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<td>Track 17</td>
<td>Falkland</td>
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<td>Track 18</td>
<td>TA (8.30-10.00am)</td>
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<td>NY</td>
<td>Track 19</td>
<td>Advertising I Channel I Consumer Behavior I New Product I Working Paper INo Session</td>
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<tr>
<td>NY</td>
<td>Track 20</td>
<td>Game Theory I Customer Relationship Management I Analyzing Advertising Content Retailing IBayesian Marketing Finance I Digital Marketing I Internet I Marketing-Finance Interface Working Paper II</td>
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<td>TB (10.30am-noon)</td>
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<td>TC (1.30-3.00pm)</td>
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<td>Track 29</td>
<td>TE (5.15-6.00pm)</td>
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<td>SA (8.30-10.00am)</td>
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<td>NY</td>
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<td>Track 49</td>
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<td>Track 51</td>
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<td>Track 53</td>
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<td>NY</td>
<td>Track 55</td>
<td>SB (10.30am-noon)</td>
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2016 INFORMS Marketing Science Conference

Hosted by: School of Management, Fudan University
Conference Co-Chairs: Xiongwen Lu, Min Ding

http://www.fdsm.fudan.edu.cn/marketingscience2016

June 15: Doctoral Consortium Venue:
School of Management, Fudan University
670 Guoshun Road, Shanghai

June 16-18: Main Conference Venue:
Shanghai International Convention Center
2727, Binjiang Avenue, Shanghai

The Johns Hopkins Carey Business School supports business knowledge development and education through our own initiatives, innovations, and collaborative programs across the Johns Hopkins University. We create and share knowledge that shapes business practices while educating business leaders who will grow economies and societies, and are exemplary citizens.
Welcome to the 2015 ISMS Marketing Science Conference!

Dear Colleagues:

We are delighted that you are attending the 2015 ISMS Marketing Science Conference. This 37th Marketing Science conference features nearly 600 scheduled presentations that span the marketing discipline. We hope that the featured research will not only lead to successful publications, but also stimulate interactions that will spawn future research projects and collaborations. The Johns Hopkins Carey Business School is proud to host this exciting and important event for the marketing science community.

The papers being presented at this conference were selected from among many contributed abstracts and special session proposals. We also received many submissions in the innovative new category of “abstract plus working paper” initiated last year. We are very pleased with the response in each category and are hopeful that each session will feature quality presentations, and also stimulate significant discussion among the session participants.

The conference though cannot be all work! Please make the time to catch up with old friends and make new ones during the coffee breaks, luncheon events and the evening receptions. We offer a particularly warm welcome to those attending for the first time. Ours is an amazingly open and welcoming discipline that benefits from interactions among people from diverse perspectives and backgrounds – all focused on the scientific study of marketing phenomena. Even as all formal events are scheduled at the hotel, you must also take in the ambience of the waterfront in “happening” Harbor East, the delectable cuisine at the local restaurants, as well as the historical sites in “Charm City” Baltimore.

The conference would not be possible without unstinting help from many people. We thank the ISMS leadership for selecting the Johns Hopkins Carey School, the JHU Carey Business School administration, faculty and staff for their support. A special thank you to the wonderful INFORMS staff who helped us put it together. We gratefully acknowledge the invaluable contributions of Paulette Bronis, Ellen Tralongo, Cheryl Clark, Jessica Bennett and Laura Payne. And we absolutely must acknowledge Terry Cryan whose experience guided us through the budgeting and setup process last year.

Please play your role in making this a successful conference for you. Attend the sessions and participate by sharing your ideas and engaging in discussion and dialogue. No less important, make sure you make use of the networking opportunities during coffee breaks, lunches, the evening reception and the gala dinner. This is your conference and your discipline – please own it and enjoy being a part of it.

Warm regards.

The Organizing Committee of the 2015 Marketing Science Conference.
Dipankar Chakravarti, Jian Ni, and Shubhranshu Singh
Guide to Exhibitors

Interpretive Simulations - Table 5
www.interpretive.com
Interpretive Simulations offers realistic business experiences for the undergraduate and graduate business school classroom. Our simulations compliment the concepts taught in marketing, strategy and management classes. All of our simulations are fully administered—we take care of all technical support and set up, freeing you to teach.

LINKS Simulations - Table 1
www.links-simulations.com
The integrative, team-based, customizable, competitive LINKS business simulations are used worldwide in undergraduate, MBA, and EMBA courses and in ExecEd programs. The LINKS portfolio of 23 web-based enterprise management, marketing, services, and supply chain management simulations has enhanced the learning experiences of 60,000+ students since 1999. LINKS simulations are web-based, so there’s no software to download or install. Web-browser access is all that’s required. We provide the back-office support to setup and manage LINKS simulation events for instructors. Extensive web-based resources (e.g., PPTs, sample course syllabi, FAQs, test questions, and tutorials) complement our responsive high-touch instructor support.

MBTN
Management By The Numbers – Table 4
www.management-by-the-numbers.com
Students can use MBTN to learn, review, and apply business concepts are their own pace through easy-to-use online tutorials and problem sets. Question variables are unique for every student. Faculty may monitor student progress on the modules assigned to the class. Authored by professors at leading business schools, there are 20+ topics appropriate for use in courses ranging from Marketing Principles to Advanced Marketing Electives. Please stop by our exhibit booth and chat with Stu and Sherry for more information and to receive a faculty evaluation ID. Prices range from $9.95 to $29.95 per student / per semester. We look forward to working with you!

Springer – Table 3
www.springer.com
Springer is one of the largest scientific publishing companies in the world, with a portfolio of 5,000 new books per year and more than 2,000 journals. Springer’s Business, Economics & Statistics program offers authoritative titles in such subject areas such as Marketing, Consumer Behavior, Strategic Management, Econometrics, Research Methodologies, Operations Research, and Business Information Systems.

World Scientific Publishing -Now Publishers -Table 2
www.wspc.com
We will be featuring key books and journals in Marketing written by prominent authors in this field. Titles include ‘The History of Marketing Science’ edited by Russell S Winer, founding Fellow of the INFORMS Society for Marketing Science (ISMS), and Scott A Neslin who served as President of ISMS.
# Summary Schedule

## WEDNESDAY, JUNE 17, 2015

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Location</th>
</tr>
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<tbody>
<tr>
<td>7:00am-8:30am</td>
<td>Consortium Breakfast &amp; Registration</td>
<td>Harborside B, Marriott</td>
</tr>
<tr>
<td>8:45am-12:30pm</td>
<td>Doctoral Consortium</td>
<td>4th Floor, Marriott</td>
</tr>
<tr>
<td>12:30pm-1:45pm</td>
<td>Consortium Lunch</td>
<td>Lebanese Taverna</td>
</tr>
<tr>
<td>1:45pm-5:30pm</td>
<td>Doctoral Consortium</td>
<td>719 S President St, Baltimore, MD</td>
</tr>
<tr>
<td>5:30pm-8:30pm</td>
<td>Consortium Reception</td>
<td>Passano Lobby/ Great Hall/ 2nd Floor</td>
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## THURSDAY, JUNE 18, 2015

<table>
<thead>
<tr>
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<th>Event</th>
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<tbody>
<tr>
<td>7:30am-8:30am</td>
<td>Continental Breakfast</td>
<td>Grand Ballroom 5/6, Marriott</td>
</tr>
<tr>
<td>8:30am-10:00am</td>
<td>Session TA</td>
<td>3rd &amp; 4th Floors, Marriott</td>
</tr>
<tr>
<td>10:00am-10:30am</td>
<td>Morning Break</td>
<td>Grand Ballroom Foyer</td>
</tr>
<tr>
<td>10:30am-12:00pm</td>
<td>Session TB</td>
<td>3rd &amp; 4th Floors, Marriott</td>
</tr>
<tr>
<td>12:00pm-1:30pm</td>
<td>Lunch</td>
<td>Grand Ballroom 5/6, Marriott</td>
</tr>
<tr>
<td>1:30pm-3:00pm</td>
<td>Session TC</td>
<td>3rd &amp; 4th Floors, Marriott</td>
</tr>
<tr>
<td>3:00pm-3:30pm</td>
<td>Afternoon Break</td>
<td>Grand Ballroom Foyer</td>
</tr>
<tr>
<td>3:30pm-5:00pm</td>
<td>Session TD</td>
<td>3rd &amp; 4th Floors, Marriott</td>
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<tr>
<td>5:30pm-7:30pm</td>
<td>Welcome Reception</td>
<td>Grand Ballroom Foyer &amp; 5/6, Marriott</td>
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## FRIDAY, JUNE 19, 2015

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<td>8:30am-10:00am</td>
<td>Session FA</td>
<td>3rd &amp; 4th Floors, Marriott</td>
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<td>10:00am-10:30am</td>
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<td>Grand Ballroom Foyer</td>
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<td>Session FB</td>
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<td>12:00pm-1:30pm</td>
<td>Lunch</td>
<td>Grand Ballroom 5/6, Marriott</td>
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<td>1:30pm-3:00pm</td>
<td>Session FC</td>
<td>3rd &amp; 4th Floors, Marriott</td>
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<td>Afternoon Break</td>
<td>Grand Ballroom Foyer</td>
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<td>3rd &amp; 4th Floors, Marriott</td>
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<tr>
<td>6:00pm-7:00pm</td>
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<td>Grand Ballroom Foyer</td>
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<td>7:00pm-10:00pm</td>
<td>Banquet</td>
<td>Grand Ballroom 5/6, Marriott</td>
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## SATURDAY, JUNE 20, 2015

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<td>Grand Ballroom 5/6, Marriott</td>
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<td>8:30am-10:00am</td>
<td>Session SA</td>
<td>3rd &amp; 4th Floors, Marriott</td>
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<td>10:00am-10:30am</td>
<td>Morning Break</td>
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<td>10:30am-12:00pm</td>
<td>Session SB</td>
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<tr>
<td>12:00pm-1:30pm</td>
<td>Lunch</td>
<td>Grand Ballroom 5/6, Marriott</td>
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<tr>
<td>1:30pm-3:00pm</td>
<td>Session SC</td>
<td>3rd &amp; 4th Floors, Marriott</td>
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Special & Invitational Meetings

THURSDAY, JUNE 18, 2015
7:30am-9:30am  JMR Editorial Review Board Meeting  Galena; Editorial Review Board members only
12:00pm-1:30pm  ISMS Board Luncheon  Galena; ISMS Board Members only
3:30pm-5:00pm  Meet the Editors I  Dover AB; open to all
5:15pm-6:00pm  Wharton Customer Analytics Initiative  Harborside Ballroom A

FRIDAY, JUNE 19, 2015
7:30am-9:00am  Marketing Science Journal ERB Meeting  Kent ABC; Editorial Review Board members only
10:30am-12:00pm  Meet the Editors II  Dover AB; open to all
12:00pm-1:30pm  Women in Marketing Science Luncheon  Kent ABC; Open (priority for advance registrants)
1:30pm-3:00pm  ISMS Doctoral Dissertation Winners I  Falkland
3:30pm-5:00pm  ISMS Doctoral Dissertation Winners II  Falkland
5:00pm-6:30pm  Marketing Science Editors’ Reception  Atlantic; Area/Section Editors only

SATURDAY, JUNE 20, 2015
12:00pm-1:30pm  ISMS Fellow’s Lunch  Falkland; ISMS Fellows only
MEET THE EDITORS I
TD9: Thursday, June 18, 3:30 pm - 5:00 pm
Dover AB

Chair: Jacob Goldenberg, IDC, Herzliya

International Journal of Research in Marketing
Jacob Goldenberg, IDC, Herzliya; Roland Rust, University of Maryland

Journal of Marketing Research
Robert Meyer, University of Pennsylvania

Management Science
Miguel Villas-Boas, UC-Berkeley

Journal of Consumer Psychology
Amna Kirmani, University of Maryland

Quantitative Marketing and Economics
Pradeep Chintagunta, University of Chicago

MEET THE EDITORS II
FB9: Friday, June 19, 10:30 am - 12:00 pm
Dover AB

Chair: Praveen Kopalle, Dartmouth College

Customer Needs and Solutions
Min Ding, Penn. State University, Fudan University

Journal of Consumer Research
Praveen Kopalle, Dartmouth College

Journal of Retailing
Murali Mantrala, University of Missouri

Journal of Service Research
Katherine (Kay) Lemon, Boston College

Journal of Marketing
V. Kumar, Georgia State University

Marketing Science
Preyas Desai, Duke University
ISMS WOMEN IN MARKETING SCIENCE LUNCHEON
Friday, June 19, 12:00 pm – 1:30 pm
Kent ABC

Organizers:
Catherine Tucker (MIT), Juanjuan Zhang (MIT), Meng Zhu (Johns Hopkins University)

Open with priority given to advance registrants.
Please visit the Registration Desk to register in advance.

SCHEDULE

12:00 pm  Luncheon starts
12:15 pm  Welcome and Opening Remarks
           Speaker Introductions
12:20 pm  Sha Yang, University of Southern California
           https://www.marshall.usc.edu/faculty/directory/shayang
12:35 pm  Catherine Tucker, MIT
           http://cetucker.scripts.mit.edu/
12:50 pm  Q&A and Discussion with Audience
1:30 pm   Adjournment
Breakfast, Lunches, & Breaks

BREAKFAST
Grand Ballroom 5/6

- Assorted baked goods, freshly cut fruit, individual yogurt parfaits
- Coffee, tea, ice water

MORNING BREAKS
Grand Ballroom Foyer

Thursday, June 18
- Assorted granola bars
- Hot tea, coffee

Friday, June 19
- Freshly baked sticky buns
- Hot tea, coffee

Saturday, June 20
- Assorted granola bars
- Hot tea, coffee

LUNCHES
Grand Ballroom 5/6

Thursday, June 18
- Delicatessen Lunch Buffet

Friday, June 19
- Gourmet Sandwiches Lunch Buffet

Saturday, June 20
- Assorted boxed lunches

AFTERNOON BREAKS
Grand Ballroom Foyer

Thursday, June 18
- Assorted freshly baked cookies
- Hot tea, coffee, soft drinks, bottled water

Friday, June 19
- Soft hot pretzels with mustard
- Hot tea, coffee, soft drinks, bottled water
The Institute for Operations Research and Management Sciences (INFORMS) is an international not-for-profit scientific society with 10,000 members, including Nobel Laureates, dedicated to applying scientific methods to help improve decision making, management and operations. The INFORMS Society for Marketing Science (ISMS) sub-branch sponsors the Marketing Science Conference. Now in its 37th year, the Marketing Science Conference aims to foster the development, dissemination, and implementation of knowledge, basic and applied research, and science and technologies that improve the understanding and practice of marketing.

