distribution, there are parametric values for which (i) the channel does not exist, (ii) only the high demand state is served, (iii) distribution occurs in both states-of-nature (but the channel is not coordinated), and (iv) distribution occurs in both states-of-nature (and channel coordination is manufacturer-optimal). Thus, the two fundamental tenets of analytical channels research do not extend to a model with asymmetric uncertainty.

3 - Antecedents and Consequences of Retailer-Supplier Market Information Sharing

Willem Smit, Research Assistant, Erasmus Universiteit Rotterdam, Burgemeester Oudlaan 50, Rotterdam, 3062PA, Netherlands, wsmit@fbk.eur.nl, Gerrit van Bruggen, Berend Wierenga

After three decades of retail concentration, retailers across industries are continuing to strengthen their positions by carefully restructuring their supplier relationships. Often, this includes specific arrangements on the sharing of market information with suppliers. (e.g., POS and loyalty-card data, so-called Partner Relationship Management tools). In this project we study market information sharing between retailers and suppliers in marketing channels. Our research centers around two questions: What are the antecedents of this type of market information sharing? And what are its consequences? Different from previous studies that have mainly focused on how channel parties communicate, we also look at what information is shared. Our research model separates the Sharing Mode from the Shared Market Information Content. Regarding the antecedents, our model incorporates factors like: the market environment, the supplier network, the retailer-supplier relationship, and supplier and retailer characteristics. Concerning the consequences, we explore the impact of information sharing on both relational factors and joint market (learning) results. To test our research model we conducted a survey among buyers from retail organizations across six retail industries. For the measurement of the market information shared we developed a hierarchical scale. Our database consists of data about 178 retailer-supplier relationships.

4 - Bargaining and Information Integration in Distribution Channel

Jane Z. Gu, Marketing Department, Stern School of Business, New York University, 44 West 4th Street, KMC 9-170, New York, 10012, United States, zgu@stern.nyu.edu, Yuxin Chen

A distribution channel's knowledge of its marketplace can be dramatically improved by pooling complementary marketing data possessed by different channel members, i.e. through information integration. Our study sets out to explain the variations in the level of information integration observed across different industries by modeling the bilateral bargaining within a distribution channel consisting of a manufacturer and a retailer. We find that the incentive of adopting information integration in a channel depends critically on the bargaining powers of its members. Interestingly, information integration can actually hurt the profit of a retailer if it has medium bargaining power. In addition, we show that the impact of bargaining powers on the adoption of information integration is moderated by the demand uncertainty in the market. These findings provide good explanations to the heterogeneity in the practice of channel information integration indicated by anecdotal evidence.

Key words: Information Integration, Bargaining, Distribution Channel, Game Theory

Saturday, 10:30am - 12:00pm

■ **SB01**

Forum

Special Session: Models of Service and Satisfaction

Chair: Roland Rust, David Bruce Smith Chair, U. of Maryland, Robert H. Smith School of Business, College Park, MD, 20742, United States, rrust@rhsmith.umd.edu

1 - The Impact of Capacity Constraints on Customer Service

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Many service firms face capacity constraints that become binding during peak times or time periods. During these peak time periods, firms must consider how to ration capacity. We consider a service provider who faces limited capacity. We determine the optimal allocation of capacity both as the number of customers increases and as capacity increases. We show that as the number of customers increases, the service provider should provide more service time to each customer up to a point. At that point, the store should stop serving additional customers to maintain a minimal level of service per customer. Moreover, during times of peak demand, the service provider should not use any new capacity to serve more customers but should instead use that additional capacity to better serve additional customers. Of course, our theoretical conclusions are driven by assumptions about consumer response to service.

Consequently, we provide an empirical application (with store traffic and transaction data) in a retail setting for three different product categories to determine whether customer response is consistent with our model. The empirical application shows that actual transactions and store traffic are consistent with the effects hypothesized in our theoretical model.

2 - Customer Satisfaction and Consumer Spending

Roland Rust, David Bruce Smith Chair, U. of Maryland, Robert H. Smith School of Business, College Park, MD, 20742, United States, rrust@rhsmith.umd.edu, Claes Fornell

In view of the large impact of consumer spending growth on the economy, the importance of identifying factors that drive aggregate consumption can hardly be overstated. Accounting for changes in household spending growth from economic variables such as income, wealth, and credit has met with only limited success. We propose customer satisfaction as a key driver of consumer spending growth. Based on a simple analytical model we derive several propositions about the nature of the relationship between customer satisfaction and consumer spending growth. We test those propositions using data from the American Customer Satisfaction Index (ASCI), and find that the data are largely consistent with the theoretical predictions. Customer satisfaction is found to have a significant impact on consumer spending growth stronger than for variables more commonly used to predict future economic conditions.

3 - Modeling Brand and Dealer Loyalty in the Market for New Cars

Peter Verhoef, Assistant Professor, Erasmus University Rotterdam, Burg. Oudlaan 50, School of Economics, Rotterdam, PA, 3067 PA, Netherlands, verhoef@few.eur.nl, Fred Langerak

Dealers are assumed to add value to brands, due to their extensive efforts in services and relationship building. We test this assumption by looking at brand loyalty decisions in the market for new automobiles. We use a nested logit model to test the dealers' contribution to brand loyalty using brand- and dealer switching data of 999 consumers in the Dutch market for new automobiles. Our results show that: (1) the consumer's brand loyalty decision precedes the consumer's dealer loyalty decision; (2) the dealer positively influences the consumer's brand loyalty decision; (3) the consumer's perception of brand equity reduces the dealer's positive influence on brand loyalty, and that; (4) the dealer's positive influence on brand loyalty is restricted to the volume segment in the market for new automobiles.

4 - Dynamic Targeted Promotions

Z. John Zhang, Associate Prof., The Wharton School, 700 JMH, 3730 Walnut Street, Philadelphia, PA, 19104, United States, zjzhang@wharton.upenn.edu, Gila Fruchter

This research analyzes the strategic use of targeted promotions for customer retention and acquisition in a dynamic and competitive environment. Our normative analysis shows that a firm's optimal targeting strategies, both offensive and defensive, in a dynamic setting depend on its actual market share, the relevant redemption rate of its targeted promotions, customer profitability, and the effectiveness of its targeted promotions. These strategies have the attractive feature of being an adaptive control rule. A firm can operationalize these strategies by adjusting its planned promotional incentives on the basis of the observed differences between actual and planned market shares and between actual and planned redemption rates. In the long run, a focus on customer retention is not an optimal strategy for all firms. A firm with a sufficiently large market share should stress customer retention whereas a firm with a small market share should stress customer acquisition. When market shares are more evenly divided in a market, all firms should focus on customer acquisition in the long run. Our analysis also suggests that, to build a long-run market share advantage in the age of information-intensive marketing, a firm must strive to improve its targeting effectiveness and increase its profit margin.

■ **SB02**

Tokyo

Innovation 05

Chair: Joep Arts, Ph.D. Student, Vrije Universiteit Amsterdam, Faculty of Economics, Room 3A-15, De Boelelaan 1105, Amsterdam, 1081 HV, Netherlands, jarts@feweb.vu.nl

1 - Mere Newness and The Consumption of New Products

Jennifer Chang, Assistant Professor, Simon Fraser University, Faculty of Business Administration, 8888 University Drive, Burnaby, BC, V5A 1S6, Canada, jennifer_chang@sfu.ca, Robert Krider

Movies and similar goods exhibit rapid product introduction and short lifecycles. In contrast to most goods studied in innovation research, such products may not be objectively better. For example, we show that the rapid fall in a movie's revenues involves both the aggregate depletion of a pool of adopters and declining utility for some individual nonadopters. Implications are shown for newness-sensitive segment dynamics on marketing expenditures and release timing.

2 - How to Save More: Tools for Self-Control

Greg B. Davies, Faculty of Economics and Politics / University of Cambridge, Sidgwick Avenue, Cambridge, CB3 9DD, United Kingdom, gbd21@cam.ac.uk, Philipp E. Otto, Henry Stott, Nick Chater

Past research has shown that a large proportion of individuals make inadequate retirement plans if not compelled to save. The existence of a 'savings gap' is repeatedly discussed in the media (i.e. Cable News Network, 2000; Monthly Review, 2000) and is key of public policy. Behavioural analysis shows that this failure results from motivational and temporal distortion. Excessive discounting the future and economically un-rational mental accounting hinders optimal saving decisions (Thaler, 1985; Sheffrin & Thaler, 1988; Cordes 1990; Bernartzi & Thaler 2001). Therefore the question arises how behavioural control to facilitate saving can be improved. This paper describes a new method for understanding how people organise their finances. It aggregates possible lines of research in the development of new financial products, such as features to aid self-control and integrated financial structures. Based on a visualisation task and a financial personality survey we show how external as well as internal control can systematically be improved. The main issues so far neglected by financial service institutions include awareness of customer's overall financial situation, their involvement in financial solutions, and the flexibility of financial structures. It is shown how product ergonomics, individual tailoring, and product evolution can be used to support cognitive mechanisms that overcome the lack of behavioural control. This raises the possibility that financial services could be radically reorganised around customer's financial understanding, with potentially substantial impacts on savings behaviour. Integrated financial solutions increase the demand for more elaborate savings products and could have strong macroeconomic implications.

3 - Successful Brand Implementation in Service Settings - The Influence of Customers' and Employees' Perceptions of Price-Performance-Relation and Quality on Brand Attitude and Behavioural Intention

Sebastian Pattberg, Research Assistant, Philipps-University of Marburg, Universitätsstr. 24, Marburg, 35037, Germany, pattberg@web.de, Michael Lingenfelder, Jan Wieseke

Both perceived price-performance-relation and perceived quality are supposed to be key aspects of consumer preferences and buying behavior. Perceived price-performance-relation as well as perceived quality have been found to trigger the attitude towards the brand and the intention to buy the product or service behind it. From the authors' point of view this research should contribute to bridge a gap of investigation concerning the role of salespersons in brand launches. Although literature has often described employees as "internal costumers" and they are widely seen as crucial mediators of product and brand-success especially in service sector, almost no empirical research has so far taken their brand perceptions into account. Recent literature indicates that the fit of the internal and external brand identity is an important factor for brand success. A field study was conducted to test this notion in a tourist environment. Customers and salespeople of a German travel agency franchise system that was launching a travel brand were asked to indicate their perceptions of price-performance-relation, quality, attitude and buying intention regarding the new brand. Structural equation modeling and multiple group analyses' findings underline that the successful implementation of a brand requires to consider both the customers' and the salespersons' perception of brand price and quality components.

4 - Determinants of Consumer Innovation Adoption: A Meta-Analysis of Three Decades of Research in Market

Joep Arts, Ph.D. Student, Vrije Universiteit Amsterdam, Faculty of Economics, Room 3A-15, De Boelelaan 1105, Amsterdam, 1081 HV, Netherlands, jarts@feweb.vu.nl, Ruud Frambach, Tammo Bijmolt

An extensive stream of research has come into existence that explores the factors that affect the innovation adoption decision of consumers. This research shows varying results with respect to the strength and direction of effects of antecedents of innovation adoption. Consequently there is a need to synthesize research findings on antecedents of adoption. We address this need through a meta-analysis of research on the consumer adoption of innovations. In particular, we generalize empirical findings published in the main marketing journals as of 1970. We provide an overview of the drivers of innovation adoption distinguishing between different stages of the adoption process (i.e. intention to adopt, trial, adoption). We assess effects pertaining to adopter characteristics and to product characteristics. We report on a set of 78 publications, with a total of 607 relations between related constructs. In this paper we: (1) reflect on extant research of consumer's innovation adoption, (2) provide an overview of all profound antecedents used in innovation adoption theory, (3) relate antecedents to the different stages of adoption, (4) critically review the methodological choices made in passed research, and (5) discuss future directions of research on innovation adoption.

SB03

Athene

Internet 06

Chair: Zainab Jamal, Doctoral Student, The Anderson Business School at UCLA, 110 Westwood Plaza, Suite B412, Los Angeles, CA, 90095, United States, zainab.jamal@anderson.ucla.edu

1 - Shopbot Market Representativeness and Internet Price Dispersion

Jianan Wu, Tulane University, A. B. Freeman School of Business, New Orleans, United States, jianan.wu@tulane.edu, Xia Chen

Internet price dispersion research has attracted much attention recently. Although much has been studied on what attributes to Internet price dispersion, new factors emerge as the research deepens our understanding on this issue. Recently, researchers (e.g., Allen and Wu 2004) have started questioning the attribution to Internet price research from shopbot market representativeness because shopbots have become common data agents for empirical Internet price research. In this large scale study with 2.2 million observations, we examine the attribution of shopbot market representativeness to Internet price dispersion from two perspectives: shopbot vendor coverage and shopbot vendor affiliations, jointly together with other salient factors (e.g., market structure, vendor characteristics, etc.) in both supply side and demand side of the market. Our research employs the Oaxaca's (1973) decomposition method to conduct a difference-difference analysis, in which price range is used as the

major measure of price dispersion to account for the relationship between the factors where the highest prices and lowest prices locate. This analysis is conceptually appealing in depicting the attribution from both the difference between the levels of the factors as well as the difference between the rates of return of the factors, which sheds new light on Internet price dispersion research.

2 - A Proposed Framework for Consumers' Experience in Online Shopping Environment

Jun Chen, Doctoral Researcher, The University of Warwick, Warwick Business School, The University of Warwick, Coventry, CV4 7AL, United Kingdom, j.chen@phd.wbs.ac.uk, Sally Dibb

Research exploring the effect of atmospherics has focused heavily on the stimulus-organism-response (S-O-R) theory proposed by Mehrabian and Russell (1974). Based on these studies from environmental psychology and store atmospherics, this research develops a framework to portray the relationship between the online store interface, consumers' emotional and cognitive reactions to the website, and their site approach/avoidance behaviour. Consistent with the traditional S-O-R paradigm, the model for this research incorporates: the online store interface features as "stimuli", including product and service information, website usability, security and privacy, general look of the site, and speed of download; consumers' flow experiences, trust, and attitudes towards the site as "organism"; word-of-mouth, desire to stay, desire to explore, site revisit intention and future purchase intention as "response". As the essential link between consumers and online vendors, the online store interface has been fundamental to the success of online business. This research is concerned with the relationship between online store design features and consumers' flow experiences, trust, attitudes toward the site and hence their site approach/avoidance intentions. As such, the results will have direct implications for online vendors. In particular, the work will aid the design of so-called "sticky" websites. This research contributes to the use of flow theory in examining consumers' online shopping behaviours at a time when interest in flow theory research is on the increase. Data for this research will be collected from students at the University of Warwick by using an online questionnaire.

3 - Developing a Comprehensive Model of Online-Offline Shopping Preferences

Irwin Levin, Professor, University of Iowa, Department of Psychology, 11 Seashore Hall East, Iowa City, IA, 52242-1407, United States, irwin-levin@uiowa.edu, Aron Levin, Joshua A. Weller, Marco Lauriola

An important issue in contemporary consumer behavior is what drives a consumer to shop online or offline. There are at least two major questions to be addressed: What types of products are most likely to be purchased online and offline? What types of consumers are most likely to purchase online and offline? In this paper we describe earlier research addressing each of these questions separately and then we describe a new study in which we address these questions in combination in order to develop a more comprehensive model of online/offline shopping preferences. Using a multi-part survey we examine the extent to which online/offline preferences are driven by each of the following: a) differences between products related to whether key attributes are perceived to be delivered better online or offline; b) stages of the shopping experience (information search vs. final purchase); c) consumer demographics, including internet experience; d) consumer personality characteristics, including need for cognition, attitude toward risk, impulsivity and introversion/extroversion; and e) situational constraints such as availability of acceptable retail outlets. We will discuss the marketing implications of our results in terms of when and with whom to promote online services or offline services.

4 - Customer Fit and Customer Retention at an Internet Recommendation Site

Zainab Jamal, Doctoral Student, The Anderson Business School at UCLA, 110 Westwood Plaza, Suite B412, Los Angeles, CA, 90095, United States, zainab.jamal@anderson.ucla.edu, Randy Bucklin, Michael Trusov

Our research examines how customer retention varies with depth of visit i.e., with each subsequent visit for an online customer using information from multiple visits to a website. Further, we study the impact of 'customer fit' on customer retention where we define 'customer fit' as the degree to which the website accurately captures the customer's preference for a product. We use a conditional Cox proportional hazard model for multiple events with each return visit by a customer defined as an event. Our model allows us to estimate a different baseline hazard function for the first and subsequent return visits of the customers as well as capture the differential impact of the covariates. We estimate our model using customer clickstream data from the movies category of an Internet recommendation site. The only product offered by the site is a

list of recommended movies along with their predicted preference ratings, generated using the stated preference ratings of the customer. So 'customer fit' for this web site is the accuracy with which the site's recommendation engine reproduces the customer's stated preferences for a set of movies. Our results show a significant positive link between customer fit and customer retention with the impact reaching a peak on the second return visit. We also find that the time and effort expended by a customer on the site during a given visit are significant predictors of retention.

■ SB04

Rochester

Choice 08

Chair: Rakesh Niraj, Assistant Professor of Marketing, USC Marshall School of Business, ACC 215 D, 3660 Trousdale Parkway, Los Angeles, CA, 90089-0443, United States, rkniraj@marshall.usc.edu

1 - A Discrete/Continuous Model for Multi-Category Purchase Behavior of Households

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We provide an integrated utility maximizing framework for the multi-category purchase incidence, brand choice and purchase quantity decisions of households. Besides the theoretical appeal of a multi-category utility maximizing framework, such an integrated unified framework provides substantive benefits to marketing decision makers, retailers and multi-product / multi-category manufacturers as their decisions typically involve setting prices and levels of other promotional activities across several different product categories. Yet another benefit of an integrated framework is that one can assess whether the models previously proposed in the literature can be construed as sub-models resulting from multi-category utility maximizing behavior of households. In our model, on a store visit, households maximize utility across several categories subject to an overall budget constraint. They then choose to purchase a sub-set of categories. Our model allows for explicit complementarity between categories as well as co-incidence in a household's shopping basket. Within each category, a specific brand and an associated quantity level are chosen. We derive the marginal and joint purchase incidence probabilities; the conditional brand choice probabilities and the conditional quantities of the chosen brands. We obtain closed form expressions for the joint purchase incidence and brand choice probabilities if we assume that the error terms are iid Type I extreme value random variables.

2 - Semiparametric Bayesian Thurstonian Models for Choice

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We develop semiparametric Bayesian Thurstonian models for analyzing multinomial and multivariate choice data. Our model has multiple components that together yield considerable flexibility in modeling utility errors, cross-sectional heterogeneity and parameter dynamics. Each component of our model is specified semiparametrically using Dirichlet process (DP) priors. The first component of our model allows the alternative specific utility errors to non-parametrically deviate from a normal distribution. This generates a robust alternative to popular multinomial and multivariate probit models of choice. Our second component focuses on flexibly modeling cross-sectional heterogeneity. The non-parametric specification allows the heterogeneity distribution to mimic either a finite mixture distribution or a continuous distribution such as the normal, whichever is supported by the data. Thus, special features such as multimodality can be readily incorporated without the need to overtly search for the best heterogeneity specification across a series of models. Finally, we allow for parameter driven dynamics using a semiparametric state-space approach. This specification adds to the growing literature on robust Kalman filters. The resulting model is very general and integrates divergent strands of literature on flexible choice models, Bayesian non-parametrics and robust time series specifications. Given the generality of our specification, we show how several existing choice models can be obtained as special forms of our model. We develop Markov chain Monte Carlo methods for the inference of model parameters, report results from two simulation studies and an application to scanner data that highlights the benefits of our semiparametric approach.

3 - A Market Basket Analysis Based on the Multivariate MNL Model

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The following research is guided by the hypothesis, that products chosen on a shopping trip in a supermarket are an indicator of the preference

interdependencies between different products or brands. The bundle chosen on the trip can be regarded as an indicator of a global utility function. More specific: the existence of such a function implies a cross-category dependence of brand choice behavior. It is hypothesized, that the global utility function related to a product bundle is the result of the marketing-mix of the underlying brands. To investigate the determinants of the choice for a certain bundle, a market basket forecast model is adopted from Russell and Petersen (2000) which uses a multivariate logistic function. The target of the paper is to apply a multivariate logistic approach to estimate a market basket model and to make a comparison between the results of the parameter estimates for a Canadian data set with a German one, which leads to a cross-cultural study. The estimation technique is derived from models of spatial statistics. The market basket model developed in this article is applied to data from a German consumer panel. The structure of the chosen products allow to discover the impact of certain marketing mix variables and cross national comparison of market basket choice respectively product bundle buying behavior.

4 - Using Store Loyalty Data for Target Marketing: Impact of Limited Purchase Information

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During the past two decades, the increased use of loyalty programs by retailers has given them access to consumer purchase data. During this time, researchers have demonstrated how demand models based on scanner panel datasets may be used to characterize price and promotion response at the household level. Presumably, such models could be estimated on the loyalty program data and be used to develop customized marketing programs. However, in contrast to scanner panel data, which contains across-store purchase information, loyalty program data is store-specific, and there has been little research on whether and how this limited information availability impacts parameter estimates or the quality of the customized marketing program. To address these questions, we estimate an integrated model of purchase incidence and brand choice on scanner-panel data. The model incorporates household-specific parameters estimated with a hierarchical Bayes approach. The data is organized to represent two different information sets: the first contains the entire purchase string of a household (across-stores), while the second only contains store-specific purchase information. The estimated parameters from each information-set are used to develop an optimal customized couponing program (Rossi, McCulloch and Allenby 1996). A comparison of the parameter estimates and the couponing programs obtained from the two information sets provides insights into the consequences of using loyalty program data to carry out targeted marketing activities.

■ SB05

Santander

Competition & Game Theory 06

Chair: Rajiv Lal, Professor, HBS, Morgan Hall, Soldiers Field, Boston, MA, 02163, United States, rlal@hbs.edu

1 - Timing of Competitive Actions

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Competition among brands has long been a prominent area of study in marketing. Researchers have asked, and attempted to answer, important questions regarding the manner and extent to which competitors act and react to each others marketing activities (e.g., Steenkamp et al. 2004). An issue that has received little attention in this stream of research has been the timing of competitive actions. For example, how long should a manager wait before running a promotion given that a competitor has recently engaged in similar activities? We tackle this issue by taking a demand side perspective, recognizing the influence on the timing of marketing actions of three essential components of consumer's purchase decisions: (1) Purchase timing, (2) purchase quantity, and (3) brand choice. We build on previous work by Jain & Vilcassim (1991), Chintagunta (1998), and Ailawadi & Neslin (1998), amongst others, to develop a comprehensive model of these three forces. We posit that the timing of marketing actions should be based directly on an understanding of each of these consumer decision components and their interdependencies. We develop hypotheses on the potential influence of various consumer, brand, and market characteristics on the marketing timing decision and test these hypotheses on a frequent shopper data base of over 30 categories in two stores. We use extensive simulations to

generate a series of recommendations to managers regarding the timing of competitive actions.

2 - Strategic Integration in Product Systems Markets

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Product systems combine hardware (e.g., desktop PC, CD-players) and software components (e.g., application software, CDs). The coordination of product systems has been a theme of enduring research interest. One of most critical problems is whether the competing hardware manufacturers should integrate into software development. The existing literature reports conditions under which they should integrate, and concludes only the symmetric cases as optimal where (a) each manufacturer produces hardware only and (b) each manufacturer provides both hardware and software. Due to the restrictive assumptions, however, the existing models do not fully account for the reality in product systems markets. First, the models assume a free-entry software market, thereby suppressing the strategic influence that software firms can exert with software variety and price. Second, the models assume that hardware manufacturers always lead the competition, i.e., the hardware pricing decision precedes the software variety and pricing decisions. We present a general model of duopolistic competition in product systems markets. The software firms make strategic decisions on software variety and prices, which influence the hardware pricing strategies. Further, we also consider alternative decision sequences that are consistent with real-life competition. In contrast with findings in the existing literature, we find that asymmetric equilibrium market structures can exist under certain conditions, where one hardware manufacturer integrates into software development but the other does not. We empirically illustrate the ability of our model to recover and explain competition in the home video game market between two dominant players Sony PlayStation and Sega Saturn during 1995-1997.

3 - Demand, Cost and Firm Behavior with Competitive Product Line Influences

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Most industries consist of a few firms each offering multiple brands. However, the existence of product lines has largely been ignored in empirical analysis due to the greater complexity engendered in both the demand and cost functions by cost interactions and cannibalization. This paper discusses and empirically illustrates the impact of these product line interactions on estimated demand and cost parameters as well as optimal firm behavior and profits. Using data on Sports Utility Vehicles purchases we construct a structural model that describes consumers' choices as a function of multi-attribute utility and prices. We assume that firms compete in prices conditional on the 'positions' delineated in the multi-attribute space. The particulars of the supply side model depend on the assumptions we place on the price setting behavior of the firms. In particular, we model two possible scenarios (i) Firms set prices by treating each brand as an independent profit center (ii) Firms optimize prices over their entire product portfolio jointly. In either case the supply side equations explicitly link a multi-attribute production/cost function to prices thereby completing the specification. A comparison of the two scenarios allows us to make statements about the structure of the market while the second scenario also allows us to investigate issues pertaining to cannibalization and cost interactions since the empirical implementation of these frameworks not only provide us with estimates of the utility function but also outline the costs of producing each attribute. This gives us the unique opportunity to understand and explore issues relating to 'repositioning' that have not been addressed in the extant literature.

4 - Did the Internet Kill the Business for Travel Agents?

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Before the Internet emerged as one of the major distribution channels for the airline-related products, the travel agents made more than 50% of their revenues from commissions (as high as 10%) they got from airlines, but did not charge fees for their services. However, with the availability of a lower cost of distribution option in the form of the Internet, the airlines started relying more heavily on the Internet and reduced agent commissions significantly. This forced the travel agents to start charging fees for their services. During this transition period, many travel agents exited the business and only some of the big travel agents survived in the face of competition with online travel agents, such as Travelocity and Expedia, and airlines' own online booking sites. In this paper, we analyze this evolution of travel agency business using a game theoretical model. We first prove that pre-internet it was optimal for travel agents not to charge any fee for their services. Second, we show

why some travel agents could not survive after the Internet. Finally, we show that in fact the competition with the Internet increased the profits of the surviving high service quality travel agents.

SB06

Shangai

CRM 08: Customer Churn

Chair: Oded Netzer, Stanford University, Stanford Graduate School of Business, 518 Memorial way, Stanford, CA, 94305, United States, onetzer@stanford.edu

1 - Modeling and Predicting IAP Customer Churn – An International Comparison

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We compare the prediction accuracy of Hazard Model Approaches with traditional Logistic Regression to forecast customer churn on two similar sets of data from the US and Europe. The data is comprised of an array of customer and usage data from leading Internet Access Providers (IAPs) on each side of the Atlantic. We derive several interesting results from our investigation: (a) The drivers of churn/no churn seem to be industry specific, regardless of place (b) Hazard Models are superior in predicting churn, Logistic Regression Models in predicting retention (c) For Hazard models, the choice of the underlying distribution does not seem to have a substantial effect in both data sets (d) Neither the fact that we use data from a non-contractual (US) nor contractual setting (EU) does affect the results.

2 - The Integrated CRM approach to Repurchase Prediction

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In today's mature marketplaces which are generally characterized by high and growing competition, customer retention is key to the survival, let alone the success, of companies. In their efforts for customer retention in the form of repurchase, two different approaches, customer satisfaction and database marketing, to repurchase have been popular in both the academic and the business circles. One approach takes customer satisfaction as the key predictor of repurchase while the other approach regards transaction-based RFM variables as the strong predictors. In light of the limitations of each approach, this paper takes the so-called CRM approach which integrates two different types of data, i.e., survey-based data and transaction-based data. This CRM approach reveals the relative importance of these repurchase predictors, providing new insights on what to do to retain customer for repurchase. Along with the two approaches, this paper also examines the relative importance of brand preference as a repurchase predictor. This paper also conducts additional analyses at the segment level to derive any heterogeneity with respect to repurchase predictors for the purpose of appropriate implementation of differentiated CRM programs for different customer segments.

3 - Using the Mere-Measurement Effect to Reduce Customer Churn

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In the marketing literature, several studies have shown that the process of measuring customer satisfaction and purchase intentions changes subsequent behavior, a phenomenon that has been called the "mere-measurement effect" (Morwitz, Johnson, & Schmittlein, JCR, 1993) and the "self-prophecy effect" (Spangenberg & Greenwald, JCP, 1999). Dholakia and Morwitz (JCR, 2002) have shown that the effect of measurement-induced judgments is persistent over time and broad in scope. We examine how this effect can be used as a CRM (customer relationship management) tactic. In this empirical study, a field experiment was carried out in subscription services. We find two benefits of measuring customer satisfaction and intentions: 1. it increases subsequent re-subscription behavior (thereby effectively lowering churn), and 2. the survey information adds to the accuracy of a churn-prediction model built on data-warehouse data only. Implementation of this procedure resulted in several tens of thousands of euros in additional profit.

4 - A Hidden Markov Model of Customer Relationship Dynamics

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This research addresses the issue of modeling and understanding the dynamics of customer relationships. The proposed model facilitates using typical transaction data to evaluate the effectiveness of relationship marketing activities as well as the impact of past buying behavior on the dynamics of customer relationships and the subsequent buying behavior. My approach to modeling relationship dynamics is structurally different from the models in the existing literature. In the proposed model, customer-brand encounters may have an enduring impact by shifting the customer to a different (unobservable) relationship state. I constructed and estimated a hidden Markov model (HMM) to relate the latent relationship states to the observed buying behavior. This model enables to dynamically classify the customers into relationship states, and assess the evolution of customers' relationships over time. Moreover, since the relationship states are determined, in part, by exposure to marketing activities initiated by the firm, it is possible to examine methods by which the firm can alter the relationship levels and consequently affect the long-term buying behavior. To account for unobserved heterogeneity across customers, I estimated a random-effect model using a hierarchical Bayes procedure. I calibrate the proposed model in the context of alumni relations using a longitudinal gift giving data provided by the Stanford Alumni Association. The application of the model for marketing decisions is illustrated using a "what-if" analysis of a reunion marketing campaign. Additionally, using a validation sample, I show that the proposed model improves the ability to predict future donations relative to several benchmark models.

■ SB07

Hull

Pricing 07: Bundling

Chair: Peter Popkowski Leszczyc, Associate Professor of Marketing and Director CampusAuctionMarket.com, University of Alberta, 4-20F School of Business, Edmonton, AB, T6G 2R6, Canada, ppopkows@ualberta.ca

1 - When is it Profitable to Auction Multiple Items as a Bundle?

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Auctioneers of multiple products must decide whether to sell these items separately in independent auctions or sell them as a bundle in a single auction. While standard auction theory suggests that separate auctions tend to be strictly more profitable, we argue that this need not be the case. To compare the profitability of selling a bundle of goods in a single auction and of selling the bundle components in separate simultaneous auctions, we develop an analytical model of auctions and bidding strategies in a second-price sealed-bid setting. We find that, in a broad class of situations, selling the component products as a bundle in a single auction can indeed be more profitable than conducting separate auctions for the components. In particular, bundling tends to be more profitable when (1) the degree of complementarity among the component products is high, (2) there is a significant amount of heterogeneity in product valuations across bidders, and (3) the correlation of bidders' valuations of the different component products is low. Under these conditions, participants in the separate auctions of the component products tend to bid less aggressively than those in the bundled auctions because they experience greater exposure risk (i.e., the risk of failing to obtain one of a set of complementary component products). The social welfare implications of this research are also discussed.

2 - The Impact of Promotional Bundles on Consumers' Incidence, Quantity and Choice Decisions

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This paper investigates the impact of bundle promotions on consumers' purchase decisions for Fast-Moving-Consumer-Goods. It concentrates on the study of self-bundling promotions, where consumers themselves compose the bundle by selecting a number of units (the bundle quantity requirement) from a set of items (the bundle range) in order to obtain a price reduction (the bundle discount). We gain insight in the mechanisms underlying bundle promotions, evaluate the effects as a function of the bundle's characteristics, and contrast these effects with those of traditional per unit promotions. To this end, we calibrate adapted incidence, quantity and choice models on consumer panel data and promotional information in the potato chips category. At the choice level, we find strong evidence that promotional bundling introduces complementarities among the bundle items (the 'leverage effect'). Further, con-

sumers who do not buy enough to qualify for the bundle discount may still exhibit significantly altered choice patterns. At the quantity level, the bundle discount effect is moderated by the 'quantity pressure', i.e., the extent to which the bundle pushes a consumer to deviate from her usual purchase amount. Finally, at the incidence level, we do not find any significant impact of bundle promotions. By means of a simulation, we show that—compared to per unit promotions—a carefully designed bundle promotion can ensure a higher choice share for the individual bundle items as well as for the whole brand line, but has more limited potential to boost category sales. Moreover, the results demonstrate that proper selection of the bundle range and, especially, the quantity requirement, has a dramatic impact on the performance implications of the bundle promotion.

3 - Paying More for Less: Super-Subadditivity in Consumer Evaluation of Product Bundles

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We develop and test a model of multiple-product bundle valuation by consumers. We propose that individual heterogeneity in the price/quality perceptions of a component item can influence bundle valuation to a profound degree when consumers anchor on a high certainty good, and use this anchor to adjust their valuations of low certainty goods in a bundle. In some circumstances, bundling a low-value certain item with high-value uncertain item can result in a bundle valuation lower than the value of the uncertain item alone. We refer to this highly unexpected phenomenon as 'super-subadditivity'. Our conceptualization differs from previous work by Yadev, who proposed and found that consumers anchored on the item perceived to be most important (i.e. expensive). We develop a more general framework in which Yadev's model is a special case. In two bundling experiments, where participants use their own money to participate in second price (Vickrey) sealed bid auctions, we find that (1) bidders evaluate bundle value by summing individual component values and (2) bidders rely on the price/quality of the certain item to infer the price/quality of the uncertain item. Specifically, we bundle the same uncertain product with either (1) a product lower in price and quality or (2) a product higher in price and quality (both with low uncertainty concerning the price and quality). In the first case, bidders anchor on the low-quality inexpensive item, reducing their valuations of the more expensive item, and their valuation of the bundle, leading to super-subadditivity. In the second case, bidders tend to use the high quality expensive item as an anchor, resulting in super-additivity.

4 - An Empirical Analysis of the Effectiveness of Bundling Strategies in Auctions

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The present paper investigates different bundling strategies in a variable-price setting. The primary objective of this work is to determine the effectiveness of several key bundling formats in open ascending-bid (English) auctions, and to examine the moderating role of the degree of complementarity among the individual products (components). We report the results of two controlled field experiments involving real-world ascending-bid auctions. Experiment 1 examines the effect of the level of complementarity among the component products in a bundle. We manipulate the level of complementarity and the selling format (a single auction of the bundle vs. separate auctions for the components). Experiment 2 focuses on the influence of different types of bundling strategies (simultaneous mixed bundling vs. sequential mixed bundling) on the comparative effectiveness of bundling. Economic theory predicts that, in general, separate auctions of a set of products will yield greater revenue for the seller than a single auction of the bundle of the same items. Our results support this prediction when the complementarity among the component products is low. However, our findings show that, when complementarity is high, a single auction of the bundle can lead to substantially greater revenue for the seller than separate auctions of the components, which is in sharp contrast to what is predicted by economic theory. The comparative effectiveness of bundling is also moderated by the number of bidders and the bundling format. A simultaneous mixed bundling strategy, where the auctions of the separate component products and that of the bundle are conducted concurrently, tends to be more effective than a sequential mixed bundling strategy.