THE ISMS BOARD

<table>
<thead>
<tr>
<th>Name</th>
<th>Office</th>
<th>E-mail</th>
<th>Term</th>
</tr>
</thead>
<tbody>
<tr>
<td>John Hauser</td>
<td>President</td>
<td><a href="mailto:Hauser@mit.edu">Hauser@mit.edu</a></td>
<td>2014-2015</td>
</tr>
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<td>Treasurer</td>
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<td>Secretary</td>
<td><a href="mailto:gyer@haas.berkeley.edu">gyer@haas.berkeley.edu</a></td>
<td>2014-2015</td>
</tr>
<tr>
<td>Doug Bowman</td>
<td>V.P. of Meetings</td>
<td><a href="mailto:doug.bowman@emory.edu">doug.bowman@emory.edu</a></td>
<td>2015-2016</td>
</tr>
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<td>Xueming Luo</td>
<td>V.P. of Electronic Communications</td>
<td><a href="mailto:luoxm@temple.edu">luoxm@temple.edu</a></td>
<td>2015-2016</td>
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<td>John Roberts</td>
<td>V.P. of Practice</td>
<td><a href="mailto:johnr@agsm.edu.au">johnr@agsm.edu.au</a></td>
<td>2014-2015</td>
</tr>
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<td>K. Sudhir</td>
<td>V.P. of Education</td>
<td><a href="mailto:k.sudhir@yale.edu">k.sudhir@yale.edu</a></td>
<td>2015-2016</td>
</tr>
<tr>
<td>Juanjuan Zhang</td>
<td>V.P. of Membership</td>
<td><a href="mailto:jjzhang@mit.edu">jjzhang@mit.edu</a></td>
<td>2014-2015</td>
</tr>
<tr>
<td>Gerry Tellis</td>
<td>V.P. of External Relations</td>
<td><a href="mailto:tellis@marshall.usc.edu">tellis@marshall.usc.edu</a></td>
<td>2015-2016</td>
</tr>
<tr>
<td>Dominique Hanssens</td>
<td>President Elect</td>
<td><a href="mailto:dominique.hanssens@anderson.ucla.edu">dominique.hanssens@anderson.ucla.edu</a></td>
<td>2014-2015</td>
</tr>
<tr>
<td>Kannan Srinivasan</td>
<td>Past President</td>
<td><a href="mailto:kannans@andrew.cmu.edu">kannans@andrew.cmu.edu</a></td>
<td>2014-2015</td>
</tr>
<tr>
<td>Bernd Skiera</td>
<td>Advisory Council</td>
<td><a href="mailto:skiera@wiwi.uni-frankfurt.de">skiera@wiwi.uni-frankfurt.de</a></td>
<td>2014-2015</td>
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<tr>
<td>Yuxin Chen</td>
<td>Advisory Council</td>
<td><a href="mailto:yc18@nyu.edu">yc18@nyu.edu</a></td>
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<tr>
<td>Oded Koenigsberg</td>
<td>INFORMS Liaison Officer</td>
<td><a href="mailto:okoenigsberg@london.edu">okoenigsberg@london.edu</a></td>
<td>2015-2016</td>
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1979 Stanford University
David B. Montgomery, Dick Wittink

1980 University of Texas, Austin
Robert Leone

1981 New York University
John Keon

1982 University of Pennsylvania
Vijay Mahajan, Yoram Wind

1983 University of Southern California
Fred Zufryden

1984 University of Chicago
Steven Shugan

1985 Vanderbilt University
Russell Winer, Allan Shocker

1986 University of Texas, Dallas
Ram Rao

1987 HEC, France
Dominique Hanssens, Gilles Laurent

1988 University of Washington
Allan Shocker, Robert Jacobson

1989 Duke University
John McCann, Richard Staelin

1990 University of Illinois
S. Sudharshan

1991 University of Delaware/Dupont
Meryl Gardner, John Frey

1992 London Business School
Mark Uncles, Gerald Goodhardt

1993 Washington University
Chakravarthi Narasimhan

1994 University of Arizona
Dipankar Chakravarti, Ambar Rao

1995 University of New South Wales
John Roberts, Pamela Morrison

1996 University of Florida
Steven Shugan, Barton Weitz

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

1998 INSEAD, France
Erin Anderson, Hubert Gatignon

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

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

2001 University of Mainz
Oliver Heil

2002 University of Alberta
Peter T. L. Popkowski Leszczyc

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

2004 Erasmus University, Rotterdam
Stefan Stremersch

2005 Emory University
Sundar Bharadwaj, Douglas Bowman, Sandy Jap

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

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

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

2009 University of Michigan
Eugene Anderson, Fred Feinberg

2010 University of Cologne
Werner Reinartz, Karen Gedenk, Franziska V’Tickner

2011 Rice University
Richard R. Batsell, Sharad Borle, Ajay Kalra, Amit Pazgal

2012 Boston University
Shuba Srinivasan, Patrick Kaufmann

2013 Ozyegin University
Erhan Erkut, Tulin Erdem (NYU), Koen Pauwels

2014 Emory University
Douglas Bowman, Sandy Jap

2015 Johns Hopkins University
Dipankar Chakravarti, Jian Ni, Shubhranshu Singh

2016 Fudan University,
Ming Ding, Xiongwen Lu
RESTAURANT RECOMMENDATIONS

(Please check with restaurant or hotel concierge for locations and transportation/distance information.)

**American**

Woodberry Kitchen: www.woodberrykitchen.com  
2010 Clipper Park Rd, Baltimore

Charleston Restaurant: www.charlestonrestaurant.com  
1000 Lancaster St, Baltimore

Fleet Street Kitchen: www.fleetstreetkitchen.com  
1012 Fleet St, Baltimore

Wit & Wisdom: www.witandwisdombaltimore.com  
200 International Dr, Baltimore

Brewer’s Art: www.thebrewersart.com  
1106 N Charles St, Baltimore

The Food Market: www.thefoodmarketbaltimore.com  
1017 W 36th St, Baltimore

Waterfront Kitchen: www.waterfrontkitchen.com  
1417 Thames St, Baltimore

Pen & Quill: www.penandquill.net  
1701 N Charles St, Baltimore

The Fork & Wrench: www.theforkandwrench.com  
2322 Boston St, Baltimore

Bond Street Social: www.bondstreetsocial.com  
901 South Bond St, Baltimore

Roy’s: www.roysrestaurant.com  
720 Aliceanna St. Baltimore, (Hawaiian)

**Bistros**

Petit Louis: www.petitlouis.com  
4800 Roland Ave, Baltimore

Jack’s Bistro: www.jacksbistro.net  
3123 Elliott St, Baltimore

Ten Ten: www.bagbys1010.com  
1010 Fleet St, Baltimore

Dooby’s: www.doobys.com  
802 N Charles St, Baltimore

**Chinese**

Hunan Taste: www.yelp.com/biz/hunan-taste-catonsville  
718 N Rolling Rd, Catonsville (great food but distant)

Asian Court: www.asian-court.com  
9180 Baltimore National Pike, Ellicott City (great food but distant)

**Greek**

Mezze: www.kalismezze.com  
1606 Thames St, Baltimore

**Indian**

Ambassador: www.ambassadordining.com  
3811 Canterbury Rd, Baltimore

Indigma: www.indigarestaurant.com  
801 N Charles St, Baltimore

Akbar: www.akbar-restaurant.com  
823 N Charles St, Baltimore

Royal Taj: www.royaltajmd.com  
8874 McGaw Rd, Columbia, MD (great food but distant)

Darbar: www.darbarbaltimore.com  
1911 Aliceanna St, Baltimore
### Italian

<table>
<thead>
<tr>
<th>Name</th>
<th>www</th>
<th>Address</th>
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<tbody>
<tr>
<td>Amiccis of Little Italy</td>
<td><a href="http://www.amiccis.com">www.amiccis.com</a></td>
<td>231 S High St, Baltimore</td>
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<tr>
<td>Sotto Sopra</td>
<td><a href="http://www.sottosoprainc.com">www.sottosoprainc.com</a></td>
<td>405 N Charles St, Baltimore</td>
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<tr>
<td>Aldo's Ristorante Italiano</td>
<td><a href="http://www.aldositaly.com">www.aldositaly.com</a></td>
<td>306 S High St, Baltimore</td>
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<tr>
<td>Cinghiale</td>
<td><a href="http://www.cgeno.com">www.cgeno.com</a></td>
<td>822 Lancaster St, Baltimore</td>
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<tr>
<td>Birroteca</td>
<td><a href="http://www.bmorebirroteca.com">www.bmorebirroteca.com</a></td>
<td>1520 Clipper Rd, Baltimore</td>
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<tr>
<td>La Scala</td>
<td><a href="http://www.lascadalining.com">www.lascadalining.com</a></td>
<td>1012 Eastern Ave, Baltimore</td>
</tr>
<tr>
<td>La Tavola</td>
<td><a href="http://www.la-tavola.com">www.la-tavola.com</a></td>
<td>248 Albemarle St, Baltimore</td>
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<tr>
<td>Dalesio's</td>
<td><a href="http://www.dalesios.com">www.dalesios.com</a></td>
<td>829 Eastern Ave, Baltimore</td>
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<tr>
<td>Sabatino's</td>
<td><a href="http://www.sabatinos.com">www.sabatinos.com</a></td>
<td>901 Fawn St, Baltimore</td>
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<tr>
<td>Verde</td>
<td><a href="http://www.verdepizza.com">www.verdepizza.com</a></td>
<td>641 S Montford Ave, Baltimore</td>
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### Japanese

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<tr>
<td>Pabu</td>
<td><a href="http://www.pabuizakaya.com">www.pabuizakaya.com</a></td>
<td>725 Aliceanna St, Baltimore</td>
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<tr>
<td>RA Sushi Bar</td>
<td><a href="http://www.rasushi.com/baltimore">www.rasushi.com/baltimore</a></td>
<td>1390 Lancaster St, Baltimore</td>
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<tr>
<td>Azumi</td>
<td><a href="http://www.azumirestaurant.com">www.azumirestaurant.com</a></td>
<td>725 Aliceanna St, Baltimore</td>
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<tr>
<td>Chiu's Sushi</td>
<td><a href="http://www.baltimorechiussushi.com">www.baltimorechiussushi.com</a></td>
<td>608 S Exeter St, Baltimore</td>
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### Middle Eastern

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<th>Name</th>
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<tr>
<td>Helmand</td>
<td><a href="http://www.helmand.com">www.helmand.com</a></td>
<td>806 North Charles St, Baltimore</td>
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<tr>
<td>Lebanese Taverna</td>
<td><a href="http://www.lebanesetaverna.com">www.lebanesetaverna.com</a></td>
<td>719 S President St, Baltimore</td>
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### Spanish/Tabas

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<tr>
<td>Pazo</td>
<td><a href="http://www.pazorestaurant.com">www.pazorestaurant.com</a></td>
<td>1425 Aliceanna St, Baltimore</td>
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<tr>
<td>Tio Pepe</td>
<td><a href="http://www.tiopepebaltimore.com">www.tiopepebaltimore.com</a></td>
<td>10 E Franklin St, Baltimore</td>
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<tr>
<td>Tapas Adela</td>
<td><a href="http://www.tapasadela.com">www.tapasadela.com</a></td>
<td>814 S Broadway, Baltimore</td>
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<tr>
<td>Tapas Teatro</td>
<td><a href="http://www.tapasteatro.com">www.tapasteatro.com</a></td>
<td>1711 N Charles St, Baltimore</td>
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### Seafood

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<th>Name</th>
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<tr>
<td>Rusty Scupper</td>
<td><a href="http://www.rusty-scupper.com">www.rusty-scupper.com</a></td>
<td>402 Key Hwy, Baltimore</td>
</tr>
<tr>
<td>Ouzo Bay</td>
<td><a href="http://www.ouzobay.com">www.ouzobay.com</a></td>
<td>1000 Lancaster St, Baltimore</td>
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<tr>
<td>Thames Street Oyster House</td>
<td><a href="http://www.thamesstreetoysterhouse.com">www.thamesstreetoysterhouse.com</a></td>
<td>1728 Thames St, Baltimore</td>
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<tr>
<td>Black Olive</td>
<td><a href="http://www.theblackolive.com">www.theblackolive.com</a></td>
<td>814 S Bond St, Baltimore</td>
</tr>
<tr>
<td>Mussel's Bar</td>
<td><a href="http://www.musselbar.com">www.musselbar.com</a></td>
<td>1350 Lancaster St, Baltimore</td>
</tr>
<tr>
<td>Philips</td>
<td><a href="http://www.phillipseseafood.com">www.phillipseseafood.com</a></td>
<td>601 E Pratt St, Baltimore</td>
</tr>
<tr>
<td>Oceanaire</td>
<td><a href="http://www.theoceanaire.com">www.theoceanaire.com</a></td>
<td>801 Aliceanna St, Baltimore</td>
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**Steakhouse**

<table>
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<tr>
<th>Name</th>
<th>Website</th>
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<tbody>
<tr>
<td>The Prime Rib:</td>
<td><a href="http://www.theprimerib.com">www.theprimerib.com</a></td>
<td>1101 N Calvert St, Baltimore</td>
</tr>
<tr>
<td>The Capital Grille:</td>
<td><a href="http://www.thecapitalgrille.com">www.thecapitalgrille.com</a></td>
<td>500 E Pratt St, Baltimore</td>
</tr>
<tr>
<td>Flemings:</td>
<td><a href="http://www.flemingssteakhouse.com">www.flemingssteakhouse.com</a></td>
<td>720 Aliceanna St, Baltimore</td>
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**Thai**

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<th>Name</th>
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<tr>
<td>My Thai:</td>
<td><a href="http://www.mythaibaltimore.com">www.mythaibaltimore.com</a></td>
<td>1300 Bank St, Baltimore</td>
</tr>
<tr>
<td>Elephant Wok:</td>
<td><a href="http://www.thaielephantwokbaltimore.com">www.thaielephantwokbaltimore.com</a></td>
<td>401 S Broadway, Baltimore</td>
</tr>
<tr>
<td>Stang of Siam:</td>
<td><a href="http://www.stangofsiam.com">www.stangofsiam.com</a></td>
<td>1301 N Calvert St, Baltimore</td>
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**Fast Food/Sandwiches**

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<tr>
<th>Name</th>
<th>Website</th>
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<tbody>
<tr>
<td>Bagby Pizza Co:</td>
<td><a href="http://www.bagbypizzaco.com">www.bagbypizzaco.com</a></td>
<td>1006 Fleet St, Baltimore</td>
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<tr>
<td>Chipotle Mexican Grill:</td>
<td><a href="http://www.chipotle.com">www.chipotle.com</a></td>
<td>621 E Pratt St, Baltimore</td>
</tr>
<tr>
<td>Haagen-Dazs Ice Cream Shop:</td>
<td><a href="http://www.harboreastdeli.com">www.harboreastdeli.com</a></td>
<td>675 S President St, Baltimore</td>
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<tr>
<td>Harbor East Delicatessen &amp; Pizzeria:</td>
<td><a href="http://www.manchurianriceco.com">www.manchurianriceco.com</a></td>
<td>1010 Aliceanna St, Baltimore</td>
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<tr>
<td>Manchurian Rice Company Asian Grill:</td>
<td><a href="http://www.manchurianriceco.com">www.manchurianriceco.com</a></td>
<td>1010 Aliceanna St, Baltimore</td>
</tr>
<tr>
<td>Potbelly Sandwich Shop:</td>
<td><a href="http://www.potbelly.com">www.potbelly.com</a></td>
<td>621 E Pratt St, Baltimore</td>
</tr>
<tr>
<td>Taco Fiesta:</td>
<td><a href="http://www.tacofiesta.com">www.tacofiesta.com</a></td>
<td>618 S Exeter St, Baltimore</td>
</tr>
<tr>
<td>Whole Foods Market:</td>
<td><a href="http://www.wholefoodsmarket.com">www.wholefoodsmarket.com</a></td>
<td>1001 Fleet St, Baltimore</td>
</tr>
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**Bars/ Pubs**

<table>
<thead>
<tr>
<th>Name</th>
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<tr>
<td>13.5:</td>
<td><a href="http://www.135winebar.com">www.135winebar.com</a></td>
<td>1117 W 36th St, Baltimore</td>
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<tr>
<td>Rye:</td>
<td><a href="http://www.ryebaltimore.com">www.ryebaltimore.com</a></td>
<td>807 S Broadway, Baltimore</td>
</tr>
<tr>
<td>Bond Street Social:</td>
<td><a href="http://www.bondstreetsocial.com">www.bondstreetsocial.com</a></td>
<td>901 S Bond St, Baltimore</td>
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<tr>
<td>The Point:</td>
<td><a href="http://www.thepointinfells.com">www.thepointinfells.com</a></td>
<td>1738 Thames St, Baltimore</td>
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<tr>
<td>Tiki Barge:</td>
<td><a href="http://www.tikibargebaltimore.com">www.tikibargebaltimore.com</a></td>
<td>500 Harborview Dr, Baltimore</td>
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<tr>
<td>Heavy Seas Alehouse:</td>
<td><a href="http://www.heavyseasalehouse.com">www.heavyseasalehouse.com</a></td>
<td>1300 Bank St, Baltimore</td>
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<tr>
<td>James Joyce Pub:</td>
<td><a href="http://www.thejamesjoycepub.com">www.thejamesjoycepub.com</a></td>
<td>616 S President St, Baltimore</td>
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<tr>
<td>Gordon Biersch:</td>
<td><a href="http://www.gordonbiersch.com">www.gordonbiersch.com</a></td>
<td>1000 Lancaster St, Baltimore</td>
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<tr>
<td>Annabel Lee Tavern:</td>
<td><a href="http://www.annabelleetavern.com">www.annabelleetavern.com</a></td>
<td>601 S Clinton St, Baltimore</td>
</tr>
</tbody>
</table>

*(Please check with restaurant or hotel concierge for locations and transportation/distance information.)*
## Sightseeing Recommendations

### Transportation
(check websites for schedule and route information)

- **Charm City Circulator**
  - http://www.charmcitycirculator.com/
  - A fleet of 30 free shuttles that travel four routes in Baltimore City.

- **Baltimore Water Taxi**
  - http://www.baltimorewatertaxi.com/
  - $14.00 Adult All Day Ticket, $8.00 Adult One Way Ticket

### Area Attractions

- **B&O Railroad Museum**
  - 901 W Pratt St, Baltimore
  - http://www.borail.org/

- **Babe Ruth Birthplace Museum**
  - 216 Emory St, Baltimore
  - http://baberuthmuseum.org/

- **Baltimore Ghost Tours**
  - 731 S Broadway, Baltimore
  - http://www.baltimoreghosttours.com/
  - Award-winning haunted walking tour of the many ghost of the historic maritime village of Fell’s Point

- **Baltimore Museum of Industry**
  - Inner Harbor South, 1415 Key Hwy, Baltimore
  - http://thebmi.org/

- **Cylburn Arboretum**
  - 4915 Greenspring Ave, Baltimore
  - http://cylburn.org/

- **Edgar Allan Poe House and Museum**
  - 203 N Amity St, Baltimore
  - http://www.poeinbaltimore.org/museum/

- **Fort McHenry National Monument**
  - 2400 E Fort Ave, Baltimore

- **Harborplace**
  - 201 E Pratt St, Baltimore
  - http://www.harborplace.com/

### Shopping and Dining

- **Historic Ships**
  - Pier 1, 301 E Pratt St, Baltimore
  - http://www.historicships.org/

- **Horseshoe Casino**
  - 1525 Russell St, Baltimore
  - https://www.caesars.com/horseshoe-baltimore

- **Maryland Science Center**
  - 601 Light St, Baltimore
  - http://www.marylandsciencecenter.org/

- **National Aquarium**
  - Inner Harbor
  - http://www.aqua.org/

- **Power Plant Live!**
  - 34 Market Pl, Baltimore
  - http://www.powerplantlive.com/

- **Pride of Baltimore**
  - 2700 Lighthouse Point E, Baltimore
  - Reproduction of an 1812-era topsail schooner privateer
  - http://www.pride2.org/

- **Ripley's Believe It or Not**
  - Inner Harbor
  - Odditorium, Ripley's Moving Theater & Mirror Maze
  - http://www.ripleys.com/baltimore

- **Seadog Cruises**
  - 561 S Light St, Baltimore
  - Cruise along the Inner Harbor
  - http://www.seadogcruises.com/baltimore

- **The Gallery**
  - 200 E Pratt St, Baltimore
  - Shopping & dining
  - http://www.thegalleryartharborplace.com/

- **Top of the World Observation Level**
  - 401 E Pratt St, Baltimore
  - A breathtaking view of Baltimore's skyline, harbor and beyond from 27 floors up.
  - http://www.viewbaltimore.org/
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<tr>
<th>Session</th>
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<tbody>
<tr>
<td>TA01 – Grand Ballroom 1</td>
<td></td>
<td>Anna Dubiel</td>
<td>Is there a Relationship between Executive’s LinkedIn Connections and Stock Prices? Faria Badhan, Manoshi Samaraweera</td>
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<tr>
<td>Advertising I</td>
<td></td>
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<td>Within and Cross-Channel Effects of Brand Advertising on Word-of-Mouth Linli Xu, Mitchell Lovett, Renana Peres</td>
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<td>TA02 – Grand Ballroom 2</td>
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<td>Pamela Morrison</td>
<td>Linking Acquisition Channel Characteristics to Customer Value and Behavior Christian Schulze, Leigh McAllister</td>
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<td>Channel I</td>
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<td>The Effect of Store Brand Competition on Product Quality Decisions Ryan Choi</td>
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<td>Channel Alignment: Contrasting B2B and B2C Valuation and Updating Rules Pamela Morrison, Lina Tan, John Roberts</td>
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<td>TA03 – Grand Ballroom 3</td>
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<td>Xi Chen</td>
<td>Understanding the Effect of Last Name on Acquisition Timing in China Xi Chen, Guoli Yang</td>
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<td>Consumer Behavior I</td>
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<td>Less is More, Until It Isn’t: Feature-Richness in Experiential Purchases Chadwick Miller, Adriana Samper, Naomi Mandel</td>
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<td>Deal or No Deal? The Role of Competition in the Effect of Online Deals on Online Review Jorge Mejia, Anand Gopal, Michael Trusov</td>
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<td>Evaluating the Link between Type of Segmentation Base and Actual Consumer Brand Choice Behavior Stefan Scheuffelen, Jan Kemper, Malte Brettel</td>
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<td>TA04 – Grand Ballroom 4</td>
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<td>Martin Meissner</td>
<td>The Role of Information Presentation in Monetization of Intellectual Property Joseph Derby, Mayukh Dass, Yi Qian, Josh Lerner</td>
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<td>New Product I</td>
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<td>Optimal Introductory Product Design and Upgrade Strategies Mahmoud Pedram, Subramanian Balachander</td>
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<td>Is Consumer Empowerment Always Better? An Investigation of High- and Low-Status Technology Brands Martin Meissner, Michelle Haurand, Christian Stummer</td>
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<td>Antecedents and Consequences of Customer Involvement across Different New Product Development Phases Bradley Allen, Suman Basu Roy, Deepa Chandrasekaran</td>
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<tr>
<td>TA05 – Grand Ballroom 6</td>
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<td>Neha Purushottam</td>
<td>Sustainability Marketing Curriculum: Developing Countries Perspective Neha Purushottam</td>
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<td>TA06 – Grand Ballroom 8</td>
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<td>TA07 – Grand Ballroom 9</td>
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<td>Jihwan Moon</td>
<td>The Legend of Patent Trolls Sumitro Banerjee, David Soberman</td>
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<td>Game Theory I</td>
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<td>Estimating the Heterogeneity of Fairness Preferences on Bargaining Behavior Arnaud De Bruyn, Alina Ferecatu</td>
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<td>Willpower Depletion and Price Promotion Timing Richard Schaefer, Raghunath Rao, Vijay Mahajan</td>
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<td>TA08 – Grand Ballroom 10</td>
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<td>Jihwan Moon</td>
<td>CSV: Creating and Sharing a Bigger Value Pie Hyeom Yoo, JaeWook Kim</td>
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<td>Customer Relationship Management I</td>
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<td>How Consumer Expectations on Economy Impact Customer Satisfaction Jihwan Moon, Debanjan Mitra</td>
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<td></td>
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<td>How to Create Customers Delight and Does It Really Drive Loyalty? An Examination of Customer Delight in a B2B Context Lili Werli Zou, Chi Kin Bennett Yim, Kimmy Wa Chan</td>
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<td>TA09 – Dover AB</td>
<td>TA10 – Dover C</td>
<td>TA11 – Atlantic</td>
<td>TA12 – Bristol</td>
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<td>Analyzing Advertising Content</td>
<td>Retailing I</td>
<td>Bayesian</td>
<td>Marketing Finance I</td>
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<tr>
<td>Chair: Elisabeth Honka</td>
<td>Chair: Manish Gangwar</td>
<td>Chair: Norris Bruce</td>
<td>Chair: Anna S. Cui</td>
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<tr>
<td>Native Advertising: Evidence from Mobile Ad Experiments Harikesh Nair, Navdeep Sahni</td>
<td>Understanding the Impact of Consumer-Retailer Relationship and Information States for Store Display Yooung Han, Shibo Li, Sandeep R. Chandukala</td>
<td>Model-Based Project Discovery Bruno Jacobs, Bas Donkers, Dennis Fok</td>
<td>The Effect of Marketer’s Value at Risk (VAR) on Customer’s Product Choice and Welfare Aharon Hibshoosh, Mehmet Benturk</td>
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<tr>
<td>Television Advertising Avoidance Kenneth C. Wilbur</td>
<td></td>
<td>Nonparametric Bayesian Dynamic Modeling: An Application to Facial Emotions in Digital Video Norris Bruce</td>
<td>Myopic Marketing and Innovation Management: The Relevance of Financial Leverage Daniel Wittmann, Malte Brettel</td>
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<td>Chair: Zainab Jamal</td>
<td>Chair: Alina Sorescu</td>
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### 2015 INFORMS Marketing Science Conference

**Thursday, June 18th, 2015**

**10.30-12.00 (TB)**

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Praveen Kopalle, Robert Fisher, Bharat Sud, Kersi Antia  
A Times Series Analysis of Online Review Market Microstructure  
Nikolaos Korfiatis, Nikolaos Vlastakis, Raphael Markellos  
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**Chair:** Umut Konus  
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Monika Kadam  
Efficiency and Effectiveness of "Mee Seva": An e-Governance Project in Andhra Pradesh, India  
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Desmond Lo, Giorgio Zanarone, Mrinal Ghosh  
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### TC03 – Grand Ballroom 3
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**Chair:** Tong Lu  
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Debt Repayment Strategy and Consumer Motivation to Repay Debt  
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Incentives in the Online Labor Market: Money and/or Hobby  
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### TC05 – Grand Ballroom 7
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- Journal of Marketing Research – Bob Meyer
- Journal of Consumer Psychology – Amna Kirmani
- International Journal of Research in Marketing – Jacob Goldenberg, Roland Rust
- Management Science – J. Miguel Villas-Boas
- Quantitative Marketing and Economics – Pradeep Chintagunta

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- Restaurant Diners’ Reaction to Incidents of Mad Cow Disease: Stay Home, Eat Less Beef, or Life as Usual? – Sina Ghotbi, Charles Weinberg, Tirtha Dhar, Ting Zhu
- Empirical Analysis of the Interplay Between Base and Extended Warranties in Automobile Retailing: Hyeong-Tak Lee
- The Retail Impact of Electronic Shelf Labels (ESL) – Sourav Ray, Mark Bergen, Daniel Levy, Li Wang
- Consumer Return Rate Evolution over Time – Siham El Khal, Tu Linh Erdem, Christian Schulze, Bernd Skiera

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- Health Information and Consumer Learning in the Bottled Water Market – Lu Huang, Yizao Liu
- Consumer Impatience and Market Structure: The Case of Online Pizza Delivery – Elsa Montaguti, Federico Rossi, Sara Valentini
- The Impact of Chapter 11 Bankruptcy on Consumer Demand – O. Cem Ozturk, Pradeep Chintagunta, Srinaran Venkataraman

### TD12 – Bristol

**Marketing Strategy II**
- **Chair:** Kyung-Ah Byun
- At the Edge of being Good: Is the Relationship between CSP and CFP really U-Shaped? – Michael Langmaack, Sönke Albers
- Ties that Blind: Loose Ties to Counter the Negative Consequences of Relationship Multiplexity – Ashish Sharma, Sundar Bharadwaj, Kapil Tuli
- Sustainability of Brand Loyalty After Product Recalls: Understanding the “Chipping-Off” Effect – Kyung-Ah Byun, Mayukh Dass, Priyush Kumar, Dale Duhan

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- **Chair:** Yufei Zhang
- Social Media Success Factors and Firm Performance – Sarah Germer, Michael Paul
- Development of Multi-Item Scale for Measuring Effectiveness of Promotion Campaigns on Facebook – Neevaj Pandey
- E-Brands: How to Survive and Thrive – Yufei Zhang, Jeongwen Chiang, Chen Lin
- Content Drivers of Virality for YouTube Video Ads – Wayne Zhang, Gerard Tellis

### TD14 – Harborside B

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- Brand Buzz in the Echozone – Roland Rust, Harald van Heerde, Kelly Hewett, William Rand
- The Value of Online Reputation Mechanisms – Brett Hollenbeck
- The Influence of Tie Strength and Communication Environment on what People Share Online – Sungisk Park, Debanjan Mitra
- Quantifying the Impact of WOM Contagion over the Twitter: Is the Influencer-Seeding Strategy Effective? – Makoto Mizuno, Makoto Abe, Naoki Shinbo

### TD15 – Essex AB

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- A Search Cost Model of Consideration Set Formation – Mike Palazzolo, Fred Feinberg
- Positive Psychology and the Consumption of Information Goods – Olivier Toubia, Garud Iyengar, Alain Lemaire, Renée Bunnell

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- When More is More and Less is Less: Post-Merger Returns to Marketing Investment – Chanil Boo, William Putsis
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## 2015 INFORMS Marketing Science Conference

**Friday, June 19th, 2015**

10.30-12.00 (FB)

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<td>Exploring the Interaction between Salesperson Networking Behaviors and Marketing Communications</td>
<td>Capturing Cross-Product Category and Inter-Temporal Decision Patterns from Large Consumer Data</td>
<td>Firm-Level Drivers of Cross-Functional Coopetition: The Effect of Shared Goals and Reward Systems</td>
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<td>Andrew Crecelius, Srinath Gopalakrishna</td>
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<td>When Salespeople Manage Customer Relationships: The Effects of Adverse Selection and Moral Hazard</td>
<td>Elimination-by-Aspects as a Generalization of Nested Logit and Cross-Nested Logit Models</td>
<td>The Impact of Corporate Ownership and Management on Innovation</td>
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<td>Dynamics of Textual Cues as Influence Strategies during B2B Sales Negotiations</td>
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<td>Muriel Mantra</td>
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<td>Informational Shocks and the Effects of Physician Detailing</td>
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<td>Value of Search Aggregators</td>
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2015 INFORMS Marketing Science Conference

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<td>Brand Name Types and Consumer Demand: Evidence from China’s Automobile Market Qi Sun, Fang Wu, Shanjun Li, Rajdeep Grewal</td>
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<td>Understanding Sellers’ Marketing Tools Adoption in Online Marketplace Botao Yang, She Yang, Shantanu Dutta</td>
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<td>Delegating Pricing Power to Buyers: An Experimental Investigation Lucas Stich, Klaus M. Schmidt, Florentin Krämer, Martin Spann</td>
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Company Accounts on Twitter, Facebook, and LinkedIn: Do They Impact Profitability?  
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| FC13 – Harborside A | Digital Marketing V | Chair: Scott Dacko  
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Twitter and Tweeters: A Network Analysis of Tweeter Influence on Virality – The Case of Kolaveri Di  
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| FC14 – Harborside B | Entertainment I | Chair: Gilles Laurent  
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- Why do People Search for Brands? Brand Attitudes and Search Engine Queries
  - Elea Feit, Yi-Hsin Yeh, Jeff Dotson, Jeffrey Oldham
- Does Comparative Advertising Locate Rival Brands more Distant or Closer?
  - Jun Bum Kwon, Avi Goldfarb

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- Feeling Hot, Hot, Hot: Activation of Hot and Cool Mental States through Embodied Sensory Experience
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- Religion, Cultural Distance, and Academic Performance of Marketing Students
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- Influence of Cultural Orientations on Online Purchase Behavior of Automobiles in Pakistan
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- Joint Effects of Sweepstakes Results and Promotion Messages on Consumer Purchase
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  - Xiaohan Wei, Stefan Wuyts
- Quantifying New Product Cannibalization using Online Search Data
  - Daniel Ringel, Iman Ahmad, Bernd Skiera
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- Strategic Design Management for Vertically Differentiated Firms via Design Quantification
  - Minki Kim, Sulah Cho, Inseong Song, Ji-Hyun Lee, Kyoung Hoon Hyun

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- Affective and Cognitive Consequences of Nostalgic Advertising among Consumers
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- The Role Of Emotion In Viewer Choice Of Media: Three Consumer Neuroscience Studies
  - Carl D. Marci
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- Mixed Bundling Strategies for Complementary Products under Uncertain Supply
  - Liwen Chen, Xiaoming Luo
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**Marketing in a Fast Changing Digital Environment**
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**2015 INFORMS Marketing Science Conference**

**Saturday, June 20th, 2015**  **10.30-12.00 (SB)**
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**Saturday, June 20th, 2015**

10.30-12.00 (SB)
### How to Navigate the Technical Sessions

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

- This Conference 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 and Session indices provide cross-reference assistance (pages 90-96).
- The “Master Track Schedule” is on the back cover. This is an overview of the tracks (general topic areas) and where/when they are scheduled.