SB08

Baltimore

Marketing Research 08

Chair: Kitty Koelemeijer, Professor of Retailing and Marketing Channels, Nyenrode University, Straatweg 25, Breukelen, 3621BG, Netherlands, k.koelemeijer@nyenrode.nl

1 - Consumer Reaction to Social Issues:

A Six Country Study Using Archetype Analysis

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There has been increasing debate on the importance of ethical consumerism to the marketing of products and the day-to-day strategic management of business. This work utilizes two experimental methodologies (choice modeling and best-worst experiments) and expands on Auger, et al. (2003) who found segments of consumers were quite willing to pay to acquire products with embedded social 'goods'. Three products categories were examined: athletic shoes, laundry detergents and batteries in six countries: USA, Spain, Germany, Turkey, India and Korea. Each respondent completed a survey with gathered information in four sections: (1) information about their last purchase, (2) a series of 8 choice tasks that included products with social attributes, (3) a best-worst experiment with 20 blocks of options examining 16 social issues, and (4) demographics. The data was analyzed using archetype analysis (Cutler and Breiman, 1994) as a means of segmenting respondents and MNL to examine the structure of preferences across the countries and segments. This study provides a window on global differences in social issue orientation. Unlike prior studies, it relies on a methodology that provides more robust estimates and allows us to determine which issues will be abandoned when the individual is forced to make a choice. We find that based on this analysis there is quite a lot of homogeneity across cultures in aggregate preferences but that there is a good deal of heterogeneity across individuals that is unobservable. This implies that gross segmentation based on observable demographic provides some information but quite limited information.

2 - Weak Sensitivity to Reputation-building in An Ultimatum Scenario

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Ever since the important experimental work of Camerer and Weigelt (1988) concluded that "sequential equilibrium with home made incomplete information describes actual behavior well enough that it is plausible to apply it to theoretical settings where individual make choices (e.g., product markets, labour markets, bargaining)", one might be tempted to actually use the theory confidently in these domains. The present study attempts to explore Bayesian updating in a bilateral negotiated sale setup, injected with a whiff of ultimatum aroma, in order to assess the robustness of the above conclusion. It imitates Camerer and Weigelt's study rather closely: the experimental unit is five repetitions of a game where a seller demands a price and the buyer, who is known to the seller probabilistically as of type high or low search cost, responds with either acceptance or opting to a cost laden search for an alternative source of supply. We find that sellers do not change their price demand during the five repetitions of the basic game although buyers tend weakly to refuse early demands and accept later demand. Two hundred and forty students participated in the study spanning 10 sessions, which are characterized by the crossing of five levels of seller's knowledge of the buyer type with two levels of search costs. We conclude that the ultimatum nature of the basic game tends to overwhelm rational behavior on the part sellers and that buyers are not cognizant of favorable prices occurring later in the play.

3 - The Influence of Opinion Leaders on the Success of Hedonic Goods

Michel Clement, University of Kiel, Institute for innovation research, Westring 425, Kiel, 24098, Germany, michel@michelclement.com, Dennis Proppe

Hedonic products are characterized by an affective and sensory experience of aesthetic or sensual pleasure, fantasy or fun. Books are a typical example of hedonic goods where consumers face a high degree of uncertainty prior to consumption. In order to reduce the uncertainty about the quality of the hedonic good, consumers search for clues that might help them to evaluate the book. Especially for hedonic goods opinion leaders can be a reliable source of information about the quality of the product. Critics and their reviews of hedonic goods seem to have a substantial, but rather theoretical impact on the success of these goods. Empirical studies about the role of reviews in the movie industry indicate that critics are able to forecast but only to a limited extend influence the success of a hedonic good. We research the role of opinion

leaders in the publishing industry by analyzing the life cycle of 1,431 books. Using random coefficient and mixture regressions models we can show that reviews do influence the market performance of a book. Our results further indicate that polarizing reviews (even if they are extremely negative) do have a positive effect on book sales. Sales are also positively influenced if there is a dispute between the reviewers.

4 - Effects of Product Quality Information on Consumer Choice for Perishables

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This paper focuses on the consumer choice effects of introducing a quality guarantee in a perishable goods category. In many categories suppliers attempt to reduce consumers' purchase risk by providing product quality guarantees, or warranties. Such warranties underpin the supplier's brand promise and can enhance product value, allowing for higher margins. These higher margins however come at the cost of having to deliver on the quality promise. Suppliers therefore need to know how much extra value is created by this new product feature. Our paper assesses for one category of perishables how much consumers are willing to pay for a product for which a supplier based guarantee of product durability is introduced. We also assess to what extent the added value of this guarantee is affected by the specificity of the guarantee. We hypothesize that a less specific product guarantee not only results in lower item preferences but that it also moderates the effect of durability. To assess the willingness to pay for a product guarantee and to test our hypotheses we analyze data from an existing consumer panel in The Netherlands. Panel members participated in a choice experiment that varied the levels product guarantee in terms of durability and specificity. Preliminary results based on choice model estimations reveal significant positive effects for durability but not for specificity. This would imply that suppliers can introduce such a new feature even if they cannot always deliver exactly what they promise.

SB09

Leuven

Networks 01

Chair: Frédéric Dalsace, Assistant Professor, HEC School of Management, Paris, Rue de la Libération, Jouy en Josas, 78350, France, dalsace@hec.fr

1 - Positioning Via Affiliation: The Ability of Strategic Alliances to Enhance Image Perceptions

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Facing an increasingly competitive marketplace, many firms have turned toward formal alliances with other entities in order to achieve strategic advantages. One form of corporate cooperation that has seen steady growth is strategic partnerships where two brand names are publicly linked. Whether a brand's image may be perceived differently by consumers after an alliance is an interesting question. The goal of this research was to explore the ability of a brand's image to be enhanced by partnering with a brand that maintains a strong image on a certain dimension. Further the study sought to provide insight into whether the level or depth of the relationship was a significant moderating variable in the alliance's ability to alter image perceptions. In order to test the study hypotheses, an experiment featuring fictional brand alliances was conducted. The findings of the study suggested an alliance with a brand that maintains a strong image can enhance the perceived image of the inferior brand. The results also indicated that a positive image "rub-off" effect is possible at various levels of alliance relationship. Meaning that an image enhancement can occur regardless if the relationship is considered to be more "involved" than another form of alliance. The results of this study seem to imply that the mere fact that the brands are collaborating on some level is enough to alter perceptions. The suggestion that even low level public relationships with image-rich brands can escalate a partner brand's overall image is noteworthy. For marketing managers the findings appear to support a strategy of seeking out partnering opportunities with brands that maintain an image they may covet for their brand.

2 - Modeling Experience Intentions in a Consumer Network: Access Structure and Word-of-Mouth Dynamics

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This paper is in two parts. In the first part, we present a framework to organize the structural diversity found in consumer networks and a theoretical model to study the dynamics of experiential intention formation via consumer-to-consumer word-of-mouth interactions. In our framework we look at a subset of network structures that are binary and bidirectional. We then introduce the notions of accessibility, singularity, and exchangeability. Accessibility ensures that the network itself, and not any smaller part of it, is made the unit of analysis. Singularity and exchangeability are structural analogs of heterogeneity and homogeneity as commonly used in standard marketing research. Our theoretical model of experiential intention formation borrows from previously proposed information theory-based decision analytic frameworks of product adoption and incorporates word-of-mouth interaction as its central information generating process. In the second part, we present some of the findings from computational modeling experiments in medium-sized consumer network structures. Here, we use the SWARM computational modeling platform to investigate the aggregate dynamics of experiential intention formation on accessible and non-singular structures. In particular, we contrast exchangeable and non-exchangeable structures which facilitate unconstrained and constrained access to word-of-mouth information, respectively. Next, we compare these with dynamics and asymptotics for small-world networks obtained by adding random links to constrained access structures. We close by discussing these results and what they imply for managerial practice.

3 - Effects of Relational and Non-Relational Constructs on Alliance Partner Performance

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Little is known about the effects of alliance partners on firm performance and less still is known about the extent to which a focal firm's customer-brand relationship affects the partner firm's customer-brand relationship. The impact of relational variables on brand performance has only recently been documented and then in the context of stand-alone competition only. By linking relational and non-relational constructs to brand performance, the authors connect cognitive and affective brand association measures to alliance success. Findings from two full mediated structural covariance models illustrate: 1. the direct effect of the customer-brand relationship on alliance evaluation, 2. the recursive effect of alliance evaluation on the component brands, the alliance partners, 3. the relative stability of the customer-brand relationship, 4. the asymmetric effects of relational constructs compared to non-relational constructs. The findings are based on a series of surveys and experiments. Data are collected from more than 2000 customers from firms operating in various industries such as telecommunications, household paints, mobile telephone original equipment manufacturers, IT consulting and passenger airlines. Findings provide understanding of the role of the brand-customer relationship in networks of organisations, as opposed to stand-alone competition, and have implications for academia and practitioners. For academia, the results link operationally contentious constructs to brand performance in the context of a network economy. For practitioners, the findings illustrate the need to examine and manage alliance partners' customer-brand relationships and monitor the alliance's communication programmes.

4 - Beyond the Transaction: A Supplier Choice Model Within Long-term Buyer-seller Relationships

Frédéric Dalsace, Assistant Professor, HEC School of Management, Paris, Rue de la Libération, Jouy en Josas, 78350, France, dalsace@hec.fr

Developing long-term relationships with a small number of suppliers enables buying firms to create "relational benefits," through the build-up of relation-specific assets, knowledge exchanged and goodwill trust (Dyer & Singh 1998). Over time, the existence of these relational benefits has been shown to improve the buying firms' performance and to potentially lead to the creation of a competitive advantage (e.g.: Jap 1999, 2001). However, the detailed, transaction by transaction, process by which this advantage is created still remains unclear, and its impact on supplier choice for any specific transaction has not been studied. Using arguments based in Transaction Cost Economics in the Resource-Based View of the firm and in the emerging relational view in interorganizational exchange, this paper proposes a model to understand the influence of relational considerations on supplier choice. This model is tested using archival and perceptual information gathered from more than 100 supplier choices conducted in a cross-sectional sample of 13 medium- and large-sized companies. As hypothesized, relational benefits play two different roles, first as a "stock" variable and second as a "flow"

variable, when the impact of the choice on existing relational benefits is anticipated. The model contributes to supplier choice literature by suggesting that extant models may have been misspecified and by explicitly tying it together to negotiation theory. It also adds to transaction cost theory by proposing a process of how idiosyncratic investments are made.

SB10

Bergen

Marketing Strategy 05

Chair: Sharmila Chatterjee, Chair, Dept. of Marketing, Golden Gate University, 536 Mission Street, Ageno School of Business, San Francisco, CA, 94105, United States, SCHATTERJEE@GGU.EDU

1 - Price-Elasticity Decomposition in the New Brazilian Retail Environment

Delane Botelho, Assistant professor, EBAPE-FGV, Praia de Botafogo, 190, Rio de Janeiro, RJ, 22250-900, Brazil, dbotelho@fgv.br

In the 90's, the low availability of scanner panel data limited the development of marketing modeling in Brazil. Also, high inflation rates, reaching almost 2,500% in 1993, had a negative influence on scientific research in areas such as promotional activities and pricing. But this situation has changed dramatically. From 1998 to 2003, the availability of supermarket scanner data has increased 485%, and since 1998 the inflation rate has been kept between 8 and 10% per year. Moreover, the supermarket sector has experienced an increasing importance in the Brazilian economy. In 2002 its revenues reached US\$26.6 billion, and today the sector is intensively employing optical scanning—both for products and loyalty cards—generating millions of data everyday, although not using them effectively for marketing decisions. The relevance of this study is the pioneering use of such data in the Brazilian retail environment. The purpose is to apply econometric modeling in order to estimate the decomposition (brand choice and quantity purchase) of the price-elasticity of a product category in a panel data study. Two models were used: the conditional logit based on household utility maximization for the brand choice decision, and the classical linear regression for the quantity purchase decision. Both were specified to test the dependence of the two purchase decisions. Regarding the validity, the first model demonstrated a satisfactory prevision power of brand market share. Managerial implications include specific price decisions to each brand, as the nature of the elasticity decomposition varies among brands.

2 - The Role of Perceived Value in the Satisfaction Framework: An Initial Assessment in the 'High Touch' Industry

Rosidah Musa, PhD Candidate, Cardiff Business School, Cardiff University, Aberconway Building, Colum Drive, Cardiff, CF11 6BD, United Kingdom, rosidahmusa@hotmail.com, John Pallister, Matthew Robson

The central issue of this research was to identify and examine the key factors that influence customer satisfaction judgements at the subsystem and overall abstraction levels, and investigate their impacts on consumer behavioural outcomes. The Expectancy-Disconfirmation Paradigm was employed as the theoretical foundation for developing the conceptual model and it was expanded by incorporating other pertinent constructs such as perceived value, relational commitment and perceived equity. Structural equation modelling was utilised to test the hypothesised relationships among the constructs. The model was tested within the context of consumption system in the direct sales channel, which is popularly known as a 'high touch' industry. Behaviour of 400 direct sales channel users were analysed. Ultimately, the study's primary goal of developing a plausible model that has statistical and explanatory power was achieved. The results exemplify three major findings. Firstly, 'performance' is the key determinant of customer satisfaction at the subsystem level, whereas perceived value is the most influential determinant of customer overall satisfaction with the direct sales channel. Secondly, perceived value does not have a direct significant impact on behavioural intentions; hence, overall satisfaction is a powerful mediator in this relationship. Finally, this study has unveiled two new links—namely perceived value—relational commitment and perceived value—perceived equity, that have not been examined empirically by previous research. Evidence of their plausibility by the current study suggests the need for further investigation and validation of these paths in other research contexts.

3 - Explaining Temporal Differences in National Technology Launches

Tomi Haapaniemi, Researcher, Tampere University of Technology, Industrial Management, PO BOX 541, Tampere, fi, 33101, Finland, tomi.haapaniemi@tut.fi, Saku Mäkinen

The paper presents results from the study of 89 countries launching two subsequent technologies of wireless telecommunications. Through multivariate regression models authors consider effects of multiple cultural dimensions on national technology launch timing compared to first global technology launch. Measures for cultural dimensions are well documented Hofstede's dimensions of cultures. The sample consists of two subsequent technological generations, namely 1st generation analog and 2nd generation digital cellular telecommunications technologies. Further the study considers 43 and 46 countries, respectively, launching these technologies. The modeling results reveal significant structural differences in best fitting models between technological generations. For example totally different predictors give best regression results in each technology. The paper also outlines propositions for the effects of cultural dimensions on national technology launches and considers practical implications for technology developers and marketers.

4 - Compatibility of Determinants of Franchisor Choice by Franchisee and Franchisee Success Factors

Sharmila Chatterjee, Chair, Dept. of Marketing, Golden Gate University, 536 Mission Street, Ageno School of Business, San Francisco, CA, 94105, United States, SCHATTERJEE@GGU.EDU, Dong Ho Lee, Paul Fouts

The current paper examines franchising in the international context. This paper is unique in that it takes a holistic approach to investigating the determinants of franchisor choice by a franchisee as well as the determinants of franchisee success. In contrast, previous research has primarily focused on the benefits to the franchisor and is heavily focused on the franchisor's perspective. The objectives of this study were threefold: 1) determine the factors affecting a franchisee's selection between an international vis-à-vis a domestic franchising operation, 2) determine the factors affecting the resulting success of the franchisee, and 3) assessing the congruence between determinants of franchisee success and determinants of franchisee choice of international versus domestic franchisor. This study adopts a multidimensional framework for international franchising which is borne out by the results. Results show that both franchisee and franchisor factors (as well as the interaction of the two dimensions) contribute toward an explanation of both the choice decision as well as the resulting success of the franchise. The second assumption guiding this research was that a more robust explanation of choice and success could be obtained using a multi-theoretic approach in constructing the dimensions. This was also supported, as dimensions derived from the resource based view, agency theory, cultural distance theory and entrepreneurship theory contributed to the findings. The empirical study is conducted in South Korea and focuses on the food service industry franchises. This industry was selected because it offers a large selection of domestic and international franchising operations in Korea.

SB11

Heidelberg

Advertising 04

Chair: Philip Hans Franses, professor, Erasmus University, PO box 1738, Rotterdam, ZH, 3000 DR, Netherlands, franses@few.eur.nl

1 - Markov Perfect Equilibrium Advertising Strategies of Lanchester Duopoly Model

Ramla Jarrar, Ph.D student, HEC University, 3000 Cote Ste-Catherine, Montreal, Qc, H3T 2A7, Canada, ramla.jarrar@hec.ca, Guiomar Martin-Herran, Georges Zaccour

This paper deals with the determination of Markov perfect advertising strategies of Lanchester model, one of the most used dynamic models of advertising competition in a duopoly. In its infancy, the advertising differential games literature had assumed that the firms adopt the open-loop information structure to design their strategies. More recently, the authors have shifted their focus to the more conceptually appealing case where the players adopt closed-loop information structure and thus design advertising strategies which depend on market share. However, the resulting Closed-Loop Nash equilibrium (CLNE) is much harder to compute than its open-loop counterpart. In the literature, zero discounting is usually assumed to ease the computational difficulty of the CLNE. This approach lacks however conceptual appeal when one deals with an infinite horizon and leads to the counterintuitive recommendation that a player should increase her advertising expenditures with her market share. The objective of this paper is twofold. First, we provide an algorithm to compute stationary Markov perfect Nash equilibria for any (nonnegative) discount rate. This algorithm is simple and can be run on

a standard mathematical package. Second, we run numerical experiments to assess the impact of the discount rate, and other key parameters of the model, on equilibrium strategies. Our results confirm that, indeed, there is a qualitative difference in the shape of advertising strategies between considering a zero discount rate and a positive discount one. The other comparative dynamics results reveal some challenging interpretation difficulties.