### Quickest Way to Find Your Own Session

Use the Author Index (page 90-94) — the session code for your presentation will be shown along with the room location. You can also refer to the full session listing for the room location of your session.

### The Session Codes

![TA01](image)

**Room number. 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 Program Schedule.

### Time Blocks

#### Thursday

- **A** — 8:30am - 10:00am
- **B** — 10:30am - 12:00pm
- **C** — 1:30pm - 3:00pm
- **D** — 3:30pm - 5:00pm
- **E** — 5:15pm - 6:00pm

#### Friday

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

#### Saturday

- **A** — 8:30am - 10:00am
- **B** — 10:30am - 12:00pm

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### Technical Sessions

**Thursday, 8:30am - 10:00am**

**TA01**

**01-Third Floor, GB 1**

**Advertising I**

**Contributed Session**

Chair: Anna Dubiel, Assistant Professor, WHU, Burgplatz 2, Vallendar, 56179, Germany, anna.dubiel@whu.edu

1 - Is there a Relationship between Executive’s LinkedIn Connections and Stock Prices?

Faria Badhan, Undergraduate Student, College of Business, University of Central Oklahoma, 100 N. University Drive, Edmond, OK, 73034, United States of America, badhan@uco.edu, Manoshi Samaraweera

LinkedIn is by far considered to be the most popular networking site for professionals. However, whether employee’s LinkedIn connections are related to the financial performance of the company is yet to be substantiated. By monitoring the LinkedIn connections of a sample of top sales executives working at large public companies, this study empirically tests whether the number of LinkedIn connections of top sales executives is related to the profitability (ROA and ROE) of the company. Results will be available to be presented at the conference.

2 - Within and Cross-Channel Effects of Brand Advertising on Word-of-Mouth

Linli Xu, University of Minnesota, 321 19th Ave. S., Suite 3-150, Minneapolis, MN, 55455, United States of America, linlixu@umn.edu, Mitchell Lovett, Renana Peres

Word-of-mouth (WOM) and advertising are two of the most central concepts in marketing. WOM has lately been viewed as more influential sources of information and trustworthy than advertising. However, advertising has been suggested to have an indirect role in stimulating word of mouth - sparking 20% of WOM conversations (Keller and Fay 2012). The central theme of this paper is to examine the relationship between advertising and WOM. In particular, we study the influence of advertising on word-of-mouth within channel (online advertising on online word-of-mouth or TV advertising on offline word-of-mouth) and across channels (e.g., TV advertising on online word-of-mouth). This study adds to the field’s understanding of the role of traditional and digital media in shaping consumers word-of-mouth. We provide evidence from a large scale database of advertising and word-of-mouth that covers 600 brands across 16 categories over 6.5 years. To our knowledge no such large-scale study has been conducted on this relationship. Preliminary evidence suggests significant relationships both within and across-channels. For example, both TV and Internet display advertising appear to be significantly related to offline word-of-mouth with TV having a stronger direct effect than Internet, whereas Internet advertising is stronger online than TV.

3 - The Impact of Institutions on Product Positioning: Evidence from a Historical Study in East and West

Anna Dubiel, Assistant Professor, WHU, Burgplatz 2, Vallendar, 56179, Germany, anna.dubiel@whu.edu, Jaideep Prabhhu, Souriendra Banerjee

Do marketers in distinctly different institutional settings (i.e., socialist vs capitalist; developing versus developed) position products differently? Existing research has largely studied product positioning in a single institutional setting, namely the capitalist, developed economies of the United States or Western Europe. Researchers have mostly ignored how products are positioned in developing economies, limiting the generalizability of marketing theories. We address this gap in the literature by conducting a historical study over a period of 47 years (from 1949-1995) across 20 brands in East Berlin (in erstwhile East Germany, which was under socialist rule from 1949 to 1990), in West Berlin (in erstwhile West Germany, which was capitalist from 1949) and in unified Berlin (in Unified Germany, which was capitalist from 1990 onwards). We use a uniquely compiled database of newspaper advertisements from four leading daily newspapers in East and West Berlin over the 47 years period. Our findings show that in developed, capitalist economies (i.e., in West Berlin) expensive products have a more symbolic (relative to functional) positioning whereas in developing, socialist economies (like East Germany) cheap products have a more symbolic (relative to functional) positioning. These findings have implications for product positioning in emerging markets because emerging markets are typically transitioning from socialist, developing institutions to capitalist, developed institutions.
1 - Linking Acquisition Channel Characteristics to Customer Value and Behavior

Christina Schulze, Frankfurt School of Finance & Management, Sonnenstrasse 9-11, Frankfurt, 61440, Germany, email@christian-schulze.de, Leigh McAllister

Customers differ greatly in their value and behavior, depending on the acquisition channel. As consumers spend more time and money online, new types of channels emerge. As the number of available channels increases, marketing managers seeking to acquire valuable customers must look beyond individual acquisition channels. In our research, we seek to identify the underlying characteristics of customer acquisition channels, and investigate how these characteristics influence the value of acquired customers. In our empirical study, we analyze the value (revenue, profit, and behavior (number of orders)) of more than 60,000 customers of an online retailer, acquired through 13 different channels. Our study contributes to the literature on acquisition channels by (1) broadening insights into the link between acquisition channels and firm value, (2) introducing a new kind of acquisition channel, (3) providing a structure for integrating previous studies of acquisition channels, and (4) resolving conflicting findings in previous literature regarding the effect of promotions on customers’ future orders.

2 - The Effect of Store Brand Competition on Product Quality Decisions

Ryan Choi, UC Irvine, 6219 Adobe Circle, Irvine, CA, 92617, United States of America, jihungc@uci.edu

It has been conventionally known that the introduction of a store brand can be used as a tool for customer segmentation or store profitability. More recent studies show that a retailer who offers a store brand product positions itself close to the national brands in terms of product characteristics (i.e., quality) due to its strategic relationship with the national brand or its own store loyalty. However, previous studies have ignored the retailers’ competitive behaviors. This paper investigates how retailers design store brand products under different market characteristics, such as the intensity of competition, consumer heterogeneity, and the manufacturer’s strategic decisions. Interestingly, I find that symmetric retailers have an incentive to decrease the product quality of their store brands as the competition among them gets more intense, while a monopolistic retailer positions its store brand product relatively close to the national brand.

3 - Channel Alignment: Contrasting B2B and B2C Valuation and Updating Rules

Pamela Morrison, Professor, Australian National University, Research School of Management, Level 1, LF CrispBld 26, #26 Kingsley Rd, Canberra, 2601, Australia, pam.morrison@anu.edu.au, Tina Tan, John Roberts

Urban (2005) proposes that aligning push and pull channel strategies can make a company more responsive to changing customer demands. A pull strategy is directed at addressing consumer demands directly (B2C), while a push strategy utilizes the network of channel intermediaries to influence and reach end consumers (Grewal & Lilien, 2012). While much academic effort has been directed towards B2C marketing, there have been a limited number of studies looking at B2B markets, and still fewer examining alignment between the two. Previous research has investigated the alignment between B2C and B2B markets, an understanding of differences in belief formation and updating between B2C and B2B markets is required. While the literature suggests that channel alignment is necessary, a prerequisite to such alignment is an understanding of the degree to which decision rules differ between the two groups, and whether they respond to incoming information in the same or different ways. This paper investigates these beliefs, effect on evaluation, and differential updating with new information between 356 trade distributors and 781 consumers in the travel market regarding a well-known global airline. Our aim is to shed light on the variation between B2B and B2C beliefs and to test for interaction between B2C and B2B beliefs, an understanding of differences in belief formation and updating between B2C and B2B markets is required.

1 - Understanding the Effect of Last Name on Acquisition Timing in China

Xi Chen, Associate Professor, China University of Political Science and Law, 29 Fuxue Road, Changding District, Beijing, China, chenxi@cups.edu.cn, Guoli Yang

This research examines the effect of last name on acquisition timing for Chinese. Previous research suggests that there is a significant negative correlation between the depth of the first letter of surname in the alphabet and response time to acquisition opportunities in Western culture. This research investigates whether this finding holds in Chinese culture over three studies. We find an opposing conclusion that the earlier in the pinyin alphabet the first letter of surname is, the faster the person responds to acquisition opportunities. We suppose that it lies in the difference between Chinese culture and western. For example, in China where interdependent culture is mainstream, to keep relationship harmonious, students are generally shy and avoid showing off, teachers hence tend to imitate class interaction and assign tasks or duties by calling student names. Therefore, students with last name locating earlier in the register sheet are more likely and more frequently to be assigned duties and challenges, this in the long run acts as a priming or inertia effect and shapes the students with last name earlier more aggressive and active, always keep alert and ready to take challenges, this in turns makes them respond quicker to acquisition opportunities in restricted time period. Additionally, this research also expands the concept of ‘last name’ from depth into the alphabet the first letter of one’s last name (pinyin in Chinese system), to number of strokes of first letter of one’s last name and student ID for Chinese subjects, as the stroke is a feature of Chinese name and the student ID is related to the class registers. Findings suggest that there is no significant correlation between number of strokes and response time, and there is a partial significant positive correlation between student ID and response time, indicating the earlier the ID locates in register sheet, students respond quicker.

2 - Less is More, Until It Isn’t: Feature-Richness in Experiential Purchases

Chadwick Miller, Arizona State University, P.O. Box 874106, Tempe, AZ, United States of America, chadwick.miller@asu.edu, Adriana Samper, Naomi Mandel

Previous research has differentiated between products and experiences in many ways (Van Boven and Gilovich 2003) and even though experiences are generally regarded as a better purchase than their material counterparts, researchers have primarily focused on studying the heuristics consumers use with material purchases. For instance, prior work finds that consumers prefer feature-rich relative to feature-poor products before consumption but that this preference flips after consumption (Thompson, Hamilton, and Rust 2005). However, research has yet to investigate how consumers react to the number of features included in an experiential purchase and how the feature-richness of an experience impacts before and after consumption preferences. In five studies, we investigate the impact of feature-richness on consumers’ preferences for multi-feature experiences and the underlying mechanism. In Study 1 and 2, we demonstrate the basic effect that before consumption, consumers prefer feature-poor rather than feature-rich experiences – but after consumption, they prefer feature-rich rather than feature-poor experiences – the opposite of products. In Study 3, we show the moderating effect of temporal distance on consumers’ preferences, such that consumers match their pre- and post-consumption preferences. In Study 4, we replicate our basic effect in a study where consumers are allowed to choose the feature-richness of their experience; we also show that Locus of Control (LOC) acts as a post-consumption moderator. Finally, in Study 5, we replicate our LOC findings from Study 4, and we show that social signaling moderates post-consumption experiential evaluations.

3 - Deal or No Deal? The Role of Competition in the Effect of Online Deals on Online Review Quality

Jorge Mejia, University of Maryland, 7621 Mowatt Lane, College Park, MD, 20740, United States of America, jmejia@umdsmith.umd.edu, Anand Gopal, Michael Trusov

Consumers today are using online reviews to inform their purchasing decisions about many products and services. Moreover, online deals such as Groupon have become an important part of the marketing mix for merchants. One area that is understudied in the eWOM literature is the competitive environment affects online reviews, which is the objective of this study. We combine data from a leading provider of online reviews for restaurants with a dataset of online deals covering over 95% of the deals in a major metropolitan area in the U.S. We model the weekly arrival and valence of reviews for over 5 years using a hierarchical Bayesian longitudinal model. Consistent with prior work, we find that online deals have a significant negative effect on the valence of the reviews and that this effect is moderated by merchant characteristics, such as restaurant price...
and age. However, we also find that the valence of reviews decreases in the face of increased competition in the form of nearby deals. Surprisingly, we find this effect extends to merchants that do not offer deals. Building on these empirical results, we conduct two lab studies using subjects from Amazon’s MTurk. We confirm a negative main effect of deals on consumer quality perceptions and validate the price category of the restaurant as moderator. In regards to competitive positioning, consumer quality perceptions are significantly affected by increased competition in terms of nearby deals, even if the focal merchant does not engage in a deal offer.

4 - Evaluating the Link between Type of Segmentation Base and Actual Consumer Brand Choice Behavior

Stefan Scheufelein, RWTH Aachen University, Kackertstr. 7, Aachen, 52072, Germany, scheufelein@time.rwth-aachen.de, Jan Kemper, Malie Brettel

Understanding which brands consumers choose to buy is extremely important for retail companies. Furthermore, understanding this behavior for different customer segments is crucial to be able to serve a varied customer base. Consumer segmentation is the fundamental tool for this, but so far segmentation methods have had mixed results in predicting consumer brand choice behavior. Choosing the appropriate segmentation base is a key prerequisite for an insightful segmentation. Following several calls for evaluation of segmentation bases towards predictive validity, we examine which base produces segments that have a more differentiated brand choice behavior and thus result in higher predictive validity. We draw from social psychology and apply the Value-Attitude Behavior Hierarchy to segmentation research, hypothesizing that segmentation based on attitudes will produce more differentiated segment behavior than segmentation based on personal values. To do so, we work on a dataset of over 35 million customer transactions from a leading European online apparel retailer of which so far approximately 14,500 real transactions for 3,219 customers were selected to test our hypotheses. Using Exploratory and Confirmatory Factor Analysis, two-step Cluster Analysis with Ward’s method and k-means clustering we calculate three separate segmentations based on personal values, fashion attitudes and online shopping attitudes and link them to real brand choice behavior using ANOVA and Duncan’s test. We contribute by advancing our knowledge on the connection between segmentation bases and predictive validity towards consumer brand choice behavior using data directly obtained from real consumer behavior.

3 - Is Consumer Empowerment Always Better? An Investigation of High- and Low- Status Technology Brands

Martin Meissner, Associate Professor, University of Southern Denmark, Niels Bohs Vej 9-10, Esbjerg, Denmark, meissner@sam.sdu.dk, Michelle Haurand, Christian Stummer

Labeling product innovations as being designed and selected by consumers has been shown to have positive effects on non-participating consumers’ self-stated behavioral intentions (to prefer, recommend and buy these products). Recent findings, however, raise the question to which product categories these benefits are generalizable. Negative outcomes of consumer-design might especially hold for products which are bought in order to signal status. Previous research has demonstrated that for such products with high status relevance, like expensive fashion, consumer-design backfires in terms of decreasing consumers’ self-stated behavioral intentions. In our empirical study, we investigate two popular technology brands, Nokia and Apple, which have a different potential for signaling status. We test the benefits of labeling their products as consumer-designed for three different empowerment strategies (empowerment to select, empowerment to create and full empowerment). The empirical results show that, firstly, labeling products as selected by users has a total positive effect on consumers’ self-stated behavioral intentions for Nokia, but not for Apple. The empowerment to create and full empowerment strategies did neither have positive nor negative total effects for either brand. Secondly, the results of a mediation analysis reveal that the effect on behavioral intention is mediated by perceived innovation ability. Thirdly, we find a competitive mediation effect for all investigated empowerment strategies, i.e. a negative direct effect of consumer empowerment on behavioral intentions. These first empirical results point to the possible existence of a second mediator which should be pursued in future research.