2 - An Empirical Analysis of Strategic Pricing and Advertising for Differentiated Products

Shinn-Shyr Wang, Graduate Student, University of Wisconsin-Madison, 427 Lorch Street, Madison, WI, 53706, United States, swang17@wisc.edu, Tirtha Dhar, Kyle Stiebert

The present paper models and estimates strategic competition in price and advertisement between firms using flexible demand and cost specifications. Compared to previous studies we test for different strategic games between firms in both price and advertisement dimensions. To specify demand we use fully flexible nonlinear Almost Ideal Demand Specifications (AIDS) to estimate the price and advertising elasticities of demand for leading brands of butter and margarine in the US, and then investigate degree of market power in this industry. Our major focuses are on how advertising influences market power and on marginal awareness impacts of various advertising forms such as print and television media. Using proprietary city level IRI retail scanner data and advertisement data from CMR on the butter and margarine industry from 1998 to 2002, limited information maximum likelihood (LIML) estimations of demand and cost functions are obtained. And we estimate long-lived advertising effects after taking into account initial brand equity and consumer heterogeneity. We find advertisement expenditure to be a significant factor in influencing price-cost margins of firms and the effect of advertisement to be long lived. In terms of strategic games between firms we find complex brand level interactions.

3 - The Effect of Competitive Advertising Interference on Sales for Packaged Goods

Andre Bonfrer, Singapore Management University, 469 Bukit Timah Road, Sunny, Singapore, andrebonfrer@smu.edu.sg, Sanjay Dhar, Peter Danaher

Competitive interference in advertising arises when customers of a focal brand are 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 lower ad recall, recognition and brand evaluation measures, no studies have examined the impact on sales. In this research we use a market response model of sales for two grocery categories in the Chicago area to investigate possible advertising interference effects. The results show that competitive interference effects 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 rate of decrease depends on the number of competing brands and the total GRPs broadcast by the competing brands. We are able to derive optimal advertising levels for the brands within a category so that they all have the maximum sales response from advertising. It transpires that the level of television advertising within the two categories is much higher than this optimum level, indicating that these grocery brands are likely to be over advertising at present. Curtailing advertising for all the brands would increase the response to advertising for each of them.

4 - On the Econometrics of the Koyck Model

Philip Hans Franses, Professor, Erasmus University, PO box 1738, Rotterdam, ZH, 3000 DR, Netherlands, franses@few.eur.nl, Rutger van Oest

The geometric distributed lag model, after application of the so-called Koyck (1954) transformation, named after the Rotterdam-based economist Leendert Koyck (1918-1962), is often used to establish the dynamic link between sales and advertising. Obviously, this year the Koyck model celebrates its 50th anniversary. In this paper we focus on the econometrics of this popular model, and we show that this seemingly simple model is a little more complicated than we always tend to think. First, the Koyck transformation entails a parameter restriction, which should not be overlooked for efficiency reasons. Second, the t-statistic for the parameter for direct advertising effects has a non-standard distribution. We provide solutions to these two issues. For the monthly Lydia Pinkham data, it is shown that various practical decisions lead to very different conclusions.

■ SB12

Lund

Channels 04

Chair: John K.M Kuwornu, AIO, Wageningen University, Marketing and Consumer Behavior Group, Department of Social Sciences, Hollandseweg 1., Wageningen, 6707 KN, Netherlands, John.Kuwornu@wur.nl

1 - A Member & Market-Oriented Structure of Marketing**Co-operatives: An Experimental Study**

Nikos Kalogeras, Ph.D. Candidate, Wageningen University, Nyenrode University, Hollandseweg 1, Wageningen, 6706 KN, Netherlands, Nikos.Kalogeras@wur.nl, Joost M.E. Pennings, Ivo van der Lans, Gert van Dijk

Despite potential contributions to the understanding of how firms achieve market-oriented organisational structures, it is underutilised in the field of marketing and strategy. In this paper we argue that to truly understand the dynamics of marketing co-operative (MC) structures we need to examine the MC members' preferences for such structures. Based on the marketing and economics literature and in-depth interviews with members of MCs, we develop a conceptual model that includes the most important attributes of MC's organisational structure (business scope; corporate governance; product-related decision-making; financial structure; member benefits; and product quality). The conceptual model focuses on the evaluation of the subjective utility that MC members derive from levels of these attributes. To investigate member preferences we use conjoint analysis. Furthermore, we recognise that MC members may not be homogeneous with respect to the utility that they attach to these particular attributes. Thus, we use a generalized regression mixture-model to analyse the conjoint data. To validate the conceptual model we conducted experiments with 120 farmers (computer-assisted face-to-face interviews) in the Netherlands in the context of a MC, in Spring of 2003. Preliminary results suggest that different member segments express different preferences concerning the MC's internal organisational structure. Our analysis reveals the necessity for designing a more supportive MC structure for different member segments and our model suggests that members' heterogeneity and conflicting interests within a co-op environment should be taken into consideration. It is important then, to align such a MC management behaviour with a market-oriented strategy to assure the survival of these MCs.

2 - Governance Forms, Relational Exchanges and E-Procurement Models: Implications & Performance Measures

Ramana Madupalli, Doctoral Student, Georgia State University, MSC 4A 1370, 33 Gilmer Street SE Unit 4, Atlanta, GA, 30328, United States, mkrkrmx@langate.gsu.edu

E-Procurement is with no doubt one of most raving technologies in today's B2B E-commerce world. Many researchers and businesses are coming forward in their own way to explore this aspect. With an estimated average savings of 42%, E-Procurement has become an integral part of many companies' future plans. In this paper the author attempts to explore how E-Procurement revolutionized the buying process by examining the rapidly evolving research in this area. Following the extant work done on governance forms, this paper analyzes different E-Procurement models based on the governance forms and relational exchange forms. Unilateral and bilateral governance forms are analyzed for governance forms perspective and then transactional and relational angles are considered as a relational exchanges dimension. Two different pictorials are developed for both the dimensions in order to provide a framework for different E-Procurement models. Governance forms are considered as a continuum for the analysis purpose Later another important aspect of E-Procurement, Performance has been presented comprehensively. Performance has always been an interesting concern for both researchers and organizations. Though both look at the aspect in different perspectives, it is indeed a core issue in taking various future courses of action in a B2B setting, and for developing various intriguing issues in functionality of E-Procurement and its effect on the traditional phenomena of a B2B setting. Finally this paper develops measures that can be used for evaluating the performance of the E-Procurement. The measures are categorized into transactional, compliance, management information, e-procurement price and payment benefits.

3 - Lead-Time, Uncertainty, and Channel Decision Making

Eyal Bialogorsky, University of California, Davis, UC-Davis, Graduate School of Management, One Shields Ave., AOB IV, Davis, CA, 95616, United States, eyalog@ucdavis.edu, Oded Konigsberg

Production lead-time forces companies to make production decisions before the realization of demand. These decisions thereafter constrain the firms' reactions to changes in demand. Channel members decisions will depend on the initial production decisions by manufacturers and stocking decisions by retailers. In this paper we analyze how production lead-time affects the decisions in a channel of distribution facing uncertain demand. In particular, we consider which channel member (the retailer or the manufacturer) should accept the risk of carrying excess inventory, and how lead-time affects promotional activity. We find that in most cases it is to the benefit of the channel, the retailer and the manufacturer that the manufacturer will bear the risk of excess inventory in the channel. However, when there is uncertainty about the market size, and the difference between the possible demand states are large the channel and the retailer are better off if the retailer carries the inventory risk, while the manufacturer still prefers to carry the risk on its own. Thus, there is channel conflict under these conditions. Even so, if there is no possibility of side payment transfers from the retailer to the manufacturer, the manufacturer will assume the inventory risk.

4 - Transformations and Risk Shifting in Food Marketing Channels

John K.M Kuwornu, AIO, Wageningen University, Marketing and Consumer Behavior Group, Department of Social Sciences, Hollandseweg 1., Wageningen, 6707 KN, Netherlands, John.Kuwornu@wur.nl, Erno Kuiper, Joost M.E Pennings

This paper applies the classic agency model to investigate risk shifting and chain reversal in a food supply chain using time series analysis. We show that if the principal is risk-neutral and the agent is risk-averse instead of risk-neutral, then a linear contract can still be optimal if the fixed payment is negative. Our empirical application to the Dutch marketing channel of ware potatoes over the period 1946-1996 has shown that risk has been shifted from retailers (principals) to farmers (agents). The results show that while since the 1970s the fixed payment to the farmers have decreased over time to become more and more negative, the incentive intensity has approximately doubled, and the risk premium asked for by the farmers remain considerable. Having received 20 percent of the retail sales as a fixed payment in the early 1950s, the average decline of 2.9 percent per annum since 1975 means that the farmers now have to pay an implicit rent equivalent to 40 percent of the retail sales to their purchasers. We argue that this risk shift could be the consequence of chain reversal (i.e. the transformation of the traditional supply oriented chain into a demand oriented chain). These results are consistent with the fact that retailers have become more powerful than upstream stages in the channel (e.g., Kuiper and Meulenber, 2002). As a result, they can force processors and wholesalers to better fit the needs and wants of the consumer which, in turn, processors and wholesalers can only do with the farmers' support.

Saturday, 13:30pm - 15:00pm

■ **SC01**

Forum

Special Session: Drivers and Barriers to Marketing Models Use in Managerial Decision Making I

Chair: John Roberts, Professor, Australian Graduate School of Management and London Business School, University of New South Wales, Sydney, NS, 2052, Australia, johnr@agsm.edu.au

1 - Drivers and Barriers to Marketing Models Use in Managerial Decision Making I

John Roberts, Professor, Australian Graduate School of Management and London Business School, University of New South Wales, Sydney, NS, 2052, Australia, johnr@agsm.edu.au, Gary Lilien, Glen L. Urban, Dick Wittink, Manfred Krafft, Delaine Hampton

This session, sponsored by the Practice Committee of the Society for Marketing Science, will start with the interesting review article by Leeflang and Wittink in the September 2000 issue of the *International Journal of Research in Marketing*, entitled 'Building Models for Marketing Decisions: Past, Present and Future'. Dick Wittink will summarize and update that paper, followed by Gary Lilien providing a perspective on the market penetration of marketing science models. This will lead naturally to implementation challenges in practice from an academic's perspective (Manfred Krafft) and from a practitioner's viewpoint (Delaine Hampton). The presentations will be wrapped up by Glen Urban, who will synthesize the discussion and open the floor for comments and questions.

2 - Building Models for Marketing Decisions: Present and Prospective

Dick Wittink, George Rogers Clark Professor of Management and Marketing, Yale University, New Haven, New Haven, CT, United States, Dick.Wittink@yale.edu

3 - Use of Models for Marketing Resource Allocation Decisions: Perception Versus Reality

Gary Lilien, Penn State University, BAB 402, University Park, PA, 16802, United States, g5l@psu.edu

4 - Challenges in Model Implementation from an Academic Perspective

Manfred Krafft, Prof. Dr., University of Muenster, Institute for Marketing, Am Stadtgraben 13-15, Muenster, D, 48143, Germany, mkrafft@uni-muenster.de

5 - Benefits and Impediments to the Use of Marketing Science by Managers

Delaine Hampton, Director, Customer and Market Knowledge, Procter and Gamble, United States, Hampton.ds@pg.com

■ **SC02**

Tokyo

Innovation 06

Chair: Min Ding, Assistant Professor, Pennsylvania State University, 701A Business Administration Building, Marketing Dept, Smeal College, University Park, PA, 16802, United States, mqd9@psu.edu

1 - Joint Research and Development: The Lure of Dominance and the Need to Share Cost

Markus Christen, Assistant Professor, INSEAD, Boulevard de Constance, Fontainebleau, 77300, France, markus.christen@insead.edu, David Soberman

We examine how the incentive of incumbent firms to form a research joint venture is affected by the threat of entry by a new competitor when this late entrant has access to existing technology and incumbents can invest—individually or jointly—in uncertain R&D to develop a new technology that can potentially block entry. We find that the threat of entry increases the incentive of incumbents to form research joint ventures in the case of non-drastic innovations, i.e., innovations that do not deter entry. However, when R&D has the potential to block entry, the threat of entry actually decreases the incentive to form a joint venture. In this case, it is socially beneficial for governments to support R&D cooperation by incumbents even when this reduces the likelihood of innovation. The market equilibrium is driven by the tension between two forces that affect the incentives of incumbents: the need to share R&D costs and the "lure of dominance", i.e., the attractiveness of R&D to provide substantial profits to a sole owner of an innovation.

2 - Product Diversity versus Technology Diversity: Path Dependence and Cross-effects

Shaoming Qu, Assistant Professor, Concordia University, 1455 de Maisonneuve Blvd. W., Marketing Department, JMSB, Montreal, QC, H3G 1M8, Canada, squ@jmsb.concordia.ca, Shantanu Dutta, Om Narasimhan, Stefan Wuyts

The distinct differences in the diversities of firms' product portfolios have been the focus of a massive body of literature. However, equally significant differences in the diversity of their technological know-how portfolios have attracted considerably less attention. Even more surprisingly, there has been almost no work looking at the reciprocal impact of these two types of diversity on each other. cursory evidence, especially in high-technology markets would suggest an intimate relation between a firm's technology diversity and its product diversity. Motivated by these facts, we explore thoroughly firms' product diversity and technology diversity strategies in an integrated framework. Our conceptual framework recognizes the inter-dependencies between technology and product diversity, with a view to shedding more light on the understanding of "market pull" and "technology push" issues. We also account explicitly for path dependency in both product and technology diversity, and introduce a number of firm-specific resources and capability variables that may affect both diversities. We test our framework on a panel of firms in the pharmaceutical industry and find strong support for our theorizing. Interestingly, from the point of view of marketers, we find strong evidence for market pull effects; marketing seems to have a strong impact on product as well as technological diversity. We also find strong path dependency effects for both technological and product diversity.

3 - New Product Development under Channel Uncertainty

Lan Luo, Ph.D Candidate, University of Maryland, 1308B Van Munching Hall, R. H. Smith School of Business, College Park, MD, 20742, United States, lluo@rhsmith.umd.edu, PK Kannan, Brian Ratchford

This paper focuses on understanding the impact of channel players in developing new products. Extant research in new product development abounds in methodologies that focus on the needs of customers (e.g., conjoint analysis). However, in markets where a retailer plays a dominant role in getting the product/service to the ultimate customers, focusing just on the customers might not be sufficient. As well as a manufacturer might obtain the preference information from customers and design optimal products, if the retailer's assortments and their acceptance criteria to carry the product are not taken into account, the product might never reach the market. We develop a model to incorporate the retailer's acceptance criteria, retailer's product assortment, and competing manufacturers' potential reactions directly in the design of the new product, thereby maximizing the product's success probabilities. In our model, consumer demand is estimated through a hierarchical Bayesian choice-based conjoint model. The interactions among the manufacturers are modeled as Bertrand competition. The dominant retailer's goal is to maximize category profit. With the introduction of the new product, the retailer makes decision about whether or not to carry it based upon whether adding the new product into its assortment will increase its category profit and, the manufacturers of the competing products react to entry by changing their own wholesale prices. For each design candidate, a set of Nash subgame perfect wholesale and retail prices are derived. The optimal design increases the category profit of the retailer and provides the highest profit to the manufacturer. We illustrate our approach using data gathered in a new power tool development project undertaken by a US manufacturer.

4 - New Products Development Process: From Optimal Pipelines to Optimal Portfolios

Min Ding, Assistant Professor, Pennsylvania State University, 701A Business Administration Building, Marketing Dept, Smeal College, University Park, PA, 16802, United States, mqd9@psu.edu, Jehoshua Eliashberg

Driven by the continuous commercialization of new drugs, the pharmaceutical industry commands a worldwide market of \$300+ billion in 2000 and an annual growth rate of 11%. The constant introduction of new drugs is made possible by an astronomic research budget allocated to diverse new drug candidates' portfolios. For example, GlaxoSmithKline (GSK) had budgeted \$4 billion in 2002 to develop a portfolio of more than 100 drug candidates across 10 therapeutic areas (e.g., cardiovascular). Practitioners, however, rarely agree upon the best way to structure the new drugs portfolio. Unlike earlier days where a firm could absorb the consequence of bad decisions, firms are facing much tougher market conditions these days and mistakes in new product portfolio management can make or break the firm. As a result, the portfolio planning problem has become of greater importance and interest to both practitioners and academics. Despite the existence of a wide variety of portfolio planning tools, there is no portfolio theory that integrates the key elements of new product portfolio issues in a rigorous

framework and generates an optimal portfolio, based on decision makers' strategic objectives. This paper fills this important gap by extending previous research on new product pipeline optimization (Ding and Eliashberg, Management Science 2002) to portfolio optimization. A decision tree-based portfolio model is developed. Dynamic programming is used to optimize the decision tree for various strategic portfolio decisions. The optimal policies are evaluated vis-à-vis some real-world policies.

■ SC03

Athene

Internet 07

Chair: Boonghee Yoo, Associate Professor of Marketing, Hofstra University, Marketing and Int'l Business Dept., School of Business, Hempstead, NY, 11803, United States, mktbzy@hofstra.edu

1 - Antecedents and Consequences of Customer Satisfaction in Business-to-consumer E-Commerce

Anand Kumar Jaiswal, Doctoral Candidate, XLRI Jamshedpur, Circuit House Area (East), Jamshedpur, Jh, 831001, India, anandk.03@astra.xlri.ac.in, Prithwiraj Nath

Despite the dot.com bust, e-retailing is growing at a good pace. In developing economies like India, business-to-consumer (B2C) e-commerce is gradually making inroads in the way of life. Although customer satisfaction is well researched in the context of traditional marketing, there have been few empirical studies to understand its significance in the B2C e-commerce (Szymanski & Hise 2000; Srinivasan, Anderson & Ponnarolu 2002; Shankar, Smith & Rangaswami 2003). Especially in the context of developing economies, hardly any research attempted to investigate e-satisfaction. This paper investigates the antecedents and consequences of customer satisfaction in e-retailing context. We collected data from survey of 202 e-retailing customers in India and used structural equation modeling approach to test the hypothesized model. Research model includes individual level variables (which are outside the control of e-retailers) like web skill as well as variables jointly determined by individual- and business- level factors such as financial security perception (Srinivasan et al. 2002). We identify seven antecedent variables, convenience, time-to-shop, web skill of shoppers, merchandising, financial security perception, customer support and web community sponsorship that potentially impact e-satisfaction. Result shows that out of seven variables, only convenience, time-to-shop and web skill impact e-satisfaction. Result also reveals that e-satisfaction has direct impact on two behavioral outcomes: customer loyalty (measured using items of repurchase intention and word-of-mouth intention) and intention to pay premium.

2 - Upgrading or Downgrading?—Framing Effects in Online Shopping Environments

Nozomi Nakajima, Prof. Dr. of Marketing, Graduate School of Economics, Osaka University, 1-7 Machikaneyama, Toyonaka, Osaka, 5600043, Japan, nakajima@econ.osaka-u.ac.jp, Jian Chen

Recent development in behavioral decision theory reveals the important role of decision environment in the consumer's evaluation and choice processes. Often it is referred as "decision framing". Of particular interest is the online shopping environment, where buyers are usually forced to make their decisions under the sellers' (programmed) guidance on their web sites. How can the decision frames constructed in online shopping environment influence consumers' decision making? What should be done to exploit the characteristics of their framed decisions in the design of online shopping environments? In the present study, we considered an online PC shop as an typical example of the online shopping environments. Buyers are usually led to specify the configurations of PCs, taking their preferences and budgets into account. In the course of specification processes, their decisions are framed in some ways and influenced by them. Among other things, the way the choice alternatives are presented (upgrading/downgrading, etc.), from which buyers are to choose, is of special interest because it can be easily controlled by the sellers. Experimental studies were conducted to investigate the influence of some decision frames including the flow of selection process, the number of alternatives, the price intervals of the alternatives, and the default choice settings. The extremeness aversion, the shifts of the reference points, and the tradeoff between utility and economic loss aversion, are the examples of the involved effects. Above all, particular attention was paid to the default choice settings that provide the total prices as well as the reference points. Based on the results of the experiments, a set of theoretical conclusions and managerial implications of are discussed.

3 - An Empirical Study on the Effect of E-Sales Promotions in the Internet Finance Market

Sang Yong Kim, Associate Professor, Korea University, Business School, 5-1 Anam Sungbuk, Seoul, 136-701, South Korea, sangkim@korea.ac.kr

This study investigates how e-sales promotions affect the loyalty of Internet finance customers. We specifically pay our attention on the consumers of Internet loans market where two types of e-sales promotions are observed. We in this paper categorize the e-sales promotions into Information-oriented events and Fun-oriented events based on the real data of a leading finance company in Korea. In addition, we examine the customer loyalty by focusing on the intention of future repurchase and the intention of future recommendation. We find that Fun-oriented events (e.g., barrel uncle game) negatively impact on the intention of repurchase and recommendation. In contrast, our result indicates that Information-oriented events (e.g., sharing your own experience with others on Internet) are more effective and relate positively on the intention of repurchase and recommendation. Our findings suggest that Fun-oriented events are not a good strategy for CRM and that Internet finance companies need to develop e-sales promotions for reducing consumer's perceived risk and building trust.

4 - Online Store Site Quality: Conceptualization and Measurement of eQUAL

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An online retail store is a web-based retail store in which customers can search, evaluate, and purchase products. It is an online version of physical retail stores except that all transactions and related activities occur in cyber spaces. Electronic retailing continues to expand, increasingly substituting conventional retailing including physical stores, mail or phone orders, catalogs, and even sales force. A growing number of customers accept online stores as another routine place of shopping. Although a tremendous amount of academic research has explored how to design a successful online store site, much less research has attempted to conceptualize online retail site quality and develop a psychometrically sound measure of it. The continuing proliferation of electronic retailing calls for the research that reveals critically important components of a successful online shopping site. Such research will guide electronic retailers to design a retail web site that can serve and satisfy customers better and, consequently, result in more sales and profit for the retailers. Additionally, the concept and metric of electronic retail quality will help retailers to define the successful online store business, track the performance, increase accountability, and develop focus and intensity in the operations. The purpose, then, of this study is to develop and validate the scale that measures the various underlying dimensions. This measure, which are named as eQUAL, can be used in online shopping behavior studies that need to measure the quality status of electronic retailing and examine the effect of electronic retailing quality on related consumer attitudes and behaviors.

■ SC04

Rochester

Choice 09

Chair: Priyoo Manakote, Southern Illinois University, College of Business Administration, Carbondale, IL, 62901, United States, priyoom@siu.edu

1 - Measuring Context Effects in Choice Data After a New Product Entry

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The introduction of a new brand can cause changes in the competitive market structure. These changes can partially be attributed to changes in preferences and perception. Until now not much attention has been given to these effects on the individual brand choice level and they are disregarded in most positioning models. According to decision researchers the literature on context effects provides an extensive theoretical foundation for market entry effects on brand choice. This stream of research allows us to derive several hypotheses about how the entry of a new brand affects choice (e.g., Simonson and Tversky 1992). We apply an extension of a brand choice modelling approach to market structure analysis (Chintagunta 1994) to measure structural changes in markets with scanner panel data. Three aspects are central to this approach: to model market structure on individual level scanner panel data taking into account heterogeneity, to extract a product-market map which represents both the competitive relations and the preference

structure, and to quantify competitive effects through a detailed analysis of the dynamics in perception and preference structure. In this framework alternative hypotheses on changes in preference structure, segment structure and perceived product positions can statistically be tested by means of model restrictions. The goal of this study is to check the performance of this approach in measuring context-induced brand entry effects in choice data. We conduct a comprehensive simulation study to examine the ability of the method to recover several preference and choice effects in different scenarios.

2 - The Effect of Product Scarcity on Quality Image:

Empirical Evidence from the US Car Market

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Recent product introductions such as the Sony Playstation 2 and PT Cruiser were characterized by shortage of these products leaving many potential customers no choice, but to wait in order to be able to acquire one of these 'hot products'. This raises the question why companies implement scarcity strategies despite losing sales. We propose that product scarcity can improve customers' quality perceptions under certain market conditions and test this relationship empirically with data from the US car market. Employing the random coefficients demand model and a simulation-based estimation approach developed by Berry, Levinsohn and Pakes (1995) and extending this approach by accounting for excess demand for a number of products in the sample we show that a consumer has a significantly greater preference for a car model that is scarce during the introduction period. Product scarcity in our approach is determined in two ways: with inventory data measured in days supply and from press reports acquired from the FACTIVA database.

3 - Consumer Decision Making at the Video Store:

Renting vs. Buying

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The home-video market represents an average of 52% of the revenue for a major motion picture release (as compared to 24% from the domestic box office). Hence, researchers have begun to examine the performance of movies at the video store. Since studios make 75% on sales yet only 26% on rental revenues, they would like to convert more renters into buyers. Due to the fact that most entertainment modeling studies deal with aggregate market level data, inferences about consumer decision making at the individual level are limited. In this paper, we utilize a unique panel data set obtained from a large video store chain located in the Philadelphia area to make inferences about individuals and movies over time. We present two plausible models of varying complexity to model consumer choice. In the first model, the enjoyment that the consumer obtains from the movie stochastically diminishes over each viewing, and the consumer maximizes expected utility discounted over movie viewings by solving an optimal stopping problem. In the second model, each consumer is exogenously endowed with a distribution over movie viewings and matches the probability that the number of viewings is greater than some break-even number (calculated by comparing current buying and rental costs) with the probability of buying a particular title. Secondly, we make comparisons over movies and investigate which factors cause movies to be bought more often. Lastly, we compare the models at predicting any movie's buying vs. renting units over time.

4 - Getting the Picture on Digital Camera Attributes

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Stand alone digital cameras have witnessed remarkable growth during the past few years and are poised to overtake sales of film cameras. This explosive growth mainly stems from the unique attributes/advantages digital cameras offer over film-based cameras. Similarly, phone cameras (cell phones that integrate digital camera functions) are set to overtake sales of stand alone digital cameras. In this study, we employ hedonic regressions to evaluate changes in the imputed value of attributes of digital cameras (both stand alone and phone camera forms) at different points in time. These analyses are supplemented with an extensive choice-based conjoint study to investigate consumers' utilities for different attributes. Results provide important attribute-level insights useful to both consumers and marketers. Our study provides implications for (a) generating demand forecasts, (b) stimulating demand by packaging digital camera attributes in other product forms, and (c) understanding how value perceptions associated with key attributes change over time.

■ SC05

Santander

Branding 05

Sponsored by Brand Science Institute

Chair: John R. Rossiter, Professor, University of Wollongong and Erasmus University Rotterdam, Northfields Ave, Wollongong, NS, 2500, Australia, john_rossiter@uow.edu.au

1 - Brands as Signals: A Cross-Country Study

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The work on brands as signals (e.g., Erdem and Swait 1998; Wernerfelt 1988) focused on the influence of imperfect and asymmetric information on consumer choice processes. Erdem and Swait suggested that the clarity and credibility of brands as signals of product positions increase perceived quality, decrease consumer perceived risk and information costs, and hence increase consumer expected utility. They also discussed the antecedents to credibility and clarity. In this paper, we test how well the information-economics view of brand equity explains consumer brand choice and brand equity formation in different countries. Most previous work utilizing information economics frameworks to explain brand equity focused on US only. We adopt the framework developed by Erdem and Swait and test how well the framework fits the data across different countries (and national cultures) to draw some empirical generalizations. Additionally, we aim to highlight some differences across the countries by attempting to explain cross-national cultural differences in consumer behavior in regard to brands as signals.

We conduct our analysis on survey and experimental data on orange juice and personal computers, collected from subjects in the U.S., Spain, Turkey, Germany, Brazil, India and Japan. We chose these countries to represent a wide range of Hofstede's cultural dimensions (1980). The results obtained provide strong empirical evidence for brands as signals of product positions, in general, and for Erdem and Swait (1998) framework, in particular, across countries that vary widely along various cultural dimensions. However, some differences emerge as well, which we discuss in the paper.

2 - Brand Resilience: An Analysis of the Fragility of Brand Equity

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It is now well-known that intangible assets like brands are one of the major sources of corporate value. As a result there is a significant amount of research on the conceptualization and measurement of brand equity. However, even though brand equity is defined as "the cumulative of the current and future incremental cash flow resulting from the brand name", the future potential of the brand is often ignored in measuring brand equity. The implicit assumption is that current strength of a brand necessarily results in its future 'resilience'. On the contrary, since brand equity is based on consumers' beliefs, it can be prone to large or sudden shifts that may not necessarily depend on the current value of the brand. In this paper, we conceptualize the brand resilience construct through our understanding of consumers' beliefs as a distribution. In particular, the current measures of brand equity are based on the mean while "brand resilience" is based on the variance of consumers' beliefs. We empirically validate the "brand resilience" construct through a natural experiment in two different product-market contexts—automobiles and OTC pharmaceuticals. The natural experiment setting allows us to isolate the changes in brand equity over time holding constant the quality-related attributes. Preliminary results suggest that "low-equity" brands are sometimes significantly more resilient than "high-equity" brands. We present several other interesting results relating brand resilience with prior advertising and quality and discuss their implications for managers and researchers.

3 - Modeling Sustained Superior Brand Performance:

A Longitudinal Analysis

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Marketing managers have long been interested in determining if firms can achieve superior brand performance over time. Marketing scholars are interested in understanding what factors allow some brands to sustain superior brand performance over time. Brands that exhibit such sustained superior brand performance are said to enjoy sustainable competitive advantage. However, beyond conceptual work little effort at establishing a normative explanation of the factors that lead to long term performance advantages exists in the literature. Towards this end, we draw on industrial organization and the dynamic capability theories

to establish a model and hypotheses and conduct an empirical test of a) brand strategy, and b) category competition factors that are associated with sustained superior brand performance over time. Data for the empirical testing come from a fifteen-year study of packaged goods brands drawn from IRI's Marketing Factbook. We use a two-step procedure that first identifies the presence of long term superior brand performance, and then applies a varying parameters logistic regression framework to test the hypotheses of the role of brand strategy and category competition factors. Implications of these results for marketing managers and brand managers are discussed.

4 - What Does "Branding" Involve? A Model for Effective and Efficient Branding in Marketing Communications

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"Branding" campaigns are increasingly popular and important as the power of brands grows (e.g., Lexus in January began a \$50 million branding blitz on U.S. television, the biggest since a 2002 effort and only the second such campaign in the brand's 14-year history). However, the communication objectives for branding have not been totally identified in either the academic or practitioner literature but rather have been specified piecemeal. Branding is not about just "getting the name across" or "giving the brand a personality" but is about a finite set of necessary associations, directional associations at that, between brand elements, which branding campaigns have to achieve. We present a new theoretical model for branding in marketing communication. The practical question following the model is whether visual or verbal elements, or a combination of these, is most effective for transmitting the required communication objectives for the brand, and is also efficient in terms of reaction time (e.g., Lexus employs a visual brand mark, the angled "L" in an oval, and also the verbal tagline, 'The passionate pursuit of perfection.' How effective and efficient is this combination?). We present some student-sample data on branding effectiveness and efficiency from actual branding campaigns.

■ SC06

Shanghai

CRM 09: Customer Life Time Value

Chair: Bruce Hardie, London Business School, Regent's Park, London, NW1 4SA, United Kingdom, bhardie@london.edu

1 - A New Model for Enterprise Valuation by Using Customer Values

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A shortcoming of current work on linking marketing to financial concepts is that shareholder value is measured by using traditional finance orientated valuation approaches with aggregated cash flows and the customer as marketing's main objective does play a secondary role in the valuation model and marketing measures such as retention rate or number of new customers are not directly incorporated. Gupta, Lehmann, and Stuart (2004) show a promising approach to overcome this shortcoming and explicitly model the connection between customer and enterprise value. Their model can be viewed as a starting point for relating the value of individual customers to the value of companies. We build on their work and enhance their model by including the non-operating value of a business, indirect customer related expenditures as well as value of debt. In addition, we divide the customer equity into an ongoing and terminal value to come up with the going concern value of an enterprise. Therefore, we introduce another model for enterprise valuation by using customer values. This model enables to evaluate companies as well as demonstrates the effect of customer base changes (e.g., higher acquisition rate and lower churn rate) on shareholder value. Furthermore, we show the results of an empirical study where we determine the enterprise value of two Internet Service Provider by using customer values. Finally, we analyse the sensitivity of our results.

2 - How Much is Your Customer Database Worth? A Stochastic, Finite Mixture Model of Lifetime Value

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The concept of customer lifetime value (LTV) has found many applications in practice: it serves as a benchmark to evaluate new customers' acquisition costs; it allows the comparison of customers on a single, non-myopic metric, and can be useful to optimize retention strategies and allocate more efficiently marketing efforts; it is also helpful to assess the monetary value of a company's existing customer base, which is sometimes cited as one of a firm's most valuable assets. LTV computation is usually based on the estimation of existing customers' repurchase behavior in terms of loyalty, frequency and volume. In this presenta-

tion, we show that all facets of LTV vary greatly at different stages of customers' lifecycle, and that a great deal of heterogeneity in repurchase hazard rates exist, which in turn suggests the needs for latent class models. We propose a new approach to compute customers' lifetime value, based on the concept of 'loyalty curves', i.e., the cumulative probability for a customer to make an additional purchase at some point in the future, and show that LTV estimations can be refined by modeling customers' lifecycle as a stochastic sequence of loyalty curves. We apply this method to study the donors' lifetime value from a large charity, and show how donors' LTV is influenced by the evolution of churn rate, hazard rate and generosity over time.

3 - Lifetime Duration and Value of Grocery Retailer Customers

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Loosing customers deteriorates the profitability of grocery retailers, because it is considerably more profitable for firms to retain existing customers than to renew constantly defecting customer base. The grocery retail store under our consideration has been recording individual customer transactions and the store management would like to track retention and defection behaviors of these individuals and to predict their future transactions. In this study, we aim to identify active and inactive customers in this customer base, to specify how much longer each active customer is likely to be retained and how many purchases can be expected from each customer during their relationship with the store. Identifying active and inactive customers will prevent the store management to keep investing in inactive customers, and predicting the lifetime duration and value of customers will make it possible to know how much to invest to retain customers and to assess the store's future business potential. Answering these questions is not trivial, since the purchase activity is a random process and the customer defections are not directly observed. We empirically implement the NBD/Pareto model proposed by Schmittlein et al. (1987) to determine the probability that a customer is still active at a time point, given his/her particular observed repeat-purchasing history. The grocery retailer customer base characterizes with large number of customers and short purchase cycles, therefore over a short time horizon it provides an appreciable amount of repeat purchasing observations for statistically sound parameter estimation in implementing NBD/Pareto model.

4 - "Counting Your Customers" the Easy Way: An Alternative to the Pareto/NBD Model

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Today's researchers are very interested in predicting the future purchasing patterns of their customers, which can then serve as an input into "lifetime value" calculations. Among the models that provide such capabilities, the Pareto/NBD "Counting Your Customers" framework proposed by Schmittlein, Morrison, and Colombo (1987) is highly regarded. But despite the respect it has earned, it has proven to be a difficult model to implement, particularly because of the computational challenges associated with parameter estimation. We develop a new model, the beta-geometric/NBD (BG/NBD), that is based on a slight variation in the behavioral "story" associated with the Pareto/NBD but it is vastly easier to implement. We show, for instance, how its parameters can be obtained quite easily in Microsoft Excel. In an empirical analysis, we find that the two models yield very similar results, leading us to suggest that the BG/NBD could be viewed as an attractive alternative to the Pareto/NBD. The similarity between the two models is further explored via a simulation study.