4 - Antecedents and Consequences of Customer Involvement across Different New Product Development Phases

Bradley Allen, PhD Student, University of Texas at San Antonio, 13710 York Woods, San Antonio, TX, 78249, United States of America, bradley.allen@utsa.edu, Suman Basu Roy, Deepa Chandrasekaran

A growing body of literature indicates that the process of jointly creating new products with customers, often coined as crowdsourcing, co-creation, or open innovation, can be a powerful strategic tool for marketers. While the extant research focuses the benefits of crowdsourcing, little is known about how effective crowdsourcing is across the various stages of the new product development (NPD) process. In this paper, the authors address two important, yet under-studied issues: One, firms may, and do choose whether or not to involve customers in one or more phases of NPD. Second, when in the NPD process is it most valuable to involve customers? We test these questions empirically using data from a popular site selling user-generated products, where we observe both the different NPD phases in which the firm decided to crowdsource as well as various product outcomes. We augment the dataset with product ratings obtained from consumer surveys created by the authors. Results from the empirical analysis isolate distinct product concept-related factors that influence the decision to crowdsource in the different NPD phases. The results also demonstrate the relative value of such crowd sourcing phases on several indicators of product success in the actual marketplace.

**Contributed Session**

**Third Floor, GB 4**

**New Product I**

Chair: Martin Meissner, Associate Professor, University of Southern Denmark, Niels Bohs Vej 9-10, Esbjerg, Denmark, meissner@sam.sdu.dk

1 - The Role of Information Presentation in Monetization of Intellectual Property

Joseph Derby, Assistant Professor, Marketing, James Madison University, College of Business, MSC 0205, Harrisonburg, VA, 22807, United States of America, derbjym@jmu.edu, Maysson Dass, Vi Quan, Josh Lerner

With the increasing importance of Intellectual Property (IP) as one of the fundamental drivers of overall success of a firm, it is vital to understand how IP are valued and sold in the market. Given that various marketing aspects of the IP transaction process may affect their final price, in this paper we predominantly focus on the effects of information presentation during the IP monetization process and ask two research questions: (1) does better information presentation increase IP value? And (2) does better information presentation moderate the effects of value drivers for IP? To answer these questions, we considered transaction data of 1,743 intellectual properties sold by an IP auction house over a period of three years in a natural field experiment setup. Grounded in auction and behavior decision theories, our analysis explores the impact of several factors on IP auction outcomes across a variety of industries. Prior academic research on the role and importance of IP has primarily focused on competition, strategy, legal and accounting literatures, with research mainly in the areas of managing and valuing IP and their importance to business strategy. Our study is an initial attempt to understand the role of marketing, in terms of information presentation, on IP value.

2 - Optimal Introductory Product Design and Upgrade Strategies

Mahmood Pedram, Assistant Professor of Marketing, Grenoble School of Management, 12 rue Pierre Semard, Grenoble, 38000, France, mpedram@aud.edu, Subramanian Balachander

In this analysis, we show that a seller may strategically withhold product features from earlier generations of the product in order to induce subsequent replacement phases, thus implementing sequentially increasing quality as a planned obsolescence strategy. A planned obsolescence strategy may also offer indirect product discrimination when there are low-value buyers in a secondary market. Interestingly, the planned obsolescence strategy may be superior to direct product discrimination with secondary market buyers. Finally, we show how sequentially increasing quality may result from both planned obsolescence and direct product discrimination.

**Contributed Session**

**Third Floor, GB 7**

**Working Paper I**

Chair: Neha Purushotham, Associate Professor, University of South Africa, Cnr Janadel and Alexandra Avenues, Midrand, Johannesburg, 1686, South Africa, purus@unisa.ac.za

1 - Sustainability Marketing Curriculum: Developing Countries Perspective

Neha Purushotham, Associate Professor, University of South Africa, Cnr Janadel and Alexandra Avenues, Midrand, Johannesburg, 1686, South Africa, purus@unisa.ac.za

Business schools are attempting to integrate sustainability in their curriculum. In this paper, the sustainable marketing curriculum is examined from the perspective of developing country context. This paper is an initial concept paper which is based on the review of related literature. It explores various attempts by marketing educators to incorporate sustainability issues in marketing curriculum. It also establishes the importance of integrating contextual sustainability concerns in the curriculum to make it relevant. It discusses the ways in which current frameworks of sustainability marketing curriculum can be adapted in the context of developing countries.
Retailers often solicit assistance from manufacturers in the form of information report about market conditions or advice about retail decisions, or even by requesting manufacturers to make decisions on their behalf. Often such assistance is not governed by formal contracts, causing concerns about manufacturer opportunism. We investigate whether and how the form of manufacturer assistance information sharing, advice provision or delegation affects retailer trust and coordination of channel decisions. Standard theory predicts equivalent outcomes complete lack of trust and coordination under all three arrangements. However, laboratory experiments, we find that some arrangements lead to higher trust and coordination than others. We propose that the three forms of manufacturer assistance produce different outcomes due to the differences in manufacturer-provisioned domain (information vs. action domain) and delegation sequence (whether retailer or manufacturer decides ret.). We also find that, despite the presence of manufacturer opportunism, retailers that are trusting make higher profits than retailers that are not.
effects of surprise and exclusivity on customer delight differently. Specifically, the effect of surprise (exclusivity) is strengthened (weakened) by unpredictability. Moreover, customer delight is found to have an enduring positive and stronger effect than customer satisfaction and post-program (6 months after the completion of the program) account balance increment. This paper contributes to the customer delight and loyalty literature by making a distinction between the effects of customer delight on customer loyalty in a B2B context with longer-term behavioral loyalty data collected from a real world loyalty program. Our research also reconciles the inconsistent findings regarding the determining factors of customer delight by identifying its underlying process with boundary conditions.

1 - Native Advertising: Evidence from Mobile Ad Experiments
Harikesh Nair, Stanford University, Stanford, CA, United States of America, harikesh.nair@stanford.edu, Navdeep Sahni

Native advertising is a strategy in which advertising is merged with the media content. Advancements in new technology provide the flexibility of making the advertising “native” in a variety of formats including mobile, search, display as well as other content. This ability has led to questions about how consumers respond to the distinction between ads and content in the short and the long term, leading to issues about whether consumers are hurt from “nativitv” and concerns about separation of sponsored versus un-sponsored content in media. We address these questions by conducting a large-scale randomized control trial implemented on a restaurant search and review platform's mobile app. The experiment design allows us to identify consumers' response to nativity separately from other brand, content, prominence and position related effects and to explore whether native ad exposure affects subsequent search and choices. We are also able to assess the heterogeneity in these effects across consumers and to examine the value of “native” strategies from both the search platform’s and the advertisers’ perspectives.

2 - Advertising Tailoring: The Persuasive Effect of Ad Content
Navdeep Sahni, Assistant Professor, Stanford University, 655 Knight Way, Stanford, CA, United States of America, navdeep.sahni@stanford.edu, Christian Wheeler, Pradeep Chintagunta

A significant portion of the advertising content is not informative about the advertised product. We study the impact of such non-informative components of advertising on consumer decisions. Using large-scale randomized field experiments with email advertising we find that tailoring the ad message, matching its peripheral content with the characteristics of the targeted population, can significantly benefit the advertiser. Analysis shows that the role of such content is beyond just drawing attention towards the ad, it can enhance the processing of the message which has implications for the items. The analysis also shows that advertisers can incorporate the information they have about their target population to improve the effectiveness of advertising.

3 - Television Advertising Avoidance
Kenneth C. Willbur, University of California-San Diego, Rady School of Management, La Jolla, CA, 92093, United States of America, kennethwilbur@gmail.com

Television networks make money by selling eyeballs to advertisers. However, audiences choose whether to watch commercials. If advertisement avoidance varies across ads, then networks’ optimal pricing and selection of commercials depend on viewers’ reactions. This paper investigates the extent and drivers of television advertising avoidance in a novel, large-scale dataset. We propose a new measure of commercial avoidance called the ‘Passive/Active Zap’ (PAZ), which occurs when a set-top box has been tuned continuously to one channel for at least five minutes and then switches during a commercial. 25% of all eligible commercial breaks are interrupted by a PAZ. A proportional hazards model estimates how advertising avoidance responds to ad characteristics. Among many findings, the results show that movie ads are avoided less than average while auto insurance, website and women's clothing retailer ads are avoided more often. Advertisements that air after 10 P.M. are nearly twice as likely to be avoided as those that air before 9 P.M.

INFORMS Marketing Science Conference – 2015

1 - Developmental Paths of Retail Formats in Japan
Tomokazu Kubo, Associate Professor, Chuo University, Japan, tomokazu@tamaacc.chuo-u.ac.jp

The purpose of this research is to examine the nature of retail formats innovation in Japan. Past literature has raised two issues: (1) positions which new retail formats take at their entry and (2) developmental paths which retail formats take over time. Wheel of retailing theory, which is a classical theory of retail formats innovation, suggested that innovators entered as a discounter and they increased their service quality and price so that the movement induced the entry of the other new discounter (McNair, 1958).

2 - Identifying Cross Category Influences through Store Category Loyalty
Manish Gangwar, Indian School of Business, Gachibowli, Hyderabad, India, manish_gangwar@isb.edu, Prakash Sattayageswaran

Existent literature largely views store loyalty as being a consumer trait towards a particular store for her overall grocery shopping needs. This perspective ignores the possibility of consumer being loyal to different stores for different categories. We take a more nuanced approach to understand the overall store loyalty; that is store loyalty at the category level to identify drivers of store choice. We leverage a recently available IRI Marketing Science dataset that has both panel level and store level information across 31 categories from Pittsfield area to answer two questions – (i) whether store category level loyalty exists and does it explain store choice decisions better and (ii) by which categories drive the store choice decision? Past research has shown that apart from marketing variables such as price, promotions, features and assortment, consumer past purchase behavior (habit persistence and inertia) strongly influence the brand choice decisions. We use the consumer past purchase behavior to resolve one of the challenges, curse of dimensionality, in studying the cross-category influence. We found asymmetric effect of category level store loyalty on store category choices. In nutshell, this paper not only asserts the existence of store loyalty as a category level consumer trait but also provides a very parsimonious way to estimate the cross-category influence.

3 - Understanding the Impact of Consumer-Retailer Relationship and Information States for Store Display
Yoonju Han, Indiana University, 1309 E. 10th Street, Hodge Hall 2100, Bloomington, IN, 47405, United States of America, yjhan@indiana.edu, Shibo Li, Sandeep R. Chandukula

Past research on consumer in-store shopping behavior always assumes that consumers have full information about marketing stimuli in the store (i.e., seeing all displays), which may not be valid in many retail settings. In this research, we focus on in-store displays and propose that consumers' category purchase incidence depends on the consumer-retailer relationship and the consumer's information states (e.g., seeing displays and paying attention, seeing without paying attention, and not seeing displays) simultaneously. We build a hidden Markov model to capture the relationship states and extend it to account for the existence of different information states in a hierarchical Bayesian framework. We apply the model to account for six types of displays in different locations within the store (e.g., store front, store rear and secondary locations). We model the dynamic changes to the relationship states to be impacted by store-level marketing activities and consumers' past shopping behavior and location of the displays. Our proposed framework accounts for endogeneity and individual heterogeneity and is estimated using a scanner panel data from a large U.S. grocery chain. Results demonstrate the existence of three relationship states (weak, medium, and strong relationship) and show that marketing mix variables (i.e., prices and displays) in different relationship and information states have differential impact on consumers' purchase incidence behavior. Managerial implications about managing the dynamics of the consumer-retailer relationship, information states and optimization of various displays from the retailer's perspective are explored.

4 - The Effect of Information on Pre-Purchase Risk Reduction Tools on Perceptions and Choices in Competition
Lutz Hildebrandt, Professor, Humboldt-Universität zu Berlin, Institut für Marketing, Spandauer Str. 1, Berlin, D-10178, Germany, lutz.hildebrandt@HU-Berlin.de, Amir Reiman

This study analyzes the effect of comparative information on intensity of two effective risk reduction marketing tools, money-back guarantees and pricing strategies on consumers’ perceptions and choice processes. We depart from previous studies by considering the effect of asymmetric return (price) policies on consumers’ choices. Based on experimental surveys, we show that information that compares risk reduction tools affects both consumer perceptions and their choice processes. Exposure to comparative retail return information increased the perceptual relationship between risk and its consequences. Our findings suggest that the high-end incumbent is better off not responding, while low-end producers need to reduce their prices.
1 - Model-Based Project Discovery

Bruno Jacobs, Erasmus School of Economics, P.O. Box 1738, Rotterdam, 3000 DR, Netherlands, jacobs@ese.eur.nl, Bas Donkers, Dennis Fok

Product purchases by customers are often motivated by an underlying theme or project. For example, the customer may be buying products needed for a bathroom renovation. We propose a model-based approach that only uses observed purchases to identify the latent projects that exist in a product assortment. The model also allows one to infer the project a specific customer is involved in. Furthermore, the model allows a temporal dependence in the projects of individual customers. The customer will at a certain point in time be done with the current project and may move on to another one. Knowledge of the projects that together comprise a project and the currently active project(s) of individual customers is very valuable to retailers. For example, this allows for a logical grouping of products in the store or customized project-specific product promotions. We apply our method to a unique data set from a Fortune 500 specialty retailer.

2 - Distributed Markov Chain Monte Carlo for Hierarchical Models

Federico (Rico) Bumbaca, PhD Student, UC Irvine, SBI 3300, The Paul Merage School of Business, Irvine, CA, 92697, United States of America, fbumbaca@uci.edu, Sanjog Misra, Peter Rossi

This presentation proposes a distributed Markov Chain Monte Carlo (MCMC) method for estimating hierarchical models when the number of units can be very large (N ≥ 100,000; 000). Existing parallel MCMC methods asymptotically approach the single machine performance as N becomes very large. However, when applied to data having a nested structure, they combine draws for the hyperparameters even though they may not be of primary interest. The cost of this approach is greater sensitivity to finite sample bias and heavier interprocess communication, resulting in performance degradation with the number of machines and subsampling, and decreasing returns to scale with the number of machines. This presentation describes an MCMC method that takes advantage of the data's hierarchical structure, resulting in an algorithm that is more robust to finite sample bias, has lighter communication requirements, and thus achieves stable single machine performance (even at relatively small values of N) with increasing machines and subsampling, while maintaining linear scalability in execution time. That is, an S-fold increase in the number of machines results in an equal, or greater, decrease in execution time. The algorithm runs on a single multicore workstation without the need for a complex parallel computing environment with a distributed file system. In the first stage, the algorithm estimates each machine's posterior predictive density. In the second stage, it combines the posterior densities and draws from the combined posterior with an independent Metropolis-Hastings sampler. A mixed logit model is estimated, with normal and Dirichlet process priors, and compared to existing methods using simulated and real data. Subsampling is used to demonstrate the performance and execution-time tradeoff.

3 - Nonparametric Bayesian Dynamic Modeling: An Application to Facial Emotions in Digital Video

Norris Bruce, Associate Professor, University of Texas at Dallas, 800 West Campbell Road, Richardson, TX, United States of America, norris.bruce@utdallas.edu

Bayesian methods in marketing have largely focused on parametric models, where researchers assume model components arise from known parametric forms. However, the growth of modern, more robust nonparametric methods has brought with it an unavoidable criticism: that parametric Bayesian inference requires arbitrary distributional assumptions, which could lead to poor inference. The purpose of this study thus is to describe how one may apply Bayesian nonparametric methods to a widely used model in marketing, the linear dynamic model (LDM). The study offers a nonparametric extension to the LDM in which the pdf of model errors are unknown, and modeled as Dirichlet process mixtures, a flexible Bayesian non-parametric model used here to perform density estimation. The study describes an efficient algorithm for estimation, the Rao- Blackwellized particle filter (RBPF), a Sequential Monte Carlo method: compares the proposed model to alternatives, including gaussian mixture LDMs; and apply it to study the effects of multiple facial emotions and low-level image features on visual attention.