■ SC07

Hull

Pricing 08

Chair: Edward Fox, Cox School of Business, SMU, 6212 Bishop Blvd, Dallas, TX, 75275, United States, efox@mail.cox.smu.edu

1 - Price and Relationships: The "Hidden Agenda"

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Pricing policy is generally studied as a condition of market, competition, and the firm (Noble and Gruca 1999). A review of the business-to-business literature uncovers little about the impact of relationship on pricing. Wathne, Biong, and Heide (2001) found that price, along with product factors, has greater impact on switching behavior than the sum of the relationship variables. Surprisingly, buyers outwardly play down the role of price in vendor selection. Dodds, Avila, and Wahlers (1996) speak of a "hidden agenda" on the part of the buyers, where the

expressed and implied role of price is quite different. This hidden agenda, where buyers want to appear interested in the relationship, is very complex. For instance, a buyer may desire to draw a seller into a deeper relationship. The seller would then create transaction specific investments with the potential to improve the seller's pricing to the buyer over the long-term. The hidden agenda may also manifest itself in relationship governance, since by showing concern for the partner firm, the buyer may also be seeking to improve its chances in gaining its "fair share" of exchange outcomes. Similarly, since there is evidence that purchase intention is related to the seller's reputation for fairness and inferred motives (Campbell 1999), a buyer is likely to care about its own reputation within a network. Our paper presents a framework of the impact of relationship on price: governance concerns, relational components, and network effects. Theoretical and managerial implications of the model are explained.

2 - Is Customer Value Pricing Always Best Practice? An Empirical Validation

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Marketing literature generally advises firms that engage in a new product pricing process to use customer value information. As marketing research has predominantly focussed on normative pricing strategies rather than organizational pricing practices, there is scant empirical evidence on the successful use of value information during a pricing process. We examine the relationship between three pricing practices that refer to the use of information on customer value, competition, and costs (value-informed, competition-informed, and cost-informed pricing) and new product market performance. The effects of these pricing practices are assessed on survey data of 144 firms in a moderating regression analysis with competitive intensity and product advantage as moderating variables. Results indicate a simple positive effect of value-informed pricing, suggesting that value-informed pricing results in market performance under all circumstances. In addition, significant three-way interactions are found of competition-informed (negative) and cost-informed pricing (positive) with product advantage and competitive intensity. Firms should engage in competition-informed pricing if they launch a product with a high advantage in a market with a low degree of competitive intensity, or if they launch a product with a low advantage in a market with high competitive intensity. Cost-informed pricing will enhance market performance if product advantage and competitive intensity are either both high or both low. These results suggest that in order to achieve superior market performance, firms should not only use customer value information during a pricing process, but also competition or costs information depending on product and market circumstances.

3 - Consumer Choice of Optional Tariffs: Consequences and Causes of Tariff Choice Biases

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Consumers can often choose between a flat rate and a pay-per-use tariff when subscribing to services such as telephone service or Internet access. Utility maximizing consumers are expected to choose the tariff that leads for a given amount of usage to the lowest bill. It has, however, been observed that consumers prefer flat rates to pay-per-use tariffs even though their bill will be higher under flat rate service ("flat rate-bias"). In addition, there is a proportion of customers with a "pay-per-use-bias". Yet, studies reporting evidence on tariff choice biases do not analyze their consequences: Does additional revenue from biases compensate lost revenues from potentially higher churn? In addition, causes of tariff choice biases have never been measured simultaneously and thus remain unclear. This paper analyzes consequences and causes of the flat rate-bias. The analysis of Internet access usage data concludes that consumers with flat rate- or pay-per-use-bias pay significantly more than they would in the less expensive tariff. Yet, only customers with pay-per-use-bias have an above average churn rate. Next, bias profitability will be calculated. Second, four potential reasons of the flat rate-bias are identified: insurance, taxi meter, convenience and overestimation effect. In order to simultaneously measure the influence of the effects on tariff choice, scales are developed and validated. By surveying the customers of the Internet Service Provider, behavioral and attitudinal data can be pooled and the influence of the four effects on the flat rate-bias is measured. The results show that the preference of flat rates is due to the insurance, taxi meter and overestimation effect. In contrast, the preference of pay-per-use-tariffs is due to underestimation of usage.

4 - Retail Category Pricing with Consumer Patronage Effects

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Retail pricing of grocery products is of considerable interest to marketing academics and practitioners. Little and Shapiro (1980) proposed that consumer patronage, "will the customer come back?", is an important consideration in retail pricing. They showed that, if prices affect consumer patronage, then price levels are lower than if product profits alone are maximized. Empirical evidence at the category level supports their approach. Price elasticities for grocery store categories have generally been found to be below unity, suggesting that profits in the category could be increased by raising prices (e.g., Neslin and Shoemaker 1983). We propose a dynamic optimization model of category pricing for a grocery retailer, which assumes that current prices affect the probability of consumer patronage on future trips. We determine how far below monopoly levels retailers should price in order to maximize long-term store profits, including patronage effects. Moreover, categories are allowed to affect the probability of patronage differentially. We develop a general expression relating prices across categories, from which systematic differences in optimal price levels are hypothesized. Our modeling approach allows category prices to have spillover effects both across time and across categories. Other retail pricing studies have focused on either inter-temporal effects, or contemporaneous cross-category effects like complementarity and substitutability, but not both. Further, cross-category effects in our model are a consequence of the dependency between store patronage and category purchase, not umbrella branding (Erdem 1998) or complementarity in use, e.g., cake mix and cake frosting (Mulhern and Leone 1991, Manchanda, et al. 1999).

■ SC08

Baltimore

Special Session: Multichannel Marketing

Chair: Arvind Rangaswamy, Jonas H. Anchel Professor of Marketing, Penn State University, 707D, BAB, The Smeal College of Business, University Park, PA, 16802, United States, arvindr@psu.edu

Co-Chair: Gerrit van Bruggen, Professor of Marketing, Erasmus Universiteit Rotterdam, Burgemeester Oudlaan 50, Rotterdam, 3062 PA, Netherlands, gbruggen@fbk.eur.nl

1 - Multichannel Shopping Behavior: Drivers and Behavioral Characteristics

V. Kumar, ING Chair Professor, Director, ING Center for Financial Services, 2100 Hillside Road, Storrs, CT, 06269-1041, United States, vk@business.uconn.edu, Rajkumar Venkatesan

We develop a theoretical framework which identifies the customer level characteristics and supplier factors that are associated with purchase behavior across multiple channels. We also propose that multichannel shoppers provide benefits as measured by several customer based metrics. We conduct an empirical analysis of our hypotheses using a customer database of a high technology hardware and software manufacturer. We find that customers who buy across multiple product categories, initiate more contacts with the firm, have past experience with the supplier through the online channel, have longer tenure, purchase more frequently, are larger and have been communicated to by the supplier through multiple communication channels, especially through highly interpersonal channels. We also find evidence for a nonlinear relationship between returns and multichannel shopping, and that there is a positive synergy towards multichannel shopping when customers are contacted through various communication channels. Multichannel shoppers provide higher revenues, higher share of wallet, have higher past customer value, and have a higher likelihood of being active than single channel shoppers. We derive several implications for managers who wish to target customers for a multichannel strategy.

2 - Multichannel Retailing: A Case Study of Early Experiences

Ruby Roy Dholakia, Professor of Marketing, College of Business Administration, Kingston, RI, 02881-0802, United States, Ruby@uri.edu, Miao Zhao, Nikhilesh Dholakia

In increasingly competitive and dynamic consumer markets, retailers are under pressure to offer and integrate multiple channels. The switching costs incurred by both retailers and consumers continue to shape the evolution of retailing channels. This paper presents a case study based on purchase data from a catalog and brick-and-mortar retailer that expanded its channels to include Internet shopping. The data analysis mostly supports our propositions regarding channel loyalty, channel switching, order size, and merchandise return behaviors. Because our specific case study dealt with a catalog retailer, it is not surprising to find customer purchases to be concentrated within the established catalog channel: past retailer strategies and customer experiences influenced these responses. Repeat purchase data also suggest that channel characteristics influence consumer responses. While store-only buyers are a small segment of this particular retailer, merchandise returns are lowest among this group since stores allow physical inspection of goods prior to purchase. Multiple channels offer added convenience. All groups of cus-

tomers of this retailer—those who entered the database as catalog buyers, as store buyers, as Internet buyers, and as non-buyers—used multiple channels. Switching solely to the new Internet channel, even for this established retail name, appears to be more difficult for consumers than relying on two or more channels. The use of multiple channels is greatest among those customers who entered as Internet customers, reflecting lower risk-aversion and learning costs. Since the database only contained archived transactional information, we can make only limited inferences about underlying characteristics and motivations that influence the purchase behaviors. We draw only case-specific inferences and eschew generalization. Experiences of other retailers will be affected by their own past strategies and costs, and not just by the general characteristics of the channels.

3 - On the Effect of Acquisition Channels on Customer Retention and Cross-buying: An Exploratory Study

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Acquisition channels are important predictors for customer loyalty in the first stages of the relationship. Although, some researchers have provided examples on how customer value differs for customers acquired via different acquisition channels, there are no studies that considered the impact of acquisition channels on retention and cross-buying. Using logit-models we explore how retention rates and cross-buying probabilities differ between a wide variety of acquisition channels used by a financial service provider. Our results indicate that the direct mail acquisition channel performs poorly on retention and cross-buying. The Internet channel seems to perform relatively well when retention is concerned. The theoretical and practical implications are discussed.

4 - Free-Riding across Retailers' Channels

Sebastian van Baal, Institut für Handelsforschung, Säcker Straße 5, 50935 Köln, Postanschrift, Köln, 50926, Denmark, s.vanbaal@ifhkoeln.de, Christian Dach

This paper presents an investigation of cross-channel shopping behavior. When consumers employ more than one channel within a transaction, they have the possibility to gain services from one retailer and place their business with another, hence they can engage in free-riding. Conversely, customers may have an inclination to stay with the same retailer, even when they switch the channel. We use empirical data in order to determine the magnitude of both effects in two directions: from an online-shop to a traditional retail store and vice versa. The results show that the rate of free-riders is above 20 percent, and that it is substantially higher than the rate of 'loyal' customers for both directions. Furthermore, we investigate the influence of selected product characteristics (search characteristics, technological change and purchase frequency) on this behavior.

■ SC10

Bergen

Marketing Strategy 06

Chair: Ralph Kauffman, Associate Professor, Univ. of Houston-Downtown, One Main St., Suite 1017N, Houston, TX, 77002, United States, kauffmanr@uhd.edu

1 - Marketing Theory and Metrics: Research Purpose and the Psychometric Assessment of Marketing Scales

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Scales are used to test marketing theories and as marketing metrics. To rely on a scale, users need to know how well it performs when used for their purpose. Marketing theories can be broadly classified as applying to (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. Marketing metrics are used for different managerial purposes. Metrics are used to (i) benchmarking marketing units, where entities such as brands are the objects of measurement, (ii) identifying whether aspects of entity performance differ in need for improvement, where entities by aspects are the objects of measurement, (iii) identifying if an entity's performance has improved, where entities by occasions are the objects of measurement, (iv) identifying if there are aspects of performance on which an entity has improved, where entities by aspects by occasions are the objects of measurement, (v) characterizing different customers to describe markets, where customers are the objects of measurement, and (vi) identifying, for segmentation, if customers differ in their responses to entities, where customers by entities are the objects of measurement. In this paper, we apply these classifications of research purposes to the

published academic literature in marketing to investigate the correspondence between how marketing scales are used and the relevance of the evidence provided for their reliability and validity.

2 - Myopic Management and the Need for Marketing Metrics: The Case of the Seasoned Equity Offerings

Natalie Mizik, Columbia University, Uris Hall, 3022 Broadway, Room 513, New York, NY, 10027, United States, nm2079@columbia.edu, Robert Jacobson

Managers commonly feel pressures that induce them to have higher discount rates than justified by the cost of capital considerations. The result of these pressures is an over-emphasis on strategic alternatives generating current-term results at the expense of long-term profits. This "managerial myopia" is the focus of our study. Are firms engaging in myopic management? What implications does this have both for those firms undertaking these behaviors and firms not doing so? How do financial markets react to these actions? What challenges does this create for marketing managers? Making use of data for firms issuing seasoned equity offerings, we find evidence consistent with firms engaging in myopic management. That is, managers over-emphasize current-term results at the expense of long-term profitability. In particular, we find that firms limit their "discretionary expenditures" (such as marketing and R&D) in an effort to increase earnings (and thereby stock return). We also find evidence that the financial markets are aware that this type of behavior takes place, but that they can not fully distinguish between firms engaging in myopic behavior versus those who do not. As a result, the financial markets appear to mis-value firms engaging in myopic behavior: these firms have significantly lower future-term stock returns compared to other firms. We discuss the role marketing metrics can play in helping managers to better signal their financial prospects to the investment community and limit the pressures attached to current-term financials.

3 - Corporate Reputation and its Coherence:

Effects on Persistence and Reliability of Firm Performance

Ujwal Kayande, Penn State University, 707B, BAB, University Park, PA, 16803, United States, ukayande@psu.edu, Rajdeep Grewal, Peter W. Roberts

Recent empirical research has shown that good corporate reputations help firms sustain superior financial performance over time, thus extending the literature on the benefits of reputation by conducting dynamic analyses of its effect on performance. Reputation, as a valuable inimitable asset, has been linked to a firm's ability to sustain above normal performance outcomes over time. Several authors have suggested that reputation is particularly important in incomplete information settings, and that a firm's reputation is an asset that can generate future rents. However, the extent to which reputation influences the shorter-term reliability of firm performance remains to be examined. In this paper, we investigate the effect of good reputations on not only the persistence of superior firm performance, but also the reliability of firm performance. We extend this further by arguing that it is not only good reputations, but also the coherence of reputation, as measured by the consistency of a firm's reputation across multiple dimensions of reputation, that strongly influences the reliability of firm performance. We use a multiplicative heteroscedastic model on corporate reputation data collected by Fortune to test our hypotheses. The results show strong support for the hypotheses.

4 - New Management Paradigms: Implications for the Future of Marketing and Marketing Science

Ralph Kauffman, Associate Professor, Univ. of Houston-Downtown, One Main St., Suite 1017N, Houston, TX, 77002, United States, kauffmanr@uhd.edu, Markus Mau

As new business models have emerged in recent years emphasizing costs, performance and quality, does the accepted theoretical background of marketing fit current paradigms? Webster (1992) indicated that "A new conception of marketing will focus on managing strategic partnerships and positioning the firm between vendors and customers in the value chain . . ." The development of cooperative projects between industry and trade enterprises have given rise to fields such as Supply Chain Management (SCM) and Category Management (CM). As new theories are developed to govern such areas, perhaps a debate about the future scope and meaning of marketing is required. Has marketing reached its zenith of strategic management importance and is now in danger of losing ground to new strategic management fields? In this paper we look at the two "new" fields: Supply Chain Management and Category Management, and assess their potential impact on the future of marketing and marketing science. We question whether the requirements of such fields can be adequately covered with established marketing approaches, models, and instruments. We propose that organizational, conceptual, and modeling approaches different from simply extending existing marketing models are needed to address these areas. Implications for marketing science include opportunities for different

modeling approaches. For example, we explore Guembel's (1994) position that the functional separation of a large but not holistic marketing area (and associated marketing costs) leads towards a defective costs-results-cohesion because significant cost factors stay unconsidered. As a result, the deduced market-reaction-functions are also incorrect.

■ SC11

Heidelberg

Advertising 05

Chair: Scott Koslow, Associate Professor, Waikato Management School, University of Waikato, Private Bag 3105, Hamilton, New Zealand, skoslow@mngt.waikato.ac.nz

1 - The Demand Chain—Supply Chain Debate. Are the Supply Chain Devotees Beginning to Lose Ground? A Review of the Evidence

David Walters, Sydney Graduate School of Management (SGSM) Limited, PO Box 6145, Parramatta Delivery Centre NSW 2150, North Parramatta, Australia, d.walters@uws.edu.au

Confronted by declining revenues, profits and market share, the typical corporate response is efficiency based—to reduce costs! For many organisations supply chain management appears a favoured solution. The fundamental assumptions behind supply chain management target efficiency and cost savings. But the adequacy of the supply chain as a separate entity is being questioned. Customer focus often appears to be lacking. Supply chain management typically fails to recognise that there are other factors besides lower prices that are important to consumers. These are only likely to be understood if the organisation's demand chain is profiled and managed. The recent demise of the McDonald's business model may be due, primarily, to a single-minded focus on supply chain management, resulting in rigid supply chain structures that turn core capabilities into core rigidities and become a constraint in response to changing customer expectations. In the UK Sainsbury and Marks and Spencer (both retailing giants) met with a similar fate—their supply chain management systems were highly efficient but market share escaped them. . . It increasingly appears to be yesterday's recipe for success! Supply chain efficiency should not be confused with organisational effectiveness. Efficiency is operational—effectiveness is strategic, both are essential. The question progressive organisations are asking concerns the relationship between demand chain effectiveness and supply chain efficiency. This paper will explore these issues and present examples of effective demand chain management that leads to supply chain efficiency.

2 - The Risk Reduction Role of Advertising

Ron Shachar, Faculty of Management, Tel Aviv University, Tel Aviv, Israel, rroonn@post.tau.ac.il, Dmitri Byzalov

This paper brings empirical evidence that the positive effect of exposure to advertising on consumers' tendency to purchase a product is due to the informative nature of ads and to consumers' risk-aversion. We show that the findings of previous studies that advertising intensity is an element in consumers' utility are due to the restrictive assumption that consumers are risk-neutral. When this assumption is relaxed, we find that exposure to advertising does not have any direct effect on the utility. Our model differs from the one presented by Erdem and Keane (1996), who did not allow advertising to have a direct effect on utility. Our model incorporates two channels through which advertising can have a positive effect on the purchase probability: (a) the risk reduction effect, and (b) a direct effect on the utility. We demonstrate, theoretically, how these two effects can be separated empirically. Furthermore, we show that the model that ignores one of these channels yields misleading estimates. The findings (of previous studies) that the utility is a function of ad intensity have long disturbed scholars. It was interpreted as if consumers can be manipulated by ads. Advertising was accused of creating wants, distorting tastes and persuading consumers to buy products that they do not need. Our findings allay these concerns. Furthermore, we show that our approach can ameliorate advertising effectiveness, and assist practitioners in improving their advertising strategies.

3 - Vividness Effect: Implications for Judgment and Choice

Marcello Tedeschi, University of Modena and Reggio Emilia, Via Gilioli Valle, 9, Reggio Emilia, IT, 42100, Italy, tedeschi@unimo.it, Enrico Rubaltelli, Lucia Savadori, Sandro Rubichi, Rino Rumiati

Previous studies demonstrated that vivid messages can have an impact on judgments and choices. More vivid or specific is a message and more persuasive and attractive it is perceived (Taylor and Wood, 1983; Sheller and Manis, 1986; Mc-Gill and Anand, 1989). In particular when individuals are presented with a choice the vivid/specific message is more attractive than a general message and when individuals are asked to judge two different messages the vivid specific message is more persuasive than the general one. In this experiment participants were presented with two products. The two products were identical except for their price: one of the products had a price 5% higher than the other. The 5% higher price was justified saying that the difference will be devolved to some charitable program. The charitable program was described either in general or vivid/specific format. The other product was described only by its price. Participants were randomly assigned to two different task conditions: choice and WTP judgment. Results showed that more people choose the expensive product when the charitable program was described in specific/vivid terms than when it was described in general terms. This pattern, although, was not paralleled by WTP judgments.

4 - Ad Agencies' Creative Processes: Can Discipline and Motivation Make Up for a Lack of Creative Skill?

Scott Koslow, Associate Professor, Waikato Management School, University of Waikato, Private Bag 3105, Hamilton, New Zealand, skoslow@mngt.waikato.ac.nz, Sheila Sasser, Edward Riordan

This paper suggests that there are two major approaches agencies can use for managing their creative process. If one has a high level of employee expertise to draw from, the focus should be on getting the employees excited about the assignment and keeping structure to a minimum. However, if one can only draw from those with less expertise, then internal motivation is even more important, and organizational discipline is needed to keep them on the right strategic track. These effects are tested via questionnaires on over 1000 advertising campaigns in major agency offices in New York and Detroit. Consistent with Amabile (1996), internal motivation is the best predictor of creativity, however the effect of internal motivation is amplified by expertise. Those with high expertise need only be moderately motivated to produce highly creative work, but those with low expertise need to be highly motivated to do as well. Those with high expertise are at their best with little organizational discipline and become less creative the more it is provided. However, those with less expertise become more creative when organizational discipline is provided. Although the most creative campaigns are the product of highly skilled agencies employees who are well motivated internally and free of organizational interference, some moderately creative campaigns can still be produced by those of low expertise who rely on organizational discipline to compensate for their lack of creative expertise.

■ SC12

Lund

Channels 05

Chair: Ashesh Mukherjee, Assistant Professor, McGill University, 1001 Sherbrooke St. West, Faculty of Management, Montreal, QC, H3A1G5, Canada, ashesh.mukherjee@mcgill.ca

1 - Social Capital and Supply Chain Management

Karen Kozak, Assistant Professor of Marketing, Western Connecticut State University, Ancell School of Business, Danbury, CT, 06810, United States, kozak@wcsu.edu, Ming Ling Chuang, Rajiv Dant

Within business, "social capital" describes business networks and the valuable resources (e.g., reciprocity, trust, norms) that arise from those networks. Unlike other forms of capital, as physical, human, and financial, social capital cannot be owned by a particular organization, but rather, should be thought of as the sum of resources that accrue to an organization by virtue of belonging to a network. Nonetheless, like other forms of capital, social capital plays an important role in enhancing performance. These researchers are keenly interested in how social capital might lend greater insight into the management of supply chain relationships. Today, as supply chains increasingly become more integrated and coordinated in their efforts to become more effective (e.g., enhancement of revenue/sales, increasing customer satisfaction/loyalty, decreasing time to market), the odds for success improve when members actively share resources for the betterment of the whole. A major strength that supply chains offer members is access to capabilities and resources that would otherwise be unavailable. For this reason, social capital, with its focus on access to and flow of resources to members through their affiliation to other supply chain members, becomes a

salient concept to understand and manage. With this focus, these researchers develop and test a conceptual model that assesses the effects of social capital on members' ability to perform. Hence, these researchers demonstrate that through actively managing social capital, supply chain members are better able to benefit, in terms of performance, from their affiliation to the network.

2 - Investigating Retail Channel Power

Jarg Temme, PhD Student, University Kiel, Marketing, Westring 425, Kiel, 24098, Germany, temme@bwl.uni-kiel.de, Daniel Klapper

Manufacturers in the consumer goods industry continuously complain that power in retail channels has shifted towards retailers with decreasing profitability for manufacturers. In theoretical as well as in empirical marketing literature the issue of power has received much attention. There is an ongoing discussion whether power in retail channels indeed has shifted or not. The published results are inconsistent, partly a result of the cross-sectional design of most studies. Hence it is difficult to conduct strategies for manufacturers and retailers to manage a power shift in the channel. Our paper will introduce a theoretically grounded methodology that can estimate power and power shifts between manufacturers and retailers in the grocery market. Hence we account for the idiosyncrasies of specific markets which is a key to develop strategies for manufacturers or retailers. We introduce a model of competition which involves the development and estimation of a structural econometric models of firm specific strategic and competitive behavior. The approach will be applied for an empirical survey of channel power in several product categories.

3 - Investigating Customer Channel Choice

Harmen Oppewal, Professor of Retail Marketing, Monash University, Department of Marketing, PO Box 197, Caulfield East, Melbourne, VI, VIC 3145, Australia, harmen.oppewal@buseco.monash.edu.au, Panos Louvieris

This paper concerns channel characteristics and how they influence buyer behaviour during the information search and purchasing stages of the customer decision making process. We aim to investigate consumer channel preferences and to identify the channel mix that maximises customer retention and acquisition opportunities. The paper contributes to the marketing literature by jointly modelling the choice of channel for information search and the choice of purchase channel. We demonstrate the use of choice experiments to assess the effects of channel attributes on channel choice in specified decision contexts that reflect typical decision situations that consumers may encounter. In the present case, this concerns choices made during a shopping trip. Respondents indicate which retail outlet or internet access point they would choose in a shopping scenario that details the nearby availability of retail outlets and internet access points. The paper reports an experiment among three hundred customers of a major UK retailer. Respondents indicated which of the available channels they would choose first and which they would expect to choose next, if any, to complete their purchase in the presented scenario. Preliminary results based on logit choice modelling suggest significant and substantial effects on first channel choice of distance to the retail outlets, store brand names, and cost of internet access. These effects however do not seem to transfer to the choice of purchase channel. This suggests that channel attribute effects are stronger for information search than purchase.

4 - A Hybrid Approach to Measuring Service Differentiation in the British Auto Dealership Market

Avinandan Mukherjee, Assistant Professor, Pennsylvania State University, School of Business, Erie, PA, 16563, United States, aum13@psu.edu

Research evidence points to a low level of perceived differentiation in the auto dealership market. This is especially true for aftersale services by dealers. Dealers seek differentiation in aftersale services through measures such as increasing the area of service centre, area of showroom, number of aftersales staff, investment in physical facilities, number of service bays, investment in service facilities, information technology usage, training of service staff, advertising and promotion expenses, location of showroom and workshop, direct marketing, customer relationship management, and customer's problem solving approach. This paper examines the returns to service differentiation by examining the implicit marginal value placed by customers on service characteristics. A hybrid approach is proposed to measure the returns to service differentiation in the auto dealership market. Based on a survey of 145 auto dealers in Great Britain, a mixture of parametric and non-parametric approaches (hedonic pricing models and data envelopment analysis techniques) is used to estimate the returns to service differentiation. The approach highlights how it is possible to identify key drivers of service differentiation and also identify service offerings that are (sub) optimally differentiated.

Saturday, 15:30pm - 17:00pm

■ SD01

Forum

Special Session: Drivers and Barriers to Marketing Models Use in Managerial Decision Making II

Chair: John Roberts, Professor, Australian Graduate School of Management and London Business School, University of New South Wales, Sydney, NS, 2052, Australia, johnr@agsm.edu.au

1 - Drivers and Barriers to Marketing Models Use in Managerial Decision Making II

John Roberts, Professor, Australian Graduate School of Management and London Business School, University of New South Wales, Sydney, NS, 2052, Australia, johnr@agsm.edu.au, Manfred Krafft, Glen L. Urban, Delaine Hampton, Gary Lilien, Dick Wittink

This double session, sponsored by the Practice Committee of the Society for Marketing Science, will start with the interesting review article by Leellang and Wittink in the September 2000 issue of the International Journal of Research in Marketing, entitled "Building Models for Marketing Decisions: Past, Present and Future". Dick Wittink will summarize and update that paper, followed by Gary Lilien providing a perspective on the barriers to market penetration of marketing science models in general and marketing resource allocation models in particular. This will lead naturally to implementation challenges in practice from an academic's perspective (Manfred Krafft) and from a practitioner's viewpoint (Delaine Hampton). Two practitioner papers will then describe ways to orient marketing models to live management actions and issues. Stuart Agres will address branding research to link marketing actions to financial performance, while Ted Fichuk will talk about the challenges and opportunities presented to marketing science by Radio Frequency Identification (RFID). The sessions will be wrapped up by Glen Urban who will synthesize the discussion, providing his perspective on translating marketing models into management action. Finally, John Roberts will open the floor to comments and questions.

2 - Using Marketing Models for Brand and Marketing Management

Stuart Agres, United States

3 - Radio Frequency Identification: Modeling Beyond the Bar Code

Ted Fichuk, United States

4 - Marketing Science Models in Industry: The Bottom Line

Glen L. Urban, Professor, MIT, E56-332, MIT, 38 Memorial Drive, Cambridge, Ma, 02142, United States, glurban@mit.edu

5 - Making Marketing Models Really Work; Questions and Answers

John Roberts, Professor, Australian Graduate School of Management and London Business School, University of New South Wales, Sydney, NS, 2052, Australia, johnr@agsm.edu.au

■ SD02

Tokyo

Innovation 07

Chair: Elie Ofek, Assistant Professor, HBS, Morgan Hall, Soldiers Field, Boston, 02163, United States, eofek@hbs.edu

1 - Assessing Firms' Receptivity to External Innovation

Scott Dacko, Lecturer in Marketing and Strategic Management, University of Warwick, Marketing and Strategic Management Group, Warwick Business School, Coventry, CV4 7AL, United Kingdom, S.G.Dacko@warwick.ac.uk, Cagla Titiz

Innovative firms seeking new product ideas can draw upon external as well as internal sources to identify novel solutions for their current and future customers' needs. Yet most companies lack the structures, systems, and culture to maximize the possibility that an innovative idea from the outside will find its way into the organization, let alone that the idea will be warmly regarded and considered. In this context, this research has four objectives. First, this research develops a case for increasing a firm's receptivity to external innovation based on a review of the literature on successful product innovation where barriers to a firm's receptivity to external innovation are identified and discussed as well. Issues related to the NPD process, success factors, ideation, definitions of innovation and the use of information technologies are examined. Second, the study develops a conceptualization, operationalization, and methodology for the measurement of a firm's receptivity to external innovation where a multi-dimensional approach for rating and analysis is proposed. Third, the study presents and discusses findings from an empirical study implementing the proposed approach on a sample of UK

firms engaged in product development across an array of industries including retail, food, healthcare, technology and spirits. Finally, the results of the study are used to propose approaches for firms to improve their receptivity to external innovation in terms of receiving, evaluating, and using externally generated ideas.

2 - An Approach to Managing Customer Experience Based on HCI Techniques

Velimir Stavljanin, Teaching assistant, Faculty of organizational sciences, Jove Ilica 154, Belgrade, 11000, Serbia-Montenegro, velimir@fon.bg.ac.yu, Dusan Starcevic

This paper proposes a novel approach to managing customer experience based on human computer interaction (HCI) techniques. Customer experience can be defined as a holistic combination of information collected through interaction with a real product and artifacts of product's marketing mix. As there is often a undesired gap between customer's expectations, generated by marketing mix, and experience of real product, manage customer experience is becoming more and more important. Many methodologies for managing customer experience have been introduced, but they solved the problem in a less formal way. Therefore, in order to achieve satisfactory outcome, they require not only practical skills, but also specific talent. In the past several years, significant progress was achieved in the field of human computer interaction. In our approach we have used knowledge and techniques from HCI community to build a framework for managing customer experience. Firstly, we have identified basic concepts of managing customer experience. The proposed methodology relies on formal specification of the product with Unified Modeling Language (UML). New methodology formally describes requirements, analysis, design and implementation of customer experience. Formal specification of the product is a basis for generation of interfaces for customer-product interaction. Rich formal description of the product, allows for more precise definition of interaction, which can reduce a gap between customer experience and values of the product. Formalization also reduces errors during development phase, which are mainly a consequence of using knowledge from different areas and different terminology.

3 - Identification of Lead Users via Virtual Stock Markets

Martin Spann, Goethe-University, School of Business and Economics, Frankfurt am Main, 60054, Germany, spann@wiwi.uni-frankfurt.de, Bernd Skiera, Holger Ernst, Jan Henrik Soll

The constant introduction of new products is of great importance for the long-term financial success of a company. Newly launched products in consumer goods and services markets show high failure rates, often reaching 50%. In order to reduce flop rates, companies can integrate innovative and knowledgeable customers, so called 'lead users', into the new product development process. However, the detection of such lead users is difficult, especially in consumer goods markets with very large customer bases. A new and potentially valuable approach for the identification of lead users are virtual stock markets, which have been proposed and applied for political and business forecasting, but not for expert identification yet. The goal of this paper is to analyze theoretically and empirically the feasibility of virtual stock markets for lead user identification. We find in our empirical study that virtual stock markets are an efficient instrument to identify lead users in consumer goods markets. Using the proposed method, companies operating in these markets can identify lead users more easily and integrate them into new product development projects. Thus, companies can improve market orientation and reduce new product flop rates.

4 - Attribute Improvement Under Market Uncertainty

Elie Ofek, Assistant Professor, HBS, Morgan Hall, Soldiers Field, Boston, 02163, United States, eofek@hbs.edu, Dominique Lauga

Product development strategy typically boils down to identifying which product attributes should be further improved. In deciding where to direct R&D efforts, firms face not only technological uncertainty regarding the feasibility and extent of achievable improvement, they also face demand uncertainty. Demand uncertainty arises because firms may not know a priori the exact value consumers place on each of the possible attributes. In a competitive context, this becomes all the more acute as the decision on which attribute to improve may be affected by rival actions. To resolve their technical uncertainties firms invest R&D resources while demand-side uncertainties can many times be resolved by commissioning costly market research (for example, a conjoint study). To shed light on firms' incentives to expend resources on resolving both uncertainties and to understand which innovative outcomes to expect, we develop a multi-stage model with two identical competing firms. In the first stage each firm decides whether to conduct market research, and in the second stage chooses which attribute to improve and how much R&D effort to deploy. Once the outcome of R&D efforts and market demand are resolved, firms compete in the product market a la Bertrand. Our findings indicate that when the equilibria of the

game are symmetric both firms either conduct or forego market research and select the same attribute to improve. Interestingly, there can exist asymmetric equilibria in which only one firm conducts market research and each firm ends up improving a different attribute. The firm conducting market research invariably invests more in subsequent R&D effort. We tie our findings to real life examples and highlight social welfare implications.

■ SD03

Athene

Conjoint 01

Chair: Jin Gyo Kim, Assistant Professor, MIT, 38 Memorial Dr., E56-323, Cambridge, MA, 02142, United States, jgkim@mit.edu

1 - Comparing Algorithms and Criteria for Designing Efficient Conjoint Choice Experiments

Roselinde Kessels, Doctoral student, Katholieke Universiteit Leuven, Department of Applied Economics, Naamsestraat 69, Leuven, 3000, Belgium, roselinde.kessels@econ.kuleuven.ac.be, Peter Goos, Martina Vandebroek

Since their breakthrough in the 1980s, conjoint choice experiments have become an increasingly popular tool to explore consumer preferences for the attributes of various goods. These experiments enable researchers to model real marketplace choices and thus to predict market demand. A typical choice experiment presents consumers with a series of choice sets, each composed of several alternatives —also called profiles— of goods that are defined as combinations of different attribute levels. Respondents are then requested to indicate their preferred alternative for every choice set. The aim of the experiment is to gather as much information as possible on the parameters of the choice model, i.e. the multinomial logit model, by submitting a small number of choice sets to a limited number of respondents. To that end, an efficient experimental design needs to be developed. In this talk, we present two different design-generating algorithms for conjoint choice experiments and compare the results. The first algorithm, the RSC algorithm, encompasses three strategies to generate efficient choice designs, namely relabeling (R), swapping (S) and cycling (C). The second algorithm involves an adaptation of the modified Fedorov exchange algorithm to the multinomial logit model. Besides the widely used D-optimality criterion, we also implement the A-, G- and V-optimality criterion in these algorithms. In addition, we make use of Bayesian design methods that integrate the optimality criterion over a prior distribution of likely parameter values.

2 - Adaptive Self-Explicated Approach for Preference Structure Measurement

V. Srinivasan, Adams Distinguished Professor of Management, Stanford University, L278, Graduate School of Business, Stanford, CA, 94305, United States, seenu@stanford.edu, Oded Netzer

In this research we propose a computer-based adaptive self-explicated approach for preference structure measurement. This approach overcomes some of the limitations of web-based self-explicated methods. Two methods are commonly used to estimate the attribute importances in self-explicated studies: ratings and constant sum allocations. A common problem with the ratings approach is that it does not explicitly capture the tradeoff between the attributes; it is easy for the respondent to say that every attribute is important. The constant sum approach overcomes this limitation, but when the number of product attributes becomes large (e.g., 10 or more), it becomes difficult for the respondent to divide a constant sum among all the attributes. This is especially true because in the self-explicated method attribute importance needs to be understood by the respondent as the value of the improvement from the least preferred to most preferred levels of an attribute. The constant-sum importance scaling is even more difficult for respondents in an interactive computer environment. We propose a computer-based self-explicated method that breaks down the attribute importance constant sum allocation into a sequence of paired comparison constant sum allocation questions. The sequence of questions is chosen adaptively for each respondent to maximize the information elicited from each paired comparison question. This approach allows for using a limited number of paired comparison questions to elicit the full attribute importance structure even when the number of attributes is large. We compare the predictive validity of the proposed approach with the commonly used Adaptive Conjoint Analysis.