1 - The Effect of Marketer's Value at Risk (VAR) on Customer's Product Choice and Welfare

Aharon Hibshoosh, Professor, San Jose State University & Lincoln University CA, Department of Marketing-DS COB, 1 Washington Square, San Jose, CA, 95192, United States of America, ahibshoosh@gmail.com, Mehmet Benturk

In many product categories, the customer's choice is restrained by a budget depending on credit extension and product's resale value. Specifically, the marketer or an associate lender extending the credit requires that the product sold, though possibly depleted, depreciated or reduced in value through principle's amortization would serve as collateral. To reduce its risk, the marketer/ lender often limits the share of the purchase price or sales amount it is ready to finance against a down payment, and has the right to seize the product if the customer fails to make loan's installment payments. Both marketer and customer considerations of credit usage and the risk of product purchasing depends on resale marketability and value and the ability to make the down payments. A customer may have an inclination to stop payments and product possession if its resale value drops too sharply. When the marketer limits its lending share and determines it by a prescribed maximal probability for insolvency, this common practice is referred to as marketing based on Value at Risk (VAR). The practice is prevalent in B2B marketing as is evident by the common contracts between manufacturers and dealers in the durable goods industries. Consumers often face this context when purchasing durable goods such as houses, cars, and financial securities. Following Becker's household production approach and Markowitz's Mean Variance approach we assume a customer whose utility depends on the values derived from the purchase of several products subject to the VAR's practice. We model, analyze and simulate, parametrically and non-parametrically, how various VAR parameters affect the estimation of consumer credit and in turn product choice and consumer welfare under various plans.

2 - Market-Based Assets and Financial Analyst Recommendation

Hanich Sardashit, PhD Student, Michigan State University, 612 Bogue Street, Rm. N456, East Lansing, MI, 48824, United States of America, sardashit@broad.msu.edu, Roger Calantone

This study focuses on financial implications of customer evaluative measures of brand attributes (brand asset metrics), electronic word of mouth and customer satisfaction. We propose four models to empirically answer two research questions. First, we question whether brand asset metrics, online word of mouth, and/or customer satisfaction influence security analyst recommendation, coverage and stock price. Second, we question whether brand asset metrics and electronic word of mouth can influence customer satisfaction (ACS). Data was obtained on 185 publicly traded companies in multiple industries using multiple sources from 2008Q1 to 2010Q2. To account for endogeneity, multiple explanations for a better performing stock, we performed 3SLS analysis. To further investigate existence of non-linear relationships, we used response surface regression (RSREG). We empirically show the relevance of brand value asset metrics to financial analyst recommendations. Our results demonstrate the importance of change in consumer preferences reflected in brand assets variables, customer satisfaction, and electronic word of mouth and impact of such changes on financial performance of firms. Finally, our results emphasize on importance of consumers' online conversations and impact of electronic word of mouth on financial outcomes. For example, the non-linear relationship of electronic word of mouth and financial outcome is very interesting; moreover, the interaction between variables measuring consumers' online conversations and brand image, loyalty and other attributes calls for further research on the topic.

3 - Myopic Marketing and Innovation Management: The Relevance of Financial Leverage

Daniel Willmann, RWTH Aachen University, Kackertstrasse 7, Aachen, 52072, Germany, willmann@time.rwth-aachen.de, Malte Brettel

Faced with earnings pressure from stakeholders, a substantial fraction of managers indicate a high willingness to manage short-term earnings at the expense of long-term marketing and research and development (R&D) investments. As the adverse long-term financial consequences of these myopic practices tend to outweigh their short-term benefits, it remains an academic challenge to identify circumstances under which managers are tempted and have the ability to act myopically. Although prior studies have examined myopic management around distinct corporate financing events, no study has – to the best of our knowledge – so far analyzed the interactions between myopia and financial leverage with a particular focus on marketing and R&D. Studying these interactions is relevant as the indebtedness of entities and socio-economic consequences have recently rekindled the academic debate on the bright and dark sides of financial leverage. Based on 61,805 US firm-years in the period from

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Promotional bundling, the practice of granting a discount to consumers who purchase a specific combination of units, is one of the most prevalent promotional tactics proven to be effective in boosting sales volumes. The current study compares two common bundling formats: A) buy two items, get a discount on both items; and B) buy two items, get a discount on the cheaper item; and investigates the effect of promotion framing on consumer spending. Intuitively, for any given discount, promotion A offers greater savings, and should therefore induce equal or higher willingness to spend. Yet, we demonstrate that holding the spending on the first item fixed, promotion A actually reduces the amount people are willing to spend on the second item. We offer a ‘marginal return on investment’ account to explain the observed effect. We propose that in the context of promotion bundling, consumers’ decision on how much to spend on the second item is driven by the desire to maximize the marginal savings on each dollar spent, rather than the overall savings from promotion. Because promotion A brings a dramatic increase in savings as the spending on the second item goes from $0 to $1, people are motivated to spend relatively little on the second item to maintain the high marginal return on investment. In contrast, because promotion B has a constant marginal return on investment, shoppers are no longer motivated to keep their spending to a minimum, and, as a result, spend more. Four experiments using different discount magnitudes, product prices, and response scales, provide evidence in support of the main effect and the proposed ‘marginal return on investment’ mechanism.

3 - Exploring the Relationship between Social Media and Loyalty Reward Programs

Qiang (Steven) Lu, Senior Lecturer, The University of Sydney, Cnr Cordrington and Rose Streets, Sydney, Australia, ly.qing@sydney.edu.au, Robyn Miller, Evelyn Chronis

The impact of social media on consumer purchase behaviour is receiving increasing attention in the marketing community. In particular, the impact of social media on traditional Customer Relationship Management (CRM) processes is receiving strong increasing interest amongst practitioners and academics. In this study we focus on the impact of social media on the purchase expenditures of members of a company’s loyalty rewards program. Our research aims to contribute to a better understanding of the emerging literature on Social Customer Relationship Management (SCRM). The study presents a conceptual framework for analysing the impact of social media posts on the sales of an Australian organic food retailer. Our framework also explores the moderating role of loyalty program membership on the relationship between social media posts and sales. Our results suggest that the dissemination of information communicating the motivations and barriers towards organic food consumption via social media posts positively impacts organic food sales. We find that this impact is greater for the purchase expenditures of long-term members of the company’s loyalty rewards program.

4 - Social Media Framework for Businesses: Exploratory Study for Top US Retailers

Nawel Amrouche, Associate Professor of Marketing, Long Island University, 1 University Plaza H 700, Brooklyn, NY, 11201, United States of America, nawael.amrouche@liu.edu

This paper reviews the importance of social media for businesses and the methods used to assess their effectiveness. In addition, the paper offers a review of scholarly papers and practitioner reports investigating the challenges of social media, their use across industries, their objectives and more specifically their impact on sales. The paper suggests also a structural framework to facilitate future social media analyses by classifying social media business objectives and the factors affecting the framework. Finally, as an exploratory study, the paper attempts to investigate the relationship of social media metrics and sales of top retailers in US and how that relationship depends on retailers’ product offerings. The empirical study examines specifically the social media usage behavior of top retailers and the role of engagement in social media.
2 - How do Review Environment Dynamics Influence Product Reviews?
Albert Valenti, PhD Student, Boston University.
595 Commonwealth Ave., Boston, MA, 02215
United States of America, alberti@bu.edu, Georgios Zervas
Consumer research on websites to inform consumers generally understand that two products with the same rating may vary in level of quality. Is this intuition correct? Why does this happen? Do reviews on certain type of products deserve a higher level of trust? This research presents an empirical investigation of the role review environment plays on influencing product reviews. Building on previous literature, we show that three main dynamic trends create noise around the true evaluation of product quality: a sequential trend, an age trend, and a macro environmental trend. We argue that these dynamic trends interact with product characteristics, producing a heterogeneous pattern on the ratings received by products. We focus on the restaurant market, an industry where quality perceptions are complex and determined by multiple factors. Also, quality evolution of restaurants can have large variations overtime and across competitors. We use online reviews and ratings from Yelp.com, the review website of reference for restaurants, on all the establishments in Boston from 2004 to 2012. This setting allows for examining the interaction between the evolution of the dynamic trends and restaurant characteristics (chain affiliation, price range, location, type of cuisine, etc.).

3 - Prediction and Analysis of Digital Customer Purchase Propensity
Zainab Jamal, Research Scientist, HP, 1140 Enterprise Way, Palo Alto, CA, 94089, United States of America, zainab.jamal@hp.com
Enterprises have developed system data that tracks their customers’ visits to digital store front pages and touch points. The data typically tracks the page visited, the date and time of the page visit, the pages that comprise a session and other attributes about the customer. This data is a big spanning millions of pages across millions of visitors, is generally sparse with low purchase conversion rates and messy. A critical need for the enterprise is to understand its customer base and improve the decision making process (ROI on marketing and communications investments worth millions of dollars). The ability to mine in-house clickstream data for actionable insights is an important piece of any application that addresses this need. This model tackles this need and develops an analytical solution to mine visitor clickstream data to predict visitor purchase propensity. We use a discrete choice model along with a page classification algorithm to predict likelihood of purchaseantom products. The page classification algorithm allows us to identify and quantify the effect of key attributes like types of pages visited, number of pages viewed and total time spent during a visit session. The model and the page classification algorithm perform well. The page classification algorithm has True Positive Rate (TPR) on average of about 90% and precision rate of 95%. The model had a TPR of 91% and a precision rate of 26%. We also find interesting insights on factors that impact purchase propensity across segments and product categories.

4 - Online Consumers’ Channel Choice between Online and Offline Youngsoo Kim, Singapore Management University, 50 Stamford Road, Singapore, Singapore, yskim@smu.edu.sg
We aim to understand the online consumer’s channel choice behavior between online and offline. In this study, we empirically examine how the offline store’s entrance affects the online consumer’s purchase decision on diverse behavior variables: (1) the number of transactions, (2) product uncertainty level, and (3) product price. We explore this question using individual-level transaction data collected from one of the premier online shopping malls in Korea. Our analyses show that during the entrance of a local offline competitor’s store, i.e., (1) the increase of transactions, and (2) the decrease of product uncertainty level, and (3) the decrease of product price. We discuss the results of a conclusion that involves the impact of offline competitor’s entrance on the online customer’s behavior and customer’s purchasing power. Our results also indicate that the online shopping mall (OM) is a potential competitor for the local offline competitor, and the OM’s store entrance time has a significant impact on the local offline competitor’s market share. We also discuss the implications of our findings on the OM’s strategy to increase its market share. Finally, we propose a theoretical framework that organizes product offerings and consumer marketing strategies to predict the impact of offline competitor’s entrance on the online consumer’s behavior.

5 - Capitalizing Advertising Spending Shubha Srihinas, Professor and Dean’s Research Fellow, Boston University, 595 Commonwealth Avenue, Boston, MA, 02215, Department of Marketing, 112 TAMU, College Station, 77845-4112, United States of America, sshirin@bu.edu, Edward Riedl, Emanuel Bayer, Bernd Skiera
Despite growing empirical evidence on future benefits related to advertising, current financial reporting rules require most advertising spending to be expensed rather than capitalized as an investment. As a result, the mandated expensing treatment creates a potential mismatch between the economics of advertising and its representation in financial reporting as having only short-term impact. This
paper revisits this debate by exploring the conditions under which advertising spending can be considered for capitalization. We are motivated by recent advances in advertising response modeling and data availability, both of which strengthen the linkages between various types of advertising spending and current/future customer behavior, and accordingly reduce the uncertainty that is the basis for the current full expensing treatment. We identify an ex ante set of conditions for evaluating any advertising spending for consideration for potential capitalization: attribution, conversion, and long-term impact. As exploratory data analysis using available financial data, we show that pre-forma capitalization of advertising spending lowers the reported volatility of performance ratios relative to the current expensing treatment, and that the equity market has increased its (on average) valuation weighting of advertising spending. We conclude with implications for three stakeholder groups—firms, investors, and regulators—emphasizing the need for awareness of the heterogeneity in advertising spending, the implications of this heterogeneity on internal and external decision-making, and as an appeal to revisit the current debate on expensing versus capitalizing advertising spending.

**TA16**

16: Fourth Floor, Essex C

**Working Paper II**

Contribution Session

Chair: Ayman Farahat, Yahoo, 701 1st Ave, Sunnyvale, United States of America, ayman.farahat@yahoo.com

1 - **Selection, Order, and Pricing of Linear Online Video Ads**

Wreetabrat Kar, Econometric Data Scientist, Adobe Systems, 140 Britannia Lane, Pittsford, NY, 14534, United States of America, wkar@adobe.com, Paulo Albuquerque, Varunathan Swaminathan

This paper studies the selection, ordering and pricing of advertisements in video sessions shown in online video platforms and proposes an algorithm that uses a collective measure of price and quality for each advertisement to optimize these decisions. The algorithm is based on cascade models and a dynamic programming method that assigns ads to a particular slot in an online linear video. The approach accounts for the negative externality created by lower quality ads placed in a video thereby leading a viewer to exit and prevents the platform from showing the subsequent ads scheduled in that video session to the viewer. Our proposed algorithm is scalable and suited for real time applications. Accounting for externalities generated by the ads, a pricing scheme based on VCG auction is implemented which ensures truthful price quotes by the advertisers. A large log of viewer activity from a leading video advertising company is used to empirically test the algorithm. A series of simulations show that our algorithm maximizes publisher revenue and increases audience retention.

**Thursday, 10:30am - 12:00pm**

**TB01**

01-Third Floor, GB 1

**Advertising II**

Contribution Session

Chair: Prasad Naik, Professor, University of California Davis, One Shields Avenue, Davis, CA, 95616, United States of America, panaik007@gmail.com

1 - **Transparent or Disguised: The Impact of Sponsored Content Advertising on Two-Sided Media Platforms**

Prabhrendra Chatterjee, Sabanci University, Sabanci University, Orta Mah. Univesite, Istanbul, Ch, 34956, Turkey, prabhrendra@sabanciuniv.edu, Bobby Zhou

Sponsored content advertising is a new form of advertising which has recently gained popularity across many media platforms. With this new form of advertising, media platforms allow marketers to integrate promotional messages with the platforms’ editorial content, often by simply disguising such messages in the form of editorial content. While marketers seem to favor sponsored content advertising that resembles organic content, such promotional technique may cause consumer aversion. In this paper, we employ a game theoretic model to understand the optimal transparency decisions of the media platforms – should a media platform explicitly clarify that the published content is a promotional message or should it allow a promotional message to pose as an editorial content? In a two platform competition setup, we find that the platforms would pursue maximal differentiation strategies in terms of their optimal transparency decision. We also find that when a platform increases its transparency level, the rival platform charges a higher fee to the advertisers even though raising transparency leads to higher readership in the first platform. The key tradeoff lies between more consumers (of sponsored content) and less transparency (higher advertising fee) in this context. Raising transparency level would also affect the prices for the consumers, although it depends on platform’s intrinsic quality. When a platform with low quality raises the media transparency level, then the platform with high quality would charge a lower price to the consumers. However, when the high quality platform raises its transparency level, the low quality platform would charge a higher price to the consumers. This puzzle result can be attributed to the cross-side network effect in the two-sided market. We also find that the effect of one’s own transparency level on subscription prices is asymmetric for the two platforms.

2 - **Assisted Self-persuasion: Choice, Complementary Adjustment, and the Effects of Advertising**

Matthew Nagle, Associate Professor, The City College of New York, 160 Convent Avenue, NAC 4/121, New York, NY, 10031, United States of America, mngaler@ccny.cuny.edu

The paper presents a theory of imperfect competition a la Hotelling in which consumers choose products and also whether and how much to adjust to (i.e., improve their attitude toward) what they choose. Advertising is modeled as reducing the cost of adjustment. When consumer tastes are distributed symmetrically with respect to products and the marginal costs of adjustment are similarly symmetric, advertising raises (lowers) prices when the marginal adjustment costs faced by successive consumers grow lower (higher) as one moves from the position of the indifferent consumer toward positions of extreme preference. Analogous price effects result from advertising-driven translations of the adjustment cost structure that result in relative decrease (increase) in marginal adjustment costs toward the extremes. Privately-chosen advertising levels are excessive when advertising price effect is positive and large relative to its 'efficiency' effect of reducing accumulated marginal adjustment costs across the mass of consumers, or when adjustment cost reductions for the just-indifferent consumer are large compared to the mass of consumers. While price increases are a necessary condition for advertising to increase joint profits, firms may still advertise when prices decrease, thus prisoners’ dilemma equilibria are possible.

**TB02**

02-Third Floor, GB 2

**Channel II**

Contribution Session

Chair: Dinah Cohen-Vernik, Rice University, 6400 Main St, Houston, TX, 77005, United States of America, vernik@rice.edu

1 - **Channel Contracts with Information Asymmetry, Quality Based Competition and Heterogeneous Preferences**

Shameek Sinha, Assistant Professor, IE Business School, Calle Maria de Molina 12, 5th floor, Madrid, 28006, Spain, shameek.sinha@ie.edu

Retail markets are characterized by asymmetric power. Information asymmetry and competitive pressure within and across channels, quality differentiation between manufacturers and consumer preference heterogeneity often results in complicated bargaining dynamics during contract negotiations between upstream and downstream channel members. To devise optimal contracts for channel coordination is challenging under this scenario. In this research, we provide a theoretical approach to model these efficient contract conditions incorporating bargaining among channel members who have asymmetric power structures. While quality differentiation and preference heterogeneity are incorporated using a Hotelling structure, we take into consideration competition both at the retail and manufacturer level (dominant and weak) and also across the upstream and downstream channel members. Information asymmetry is modeled using a multi-dimensional principal-agent framework. We show that, for the dominant retailer, the dominant manufacturer’s strategy is to adopt a non-linear pricing policy along with quantity discounts and revenue sharing options, thus motivating the retailer to put in costly effort. However, the weak manufacturer only offers a two-part tariff, relying on voluntary effort from the dominant retailer. For the weak retailers, both manufacturer and consumers have a linear pricing without any expectation for effort. However, while the dominant manufacturers create channel diversification and provide supportive investments to weak retailers to mitigate the dominant retailer’s power, the weak ones opt for information sharing and assortment management arrangements. These findings are contingent on the degree of product quality differentiation between manufacturers, the effectiveness and costliness of effort from retailers as well as the extent of preference heterogeneity.
2 - Effect of Gender of the Co-Buyer on Attention Arousal, Shopping Attentiveness & Outcome Apprehension

Rajdeep Chakraborti, Assistant Professor, IBS, Hyderabad, IFHE University, Hyderabad, India, pikluchakra@gmail.com, Ataru Adhikari

Research in retailing has primarily investigated individual buying behavior causing paucity of research in purchase with shopping companion. In addition, researches in retailing have rarely considered the role of the gender of co-buyers. At the same time, research on the effect of gender of incidental co-buyer is equally sparse. Research in consumer psychology has observed that individuals behave differently depending upon their companion(s). Only a handful of researchers have observed that people behave differently while shopping with opposite gender co-buyers. Through a series of experiments, the current study investigates buyer behaviour in retail context and explores how the presence/absence of a shopping companion affects a shopper’s a) level of shopping arousal, b) level of shopping attentiveness and c) level of outcome apprehension. Our research also investigates the change of reservation price of the buyer in presence of different gender shopping companion. The moderating role of relationship of shopping companion is explored by empirically testing whether the relationship (family member or a friend) with the companion affects the participants’ retail buying behavior. This study investigates some very important yet rarely explored facet of the companion’s influence on the buyer’s shopping behavior and their willingness to pay.

3 - Identifying Online Shopping Types from Off-Site Clickstreams to Explore Decision-Making

Daniel Schellong, RWTH Aachen University, Kackstr. 7, Aachen, Germany, schellong@time.rwth-aachen.de, Jan Kemper, Malte Brettel

Consumer behavior literature highlights the importance to better understand shopping motivation for effective marketing campaigns. Each consumer runs through multiple decision stages and branches through various online channels on his path to purchase. However, little is known about consumers’ shopping behavior based on the online channel choice to access online stores. Today’s technology enables marketers to track these choices in great detail. Therefore, for e-commerce firms it is even more critical to understand consumers’ shopping behavior to improve marketing decision making. The aim of this study is to detect and understand online shopping goals of consumers by establishing a typology of shopping strategies. We use interconnected off-site clickstream data as it records the users’ sequence of visits to a firm’s website through all online advertising channels. We contribute as we believe to be among the first to link the online channel journey of consumers with their underlying search patterns to establish a typology of shopping strategies. Further, we apply an interdisciplinary approach in integrating information retrieval insights to categorize advertising channels for various two-stage clustering analyses. Our work is also of immense practical relevance as the results offer marketers the ability to make real-time inferences for onsite personalization or targeted advertising, which promises direct effects on purchase behavior. We base our analysis on a unique and comprehensive set of individual-level off-site clickstream data from a leading online-only fashion company across the European market. The observation period from June 2013 to May 2015 includes a total of several million off-site clickstream journeys from 8 major online advertising channels.

4 - Competing with Co-Created Products

Dinah Cohen-Vernik, Rice University, 6400 Main St, Houston, TX, 77005, United States of America, vernik@rice.edu, Niladri Syam, Amit Pangal

The practice of firms co-creating products and services with their customers has a long history in business markets and, with advances in information technology, is now gaining increasing popularity in consumer markets as well. In this research study we investigate the study how firms may compete with co-created products. We analyze the strategic choices of two downstream user firms who simultaneously decide whether or not to co-create with an upstream supplier, given that the users will compete in the end consumer market with their co-created products. Within this framework we incorporate, (1) endogenous pricing and effort choice by the upstream supplier and (2) endogenous pricing and effort choices by the downstream users. User firms contemplating co-creation with a supplier are faced with a trade-off. On the one hand they can benefit from the supplier’s innovation efforts and therefore obtain a better product than they themselves could produce. On the other hand, they are confronted with the adverse effect of their own innovation efforts spilling over to their rivals via the supplier who would sell the co-created products to all users. Our model captures this tension. We have four main results. First, we show that, when users compete with co-created products, the supplier can exert lower innovation effort when it co-creates with more users. This result is in contrast to Syam and Pangal’s (2013) finding that, when two competition between users, a supplier is always better off when it co-creates with more users because it can then sell a better product. Second, and interestingly, we show that, when symmetric firms can pursue asymmetric strategies in equilibrium, the asymmetric equilibrium, in which only of the two users co-creates with the supplier, is obtained when the degree of competition between users is moderate. The economic force behind the asymmetric equilibrium is the endogenous innovation effort choices of the users and the supplier when they co-create. Third, even though the co-creation game is played by the downstream suppliers, the upper-tier firm’s incentive to participate in co-creation is important. We find that for high degree of competition between users the supplier also prefers an asymmetric equilibrium outcome, given moderate degree of competition, when both users prefer co-creation, the supplier would refuse to co-create with one of them thereby enforcing the asymmetric outcome. Finally, when only one user co-creates, she can actually benefit from spillover, even though it is one-sided, that is, the co-creating user’s effort spills over to the rival from whose effort she herself does not benefit.

TB03  INFORMS Marketing Science Conference – 2015

03-Third Floor, GB 3

Consumer Behavior II

Contributed Session

Chair: Paul Messinger, University of Alberta, School of Business, Edmonton, Canada, paul.messinger@ualberta.ca

1 - Managing Expectations – Towards a Model of Post-Purchase Satisfaction and Product Returns in Online Retailing

Niklas Helleman, RWTH Aachen University, Kackstr. 7, Aachen, 52072, Germany, hellemann@time.rwth-aachen.de, Malte Brettel

While experiencing unrivaled sales growth, online retailers face cutbacks in profits through excessive product returns. Yet, key questions in this area remain unanswered. What makes customers return online purchases? How is their cognition on the path-to-purchase affecting returns? Can online retailers adjust their websites to impact return behavior? In this study, we test an integrated model of return intentions, connecting research in return behavior to consumer satisfaction and cognition theory. We argue that the perceived accuracy and the value of expectations towards products quality can influence satisfaction and returns. Drawing on findings from persuasion and overconfidence research, we propose that perceived accuracy and value of expectations are in turn influenced by the level of elaboration during the purchase process. Additionally, we examine the impact of website stimuli on satisfaction formation, namely the level of product information and a direct appeal to customers to make a more considerable purchase decision. Results of a structural equation model analysis based on 170 participants suggest that satisfaction is in fact a powerful predictor of return intentions, and that elaboration affects expectations. More specifically, a higher level of elaboration reduces perceived accuracy and increases the value of expectations. Furthermore, we identify an effect of the level of product information on all variables, including a negative impact on return intentions. Our findings expand knowledge in product return research in two ways: (1) we are – to the best of our knowledge – the first to develop a psychological process model of return behavior in online retailing, and (2) we demonstrate the impact of shopping website stimuli on post-purchase outcomes.

2 - Is Congruity Desirable for Marketing? A Meta-Analysis

Paul Messinger, University of Alberta, School of Business, Edmonton, Canada, paul.messinger@ualberta.ca, Qian (Claire) Deng

We conduct a meta-analysis of the effect on consumers’ responses of several related forms of congruity present in seven domains of marketing activity. Our sample consists of 462 effect sizes arising in experimental studies described in 75 journal articles. The mean effect size of congruity, overall, is positive (the more congruent, the better), but relatively small (R = 0.178). More importantly, different mean effect sizes and patterns of results are identified across different application contexts and for different types of congruity. This literature began in 1989 and now accounts for more than 10,400 Google citations, but a consensus is yet to emerge as to whether (or when) congruity, incongruity, or moderate incongruity yields the most favorable consumer reaction. The results of this paper suggest a synthesis about the congruity effect, moderators, and possible directions for future work.

3 - Why Does Compliance Vary Over Time?

Wei Zhang, Iowa State University, College of Business, Ames, IA, 50011, United States of America, wzhang@iastate.edu, Ajay Kalra, Alexander Chaudhry

Statistics show a staggering in excess of 50% non-compliance rates that cause 125,000 deaths, $30 billion of losses for pharmaceutical firms and costs north of $200 billion annually for the health care system. Medical research has associated compliance rates with patient knowledge, health attitudes, quality of patient-physician interaction, symptoms, demographics, specific diseases, social support (e.g., DiMatteo et al 2002, 2004, 2012). A key variable linked with compliance are perceptions of disease severity, as perceived by the patient or by the physician (DiMatteo et al 2007). However, the evidence underlying as to why people discount the severity of the threat are not well understood. In contrast to past research that largely examines inter-person variation, we consider two factors that explain within-person variation: day of refilling and seasonality. We propose that these factors temporarily alter perceived disease threat. Additionally, we re-investigate another factor of deep interest to marketers and policymakers – whether the drug is branded or generic. We test our predictions using data provided by Wolters Kluwer focusing on chronic diseases. The final data consists of a panel of 30,031 patients with total of 1.5 million prescriptions over 4 years. We use a tobit model to capture the influence of various factors on compliance behavior. We find strong evidence that an individuals’ compliance varies over time. In particular, compliance rates vary by season and are impacted by the day of the scheduled re-fill. Further, generics lower perceived severity of threat. Our results have direct implications for policy makers and health providers.
effect of firm’s actions towards non-complying customers on firm’s revenue from through promotion and advertising. A retailer, on the other hand, can broaden their assortment of goods to persuade consumers to patronize their store. We also participate. As a result, a offering a large variety to one set of consumers may provide a competitive, it may deter customers with little preference for variety. We illustrate how preference for variety can be tested empirically using point of sale data and retail assortment decisions optimized.

**TB04**

**04-Third Floor, GB4**

**Customer Relationship Management II**

**Contributed Session**

Chair: Xi Zhang, Georgia State University, Tower Place 200, Suite 204, Atlanta, GA, 30318, United States of America, xzhang@gsu.edu, V Kumar, Koray Cogunlu, PO Box 6024, College Station, TX 77842-6024, United States of America, xzhang@gsu.edu

1 - Do it by yourself: Customer Post Behaviors after Service Contract Termination

Shin-Hye Kim, PhD Student, Washington State University, Pullman, WA, 99164, United States of America, shinhye.kim@wsu.edu, Sakhiporn Juisrich, Richie Liu, Sean Yim

Customer relationship management (CRM) plays a prominent role in business processes. For customers, future behaviors after the relationship terminates. Some customers may opt to not hire a new service provider after terminating a contract, but rather elect for self-use. Using an exclusive bundle who have terminated their service contract with a gardening service firm operating in the US, we investigate a customer’s propensity to pursue self-use after terminating a contract. Results reveal that a customer who has a short-term relationship with the firm and a customer who has spent less money towards the firm are more likely to defer to self-service after the contracts. Additionally, while a dissatisfied customer prefers self-service, the monetary value paid by the customer mitigates the negative relationship between customer dissatisfaction and likelihood for self-service. Our research contributes further insights into CRM literature by exploring post termination management. Indeed, we account for the important influence of customer satisfaction, priority value, and duration for the likelihood of post behavior after the relationship terminates. Interestingly, our results shed light on the defensive strategies to retain current customers, as well as the offensive strategies to acquire lost customers. Overall, a customer’s prior satisfaction, value generation, and length in a relationship are indicators for opting self-service after contract termination. That being said, a chance exists to win back lost customers if firms strategically meet their needs.

2 - Customer Noncompliance and Firm Relationship in a Contractual Setting

Mahima Hada, Assistant Professor, Zicklin School of Business, Baruch College, City University of New York, One Bernard Baruch Way, B12-240, New York, NY, 10010, United States of America, mahima.hada@baruch.cuny.edu, Karthik Siddhar

The relationship between a firm and its customers is a dyadic one and while scholars have often looked at situations involving firm inadequacies, customers can misbehave, too. For example, customers often do not pay their bills after using the product (e.g., subscriptions), they consume the ‘free’ product and then cancel the contract with the firm (e.g., in Wine clubs), or they repeatedly sign up for only for the free “first-month” offers (e.g., Netflix). We look at situations where customers (intentionally and economically) do not comply with the contract between the firm and the customer, leading to firms’ adoption of varied strategies to deal with such customer noncompliance (such as, forgive them or cancel the contract). We build a hidden Markov model which incorporates the customers’ noncompliance, the firm’s response to the customer behavior and the effect of these actions on the states of the customer-firm relationship. With seven years of data (over 7,000 customers in a contract with a firm, we look at the effect of firm’s actions towards noncomplying customers on firm’s revenue from these customers. Our findings have implications for: (1) identifying the hidden states of customer noncompliance and its antecedents; and (2) assessing the effectiveness of different strategies that firms adopt while dealing with customer noncompliance in a contractual environment.

**TB05**

**05-Third Floor, GB 7**

**Working Paper III**

**Contributed Session**

Chair: Baojun Jiang, Assistant Professor of Marketing, Washington University in St. Louis, One Brookings Dr., St. Louis, MO, 63130, United States of America, baojunjiang@wusl.edu

1 - Signaling through Price and Quality to Consumers with Fairness Concerns

Baojun Jiang, Assistant Professor of Marketing, Washington University in St. Louis, One Brookings Dr., St. Louis, MO, 63130, United States of America, baojunjiang@wusl.edu, Xiaomeng Guo

Consumers with inequity aversion experience some psychological distress when buying products at unfair prices. Empirical evidence and behavioral research suggest that consumers may perceive a firm’s price as unfair when its profit margin is too high relative to consumers’ surplus. In practice, however, consumers may be uncertain about the fairness of the firm’s price, because they may not know the firm’s cost even for search goods, whose quality is readily evaluated before purchase. Since inequity-averse consumers have a higher willingness-to-pay for any given quality when the firm’s cost is higher, a cost-efficient firm may have an incentive to mimic an inefficient firm’s pricing and quality strategies. We develop a game theoretic model to analyze the effects of the consumer’s inequity aversion on a firm’s pricing and quality decisions. We highlight several interesting findings. First, because of the consumer’s uncertainty about the firm’s cost, the firm may not actually lower the consumer’s monetary payoff (economic surplus) because the firm may reduce its quality to a greater extent than it reduces its price. Lastly, as the average cost-efficiency in the market decreases, both the expected quality and the social welfare may increase rather than decrease.
2 - In-Store Advertising for Competitor: When Promoting Rivals Softens Competition

Dmitri Kuksov, UT Dallas, 800 W. Campbell Rd, Richardson, TX, 75080, United States of America, dmitri.kuksov@utdallas.edu, Mohammad Zia, Ashutosh Prasad

The traditional advice to firms in competitive markets is to avoid any practice that puts customer retention at risk. However, we see instances where a firm allows competitors to advertise directly to its customers. For example, Walmart.com shows banner ads for TVs from Sears for customers searching for TVs on Walmart.com thereby risking the loss of customers in exchange for a commission. This paper explores whether and under what conditions allowing competitor advertising in one's store may be a mutually beneficial strategy. We analyze a duopoly market with customers heterogeneous in their search costs, information and preferences. We find that in-store competitor ads may mitigate price competition and boost profits of both firms, but only if the advertising firm pays a high enough commission on the customer traffic it receives through such ads. On the other hand, when the commission is not high enough, allowing competitor's advertising may decrease profits of both firms. In particular, these results imply that there is no conflict of interest between the firms in setting the level of commission. We also consider the level of advertising efficiency, i.e., the extent by which advertising simplifies consumer access to the competitor and show that in this dimension, the firm displaying the ad may be interested in the most efficient ad while the other firm is not.