3 - Hierarchical Bayesian Estimation for Polyhedral Conjoint Analysis

Srikant Vadali, Penn State University, 701C BAB, University Park, PA, 16802, United States, svadali@psu.edu, Arvind Rangaswamy, John Liechty

Recently, several researchers have proposed polyhedral methods for adaptive question design when estimating individual-level part-worth utilities. These methods have been shown to outperform existing methods in certain domains (e.g., when we need a small number of questions relative to the number of parameters estimated). Current polyhedral methods, however, treat response error in a theoretically incomplete manner. For example, at the start of the question process, consumer responses are assumed not to contain any error. This assumption holds as long as subsequent answers are consistent with previous answers, and the method incorporates response errors only when it finds that a consumer's responses are inconsistent with previous responses. We extend the polyhedral method by developing a hierarchical Bayesian model which models response errors explicitly by assuming that every consumer response includes some error. Consistent with polyhedral methods, we assume that the sum of the part-worth utilities is less than a fixed number (e.g., 100) and estimate the part-worths by modifying our priors based on the questions and responses provided by consumers. As an initial test of our proposed model, we use the question sequence provided by polyhedral methods and then apply our model to estimate part-worth utilities on simulated and real data. We evaluate the relative performance of the proposed model by determining how well it recovers true parameters from simulated data, and in predicting holdout tasks based on real data. We are also working on extending the proposed methods to adaptive question design as well.

4 - Optimal Fixed Designs for Choice-Based Conjoint Experiments: A Bayesian Decision-Theoretic Approach

Jin Gyo Kim, Assistant Professor, MIT, 38 Memorial Dr., E56-323, Cambridge, MA, 02142, United States, jgkim@mit.edu

This paper presents a simulation-based approach to optimal fixed design for choice-based conjoint experiments. Following Bayesian decision theory, experimental design problems are formally formulated by introducing a utility function, reflecting the purpose and/or costs of the experiment. The introduced utility function depends on the parameters of both choice models and of experimental design. The parameters of experimental design considered in this paper are sample size, the number of product profiles in each choice task, the number of choice tasks, and the design matrix of (known) attributes. Given the utility function, the optimal conjoint experiment design can be found by examining changes in the expected utilities with respect to all model parameters across possible combinations of experimental design parameters. The experimental design is thereby optimized over sample spaces of multiple experimental parameters jointly. In addition, a simulation-based procedure is proposed when the experimental design parameter sample space is large. The proposed approach can be applied to a wide variety of design problems in choice-based conjoint studies, including choices among multiple candidates of experimental designs, determining the optimal value of a specific design parameter when others are fixed, and even joint optima of multiple design parameters. The proposed methodology was applied to a hypothetical conjoint experiment and the following were examined: (1) effects of parameters of experimental designs on expected utilities; (2) possible trade-offs among parameters of experimental designs; (3) changes in optimal designs across the different number of design parameters. Practical implications of each for decision theory researchers will be discussed.

SD06

Shangai

CRM 10: CRM Instruments

Chair: Serdar Sayman, Assistant Professor of Marketing, Koc University, Rumeli Feneri Yolu, Sariyer, Istanbul, 34450, Turkey, ssayman@ku.edu.tr

1 - Designing Affinity Programs: Best Prices Reward Levels

R Venkatesh, Associate Professor of Business Administration, University of Pittsburgh, Katz Graduate School of Business, 332 Mervis Hall, Pittsburgh, PA, 15260, United States, rvenkat@katz.pitt.edu, Vanitha Swaminathan, Wagner Kamakura

Affinity programs among business partners, such as Hilton's offering of airline frequent flier miles to its hotel patrons, have gained in popularity. Such partnering arrangements are motivated by issues such as market expansion, loyalty and competitive deterrence. In this paper we develop an analytical model that captures consumers' heterogeneity in preferences for alternative product offerings, the degree of interrelatedness among the product categories, and the intensity of intra-category competition. Drawing on this model, we address three questions: (i) Under what product market conditions should a firm offer an affinity

program? (ii) Alternatively or additionally, should the firm offer its own loyalty program (e.g., Hilton's HHonors)? (iii) What are the optimal prices and/or reward levels under different program structures? We present our normative guidelines as a series of propositions. We find, for example, that even when a firm's affinity program enhances its profits, the program leads to erosion of the firm's core customer base. Such a program must be offered in tandem with the firm's own loyalty program. The price of the firm's product (e.g., Hilton's room rate) is increasing in its exchange rate with its partner (e.g., unit cost to Hilton of offering Continental's frequent flier miles) but decreasing in the consumers' valuation of the partner's product. The firm's price is typically higher when it offers both the affinity and loyalty programs than when it offers the affinity program alone.

2 - A Three-stage Response Model of Interactive Marketing Communications With Dynamic Effects

Srinath Gopalakrishna, University of Missouri, 434 Cornell Hall, Columbia, MO, 65211, United States, srinath@missouri.edu, Rabikar Chatterjee, Timothy M. Smith

We examine the dynamic impact of the elements of the communications mix in a sequential customer decision process for a product with seasonal and communications-sensitive demand. The stages in the process are the generation of sales leads, the conversion of leads into sales appointments, and the conversion of appointments into sales. Marketing communication elements such as direct mail, radio/newspaper advertising, and trade shows generate leads through direct and carryover effects. Seasonality influences the impact of communications. The conversion of leads to in-home sales visits is impacted by the timing of the scheduled sales visit as communicated by the call center and seasonality. Sales appointments have a probability of conversion to orders that decreases as the time lag between the initial customer contact (lead) and the scheduled sales visit increases. The initial probability and decay rate vary by communication source. The timing of the sales call and salesperson characteristics affect the probability of conversion of the appointment into a sale. Further, salesperson characteristics and anticipated purchase volume impact the dollar value of sales at the customer level. We employ a dataset with 36,000 prospects of a window manufacturer to estimate the proposed model. The model offers value as a forecasting tool and offers implications for the level and timing of communications spending and salesperson assignment, to leverage the dynamic synergies among communication elements. An interactive simulator for management decision support provides answers to "what if" questions on the impact of changes in communications and salesperson allocation decisions.

3 - Customer Retention Programs - Do They Pay Off?

Stefan Piel, Doctoral Candidate, Otto Beisheim Graduate School of Management (WHU), Vallendar, Germany, Burgplatz 2, Vallendar, D-56179, Germany, stefan.piel@whu.edu, Manfred Krafft

In this paper, we investigate how customer membership programs influence customer behavior as well as customer relationship perceptions in a retail setting. Loyalty schemes, as they are often referred to, are usually introduced to create a higher level of customer retention in profitable segments by providing more satisfaction and value to certain customers, this way establishing social as well as financial switching barriers. Popular as they are, it remains questionable whether this allegation actually holds true. Their usefulness to actually influence customer behavior, or manipulate customers' relationship perceptions, has not been shown so far. The present research uses an experimental factorial design to investigate the effect of a membership program in a controlled setting. After an initial measurement of customer relationship perceptions, two types of direct mailings (financial/social) will be addressed to the participants. Moreover, two kinds of financial incentives (coupon/bonus) are provided and two types of products (cosmetics/healthcare) are promoted. A sample of more than 2,500 consumers are observed over a period of several months. In order to assess a potential self-selection bias and to assess group differences, a sample of non-members is also included into the experiment. While customer behavior will be observable via a (loyalty program-) database, a second mail-survey will be used to account for any changes in relationship perceptions that may have occurred. We will also report to which degree activities in membership programs pay off.

4 - Buyer Switching in Frequency Programs

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A frequency (or loyalty) program is an intertemporal promotion which offers some reward or discount to the customers based on their history of purchases. Our work builds an analytical model of buyer switching under frequency programs in a dynamic framework. We consider an otherwise undifferentiated product market with stochastic prices, and provide the optimal choice strategy of a rational buyer. In each discrete

period of time, the buyer chooses between two firms considering both the prices and the reward(s). In the absence of any frequency program, the buyer chooses the seller with the lower price. However, when one of the firms offers a frequency reward, the buyer should pay a price premium for that firm—up to a certain level. We solve for the optimal price difference that the buyer should tolerate, and examine the relevant characteristics of the optimal strategy. We also examine the buyers' strategies in experimental settings—in particular, systematic deviations from the optimal strategy. We find that respondents tolerate price differences up to a certain level, but less than what the optimal strategy predicts. In addition, critical price difference (at which the chosen firm changes) increases as the respondents get closer to the reward. However, this increase is faster than predicted by optimal strategy under exponential discounting.

■ SD11

Heidelberg

Advertising 06

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1 - Long-Term Profit Impact of Integrated Marketing Communications Program

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The concept of Integrated Marketing Communications (IMC) emphasizes the role of synergy, which arises when the combined effect of multiple activities exceeds the sum of their individual effects. In this research, we investigate the effects of synergy on the profitability of IMC programs in uncertain markets. We determine the optimal IMC program on the basis of an empirically validated dynamic multimedia model that incorporates both synergy and uncertainty. Our results generalize previously published findings to uncertain markets, illuminate the profit implications of IMC programs, and explain the catalytic effects of synergy in IMC contexts. Specifically, we find that the expected long-term profit of the advertised brand increases as synergy increases. Furthermore, synergy neither increases nor decreases the variability in long-term profit. Finally, we show that managers should allocate a non-zero budget to a catalytic activity even if its direct effect is insignificant.

2 - Selling Bitter Fruit — Choosing a Communication Strategy for a Debatable Product

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The paper describes a study into the effects of positive versus defensive communication on public acceptance of debatable products. It was conducted in order to advise the Dutch Amusement With Prizes industry (AWP—a.k.a. fruit machines) on its communication strategies. Since the industry is heavily legislated, public opinion is very important to it. The research question was: In order to promote public acceptance of its products and the inevitable negative side effects thereof, will the Dutch private AWP industry be better off conveying defensive (reassuring) messages about the negative impact of its gambling products, or should this industry emphasize positive aspects of these products? Based on the literature in respect to the research question, we introduced a concept of scales to explain the mechanics behind tolerance and persuasion. Our expectations in this stage were subsequently tested through experimental research in a between-subjects design. We exposed naive subjects to one out of three manipulated newspaper clippings containing a positive, a neutral or a defensive message about a debatable product. Our experimental results confirm that: • Exposure to a positive, a neutral or a defensive version of the story leads to different tolerance levels. • Exposure to a defensive message leads to a lower tolerance than exposure to neutral or positive messages. We therefore conclude that the industry should avoid a defensive strategy and choose for a communication strategy focusing the positive aspects of the product.

3 - An Application Study of the Situation Marketing on Station Billboard Advertisements

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Advertising business has been growingly put more emphasis on the effectiveness of media planning than its efficiency. To enhance the effectiveness, a prior study proposes the idea of the Situation Marketing, which focuses not on the people, but on the temporal situation where consumers have a certain feeling, that is, delivering the ad at the right situation (Sekizawa, Washida and Bjorn 2002). This research examines the Situation Marketing particularly on the awareness of station billboard ads. Characteristics of situations are classified by two dimensions,

(1) place: on which train stations consumers contact the ads and (2) time: when they primarily use stations, i.e. weekdays or weekends. In order to identify which situation enhances the ad awareness and to measure magnitude of the enhancement, the random level shift model (McCulloch and Tsay 1993, Ohga 2002) is extended into the hierarchical Bayes probit model. A survey on station usage and ads awareness was conducted in Tokyo metropolitan area. The results show, first, that situations make two positive level shifts and one negative level shift from the average. Second, among consumer and media variables, creative factors of the ads, such as celebrities and copies, significantly increase the magnitude of the level shifts by the situations. To conclude, as a managerial implication, an example of situation selection method on media planning will be presented. Keywords (Situation Marketing, Advertising, Effective Media Planning, Random Level Shift Model)

4 - Image and Information Effects on Consumers' Evaluations of Symbol—Intensive Products

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This study examines image and information effects on consumers' quality perceptions, attitudes, and purchase intentions with respect to two kinds of symbol-intensive products, namely formal attire and jeanswear of fashion designers. Respondents provided quality, attitude and purchase intention ratings. A total of 420 respondents took part in the survey. The researchers sought to obtain a sample that was evenly balanced by demographic characteristics such as nationality, age group, sex, marital status, and gross annual income. Individual, interaction, and relative effects on product evaluation have been examined. Information does appear to be more important for consumers. Information effects were found to be stronger than image effects for quality, attitude ratings and purchase intentions of formal attire. Interestingly enough, there was an inverse relationship between images of formal attire and quality perceptions, attitudes and purchase intentions. On the other hand, image effects were found to be stronger than information effects for purchase intention of jeanswear, while information effects were more significantly correlated with quality and attitude. Implications for managerial practice and future research will be drawn.

■ SD12

Lund

Channels 06

Chair: Xinlei Chen, Doctoral Candidate, Carlson School of Management, University of Minnesota, 3-150 CSOM, Minneapolis, MN, 55455, United States, xchen1@csom.umn.edu

1 - Channel Bargaining with Retailer Asymmetry

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Manufacturers of consumer products often complain of lower profits in light of the growing channel dominance of retailers, such as Wal-Mart, Home Depot, and other 'power retailers'. We argue that this complaint might not be valid. In an analytical model of competing manufacturers and competing multi-product retailers, manufacturers might actually see profits increase when one of the retailers gains a cost advantage over its rival retailer. There exist efficiencies generated when the lower cost retailer does a larger share of a manufacturer's sales. If manufacturers sell their products at a lower price to a low-cost retailer than to the high cost retailer, they transfer market share to the more efficient retailer, thus increasing channel profits. In a bargaining relationship between a manufacturer and retailer, some of these enhanced efficiencies are transferred to the manufacturers. We extend the model to examine the effect of better product information on the distribution of channel profits and show that, by informing consumers about product attributes, manufacturers improve their bargaining position vis-à-vis retailers.

2 - The Determinants of Entry Patterns and Number of Outlets in the Retail Discount Industry

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The US retail discount industry is highly concentrated with three dominant firms: Wal-Mart, K-Mart and Target. We study the determination of local market structures in this industry through an analysis of entry patterns in a cross-section of markets. Our database includes store locations for these three chains across the country, along with other demand and cost shifters for each location. Firm's choices are formalized as the outcome of three-player game where profits depend on the market characteristics, other firms' behavior, and market/firm-specific unobservable factors. In general, such entry models yield multiple equilibria,

although various assumptions, such as a sequential move entry process, will yield unique equilibria. While we employ such assumptions in some of our estimation, we also utilize approaches that explicitly account for the multiple equilibria. In addition, we extend existing entry models to allow for multiple outlets in a market. Our results provide information about the tradeoffs these firms make between favorable market conditions and intensified competition in choosing the entry and number of outlets in a market.

3 - Could Coop Advertising Programs Prevent Manufacturers from a Private Label's Threat?

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We present an analytical framework to study whether a private label introduction could be profitable for retailers and manufacturers. We also investigate if cooperative advertising could be considered as a manufacturer's counterstrategy to the store brand harmful effects. The literature which dealt with the private label introduction issue was mainly concerned with pricing strategies. However, this problem has not been addressed considering other marketing efforts (flyers, displays, etc.). In this paper, we consider a distribution channel formed by one manufacturer and one retailer and propose a game theoretic model that accounts for marketing efforts for the national brand, in addition to retail prices. Results are found by comparing outputs from three Manufacturer-Stackelberg games: 1- the retailer offers only the manufacturer's brand, 2- the retailer sells a private label in addition to the national brand, 3- the manufacturer offers a coop advertising agreement to the retailer. Our findings generalize previous results and show that the private label introduction is profit improving for both the retailer and the channel although it could harm the manufacturer's profits. We show however that for a specific range of the retailer's advertising efficiency and of the price competition intensity, the manufacturer could profit from the private label introduction. Further, our findings suggest that the coop plan is an efficient device for the manufacturer to counter the private label threat. Our model predicts also that the retailer would accept the implementation of the coop plan only if the national brand competes strongly with the private label.

4 - Assessing the Effects of a Channel Switch

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Switching marketing channels is an expensive, "sticky" decision. A number of theories speak to the efficiency and strategic differences between channel types, and considerable empirical evidence points to the robustness of these theories. However, there is virtually no work on combining these ideas into an empirically workable methodology to assess the impact of channel switching in a realistic context (i.e., with competing firms and multiple channel structures). In this study, we undertake to close this gap. We study the "sports drink" market as it displays both competing firms (All Sport, Powerade, and Gatorade) as well as heterogeneous channels (direct-store-delivery and independent wholesalers). We estimate demand and cost parameters for a number of alternative models of competitive interaction (horizontal/inter-brand as well as vertical/intra-brand). Next, we proceed to employ these estimates to study a number of possible channel switches. Most prominently, we study the impact of switching Gatorade from its extant (independent wholesaler) channel to the direct-store-delivery (DSD) channel belonging to Pepsi. We account for three sets of changes expected to occur with a channel switch: changes in costs, changes in horizontal and vertical competitive interactions, and changes in customer product preferences. Our initial results indicate the following: Switching Gatorade to Pepsi's DSD channel increases its retail price by 16%, principally due to the higher estimated cost of the DSD channel. The impact of changes in competitive interactions is quite small. Finally, the higher costs of employing DSD are nevertheless efficient from Gatorade's point of view, if DSD's higher service levels can improve customer preference for the Gatorade brand by the equivalent of 0.2cents/oz.

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