3 - Informal Banking in the Emerging Market: Relationship as Collateral

Weining Bao, Assistant Professor, Jinhe Center for Economic Research, Xi’an Jiaotong University, No. 28 Xianming West Road, Xi’an, 710049, China, wbao3@jhu.edu, Jian Ni, Shubhranshu Singh

The loans from the informal banks in the emerging markets are often characterized by relational lending where the repayment is neither legally protected nor assets secured. Built on the relational contract framework, we show that the borrower-lender relationship serves as “collateral” that screens out risky borrowers and counteracts the moral hazard over the course of relationship. We allow installment payments which further mitigate the transaction frictions caused by the information asymmetry. Contrary to conventional wisdom, the value of “collateral” is determined by future expected transactions. In the optimal contract, as the relationship advances, the loan rate falls and the value of relationship rises. We find that the formal bank’s transactional inefficiency increases the informal bank’s incentives to discipline the borrower, when the probability of the borrower being high ability is high. We also find that the informal bank may prefer to operate in a market in which it takes longer to discipline the borrower. Moreover, we show that along the course of relationship, moral hazard mitigates the future adverse selection.

4 - Consumer Deliberation and Quality Signaling

Yue Wu, PhD Candidate, INSEAD, 1 Ayer Rajah Avenue, Singapore, Yue.wu@insead.edu, Li Guo

This paper proposes that consumer deliberation about product quality can be an endogenous mechanism to enable credible quality signaling. Consumers are often uncertain about their product valuations. Regardless of the presence or absence of perfect knowledge about quality, the consumers may bear some uncertainty and purchase a product without deliberation. Alternatively, the consumers can incur a deliberation cost to find out their true valuations and then make their purchase decisions. Our basic model rules out existing signaling mechanisms such that a firm is not able to signal her quality through price without consumer deliberation. By contrast, she is able to do so with endogenous deliberation. The signaling equilibrium emerges because the consumer deliberation incentive varies with price and perceived quality of the product and because a high-quality firm may have a stronger preference for deliberation than a low-quality firm does. In the signaling equilibrium, the high-quality firm induces consumer deliberation by setting a high price, whereas the low-quality firm prevents deliberation by charging a low price. Compared to the case of complete information about quality, the price of the high-quality firm can be distorted downward to avoid the low-quality firm’s imitation or distorted upward to facilitate consumer deliberation. In an extension we consider uninformative advertising as a potential quality signal along with the product price. The high-quality firm can utilize advertising spending to avert imitation from the low-quality firm without downward price distortion, earning a higher profit than that without advertising. However, advertising mitigates the distortion at the expense of consumer surplus and social welfare.

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2 - In-Store Advertising for Competitor: When Promoting Rivals Softens Competition

Dmitri Kuksov, UT Dallas, 800 W. Campbell Rd, Richardson, TX, 75080, United States of America, dmitri.kuksov@utdallas.edu, Mohammad Zia, Ashutosh Prasad

The traditional advice to firms in competitive markets is to avoid any practice that puts customer retention at risk. However, we see instances where a firm allows competitors to advertise directly to its customers. For example, Walmart.com shows banner ads for TVs from Sears for customers searching for TVs on Walmart.com thereby risking the loss of customers in exchange for a commission. This paper explores whether and under what conditions allowing competitor advertising in one’s store may be a mutually beneficial strategy. We analyze a duopoly market with customers heterogeneous in their search costs, information and preferences. We find that in-store competitor ads may mitigate price competition and boost profits of both firms, but only if the advertising firm pays a high enough commission on the customer traffic it receives through such ads. On the other hand, when the commission is not high enough, allowing competitor’s advertising may decrease profits of both firms. In particular, these results imply that there is no conflict of interest between the firms in setting the level of commission. We also consider the level of advertising efficiency, i.e., the extent by which advertising simplifies consumer access to the competitor and show that in this dimension, the firm displaying the ad may be interested in the most efficient ad while the other firm is not.
1 - Individual and Brand-Level Impact of Delight and Displeasure on the Satisfaction-Loyalty Link

Chris Groening, Asst. Professor of Marketing, Kent State University, 522 College of Business, Kent, OH, 44242, United States of America, cgroening@kent.edu

This paper examines moderates of the relationship between satisfaction and loyalty. Specifically we look at the effects of delight and displeasure, using their behavioral outcome, word-of-mouth. These two variables are examined at the individual- and brand-levels, as well as the first- and second-order effects of customer satisfaction at the brand-level. We find that the main effects of these measures affect the individual-level relationship between satisfaction and loyalty. Moreover, each of these effects is found to significantly moderate the relationship between satisfaction and loyalty. Individual-level measures have greater effects on the satisfaction-loyalty relationship than do brand-level measures. Within the brand-level measures, while the first- and second-order effects of brand-level satisfaction significantly moderate the satisfaction-loyalty link, the magnitude of their effects is lower than with brand-level delight and displeasure. Our results are obtained by examining a dataset of 53,173 respondents over a three-year period across 10 product categories that include 171 brands.

2 - On Customer Emotions and Loyalty Strategies

Yi-Chun Ou, Assistant Professor, University of Surrey, Surrey Business School, Guildford, Su, GU2 7XH, United Kingdom, you@surrey.ac.uk

While managing customer emotions is becoming popular, there are managers still questioning whether managing customer emotions is a right thing to do, as misperceiving the interaction of multiple strategies critically deteriorates the effectiveness of resource allocation. This study asks whether customer equity drivers (CEDs) are differentially effective for creating loyalty intentions depending on customer emotions. I take two important types of customer emotions in decision-making as moderators into account: type I (generated by firms) and type II (generated by consumers). In addition, I re-examine the main effects of type I emotions on loyalty intentions in a broader sense, including all three CEDs. Three studies (including large-scale of customer datasets and the experimental design) are adopted to test the hypotheses. The data show that type I emotions have the moderating impact on the CEDs-loyalty link, but type II emotions do not. Specifically, the CEDs-loyalty link is mitigated by positive valence of type I emotions, but strengthened by negative valence of type I emotions. Additionally, the result re-confirms the main effect of type I emotions on loyalty intentions beyond CEDs. The findings suggest that managers should be cautious of combining customer emotions and CEDs for creating loyalty intentions.

2 - Firm Expansion, Size Spillovers and Market Dominance in Retail Chain Dynamics

Ahmed Khwaja, Yale University, New Haven, CT, ahmed.khwaja@yale.edu

A firm’s decision to expand or contact has long term strategic implications for its market outcomes and industry structure. A stylized fact also is that the dynamics of retail market structure are more richly driven by expansion and contraction than by de novo entry or permanent exit. Moreover, there may be a heterogeneous relationship between firm size and future profitability; some firms may expand and become more profitable whereas expansion for others may be detrimental. Motivated by these considerations this paper develops a dynamic oligopoly model of endogenous firm size that allows size to affect future profitability, and market dominance. The dynamic link between firm size and profitability implies that a firm’s abilities change based on its experience. It also allows this relationship to be heterogeneous. Thus, with expansion new firms become more profitable. The spillovers of size on future profitability are implemented through a firm specific unobservable (to the researcher). There may also be retention of past size spillovers through serial persistence due to firm specific heterogeneity. The hurdle of estimating the model is surmounted by extending a two-step procedure that doesn’t require solving the game. The first stage combines semi-parametric Conditional Choice Probability estimation with particle filters to integrate out the serially correlated unobservables. The second stage uses a forward simulation approach to estimate payoff parameters. Data on Canadian hamburger chains provides evidence of heterogeneity in size spillovers and serial persistence in profitability across firms. This heterogeneous dynamic linkage shows how some firms become dominant and others faller as they evolve, thus affecting market structure and industry concentration.

2 - The Impact of Newspaper Paywalls

S. Srimar, Stephen M. Ross School of Business, University of Michigan, srirat@umich.edu

Growth in online readership and the corresponding decline in the circulation base of print newspapers has prompted newspaper publishers to identify opportunities to monetize online content. As a result, several newspapers have begun charging readers for access to online news content by erecting paywalls. However, the overall effect of erecting paywalls on newspaper readership and revenues is unclear. One concern is that paywalls may induce readers to substitute away to other free sources of news. Further, the attrition in readership as a result of paywalls could put advertising revenues at risk. Lastly, paywalls are believed to serve an equally important objective of stemming the declines in print newspaper readership, by preventing paying print subscribers from switching to the free newspaper. In this paper, we study the overall implications to newspaper revenues from operating paywalls, by using readership and advertising data for the New York Times before and after it launched a paywall in March 2011. By exploiting the structural break implied by the paywall launch, we assess its effects on both print and online newspaper readership as well as newspaper advertising. We comment on revenue implications for newspaper publishers from the increasingly popular decision to monetize digital news content.

4 - Can Frequency Rewards Program be Profitable?

Raphael Thomadsen, Olin Business School, Washington University in St. Louis, St. Louis, MO, United States of America, rpomadsen@wustl.edu

This paper examines the effectiveness of a linear customer loyalty program. We use a unique dataset with a complete record of individual transaction level data from all customers both before and after the loyalty program is introduced to analyze the profitability of the program. We find that the presence of the loyalty program increases firm profits by approximately 11%. Most of the loyalty program impact comes from higher retention rate, which leads to a significant increase in customer lifetime value. We also find that the presence of the program increases the frequency of purchases among consumers who at some point redeem an award by 4.5%. This is offset by a 3.6% decrease in revenues due to the discount offered in the rewards program. Throughout the paper, we control for the selection effects of which individuals choose to become members of the program, which is possible because our data includes all customer transactions, including those by members and non-members, both before and after the program introduction.
Chair: Jie Zhang, Associate Professor of Marketing & The Harvey Sanders Fellow of Retail Management, Robert H. Smith School of Business, University of Maryland, 3311 Van Munching Hall, University of Maryland, College Park, MD, 20742, United States of America, jieje@rhsmith.umd.edu

1 - Distribution Dynamics and Brand Performance:
The Role of Market Type, Retail Format and Macromarketing

Amalesh Sharma, PhD student, Georgia State University, 3348 Peachtree Road NE, Tower Place 200, Suit 204, Atlanta, GA, 30326, United States of America, asharma14@gsu.edu, V. Kumar, Sarang Sundar

Emerging markets offer ample opportunities for growth and are being seen as a hotbed for direct investment, especially in retailing. However, given the largely unorganized retail structure, the lack of granular data and the presence of multiple retail formats, it is difficult to comprehend the dynamics of emerging markets. The distribution decision for Consumer Packaged Goods (CPG) marketers is more challenging. The complexity of the distribution is further compounded by the presence of multiple retail formats. Much of the extant literature in emerging markets and distribution, though scarce have focused on aggregate distribution effects which are static in nature. However, in this study, the authors make the case that not only is the effect of distribution dynamic, the aforementioned dynamics are influenced by retail format type, market type and macromarketing trends. Further, through a Dynamic Linear Modeling (DLM) approach, we uncover the impact of macromarketing as well as market type (urban/rural) on the dynamics of each retail distribution format. Specifically, we answer the question of how much distribution effectiveness of each retail format is affected by recessionary trends, whether this effect occurs very fast and how this effect has implications for overall brand performance. Through our proposed model, we are also able to elicit the long and short term effects of macromarketing fluctuations on distribution effectiveness. The proposed model is implemented on five years of data obtained from a large Consumer Packaged Goods (CPG) manufacturer operating in an emerging market.

2 - When Cents-Off Discounts are Replaced by Reward Point Promotions: A Cross-Category Analysis

Jie Zhang, Associate Professor of Marketing & The Harvey Sanders Fellow of Retail Management, Robert H. Smith School of Business, University of Maryland, 3311 Van Munching Hall, University of Maryland, College Park, MD, 20742, United States of America, jieje@rhsmith.umd.edu, Eis Breugelmans, Seoungwoo Lee

This study investigates a new “item-based loyalty program” (IBLP) design in which conventional cents-off price discounts are replaced by reward points that need to be cumulated and redeemed later. Under this practice, LP rewards are not just based on store-level total spending but largely driven by purchases of individual items on promotions. Zhang and Breugelmans (2012) studied the impact of LPs on store-level purchase patterns and revenue implications. In this study, we focus on category-level purchase behaviors and explore the drivers of consumer reactions among a large set of category and household characteristics. For retailers, understanding whether and how individual categories and consumers may differ in the way they are affected can provide important insights to help them fine tune and improve the effectiveness of the proposed model. We analyze data from an online European supermarket to test the effectiveness of the model on store-level purchase patterns and revenue implications. We find that there are large variations in reactions to the new LP design across categories and consumers, and both category and consumer characteristics play important moderating role. Our results provide valuable insights to retailers and manufacturers on how to improve the effectiveness of an IBLP and how to minimize its potential negative impact on some categories and consumers.

The Effectiveness of Managerial Actions during Conflict Delistings

Marleen Hermans, PhD Candidate, Maastricht University, P.O. Box 616, 6200 MD, Maastricht, Netherlands, marleen.hermans@maastrichtuniversity.nl, Kathleen Cleeen, NEOMimes, Martin Kols

While the bargaining power clearly used to be associated with manufacturers a few decades ago, retailers have now grown to become equal opportunity players. This presents the challenge of negotiating the terms and conditions in which delistings occur. Consequently, both manufacturers and retailers decide to temporarily remove products from the shelves when conflicts arise (hereafter referred to as conflict delistings). Delisting conflicts often cause major revenue losses for both manufacturers and retailers, due to consumers switching to alternative brands within the store and consumers switching between brands, respectively. This study investigates which managerial actions manufacturers and retailers can take in various conflict situations to mitigate potential losses, by focusing on the effectiveness of both parties’ price promotions and advertising. More specifically, we investigate the impact of a conflict delisting on manufacturer and retailer performance using conflict delistings that occurred between 2002 and 2013 in four European countries, which amounts to 278 brands in 217 FMCG categories. The results of such a comprehensive dataset - spanning different countries, categories, manufacturers, and retailers - not only allows for the exploration of empirical generalizations on the effectiveness of marketing strategies when conflict delistings occur, but also constitutes an opportunity to assess variability between cases, which, in turn, provides insights into the moderating impact of conflict characteristics (e.g. the initiator of the conflict or the amount of publicity). The results of the study, therefore, provide guidelines to both manufacturers and retailers on which marketing instruments are more effective in different types of conflict situations.

2 - Bad Habits and Endogenous Decision Problems

Peter Landry, University of Toronto, 105 St George St, Room 555, Toronto, ON, M5S 2E8, Canada, peter.landry@utoronto.ca

I present a theoretical model of addiction in which cravings are costly distractions that force the individual to “think about” the associated consumption decision. By allowing choices to influence the frequency of future cravings, the model emphasizes new incentives and disincentives; namely, consumption provides a temporary break from the so-called “decision points,” but increases their long-run frequency. Matching evidence unaddressed by prevailing theories, I present the model as evidence that the frequency of cravings reduces near-term future demand by delaying the consumption occasion, but leads to both higher frequencies and higher per-occasion levels of consumption.
consumption in the long-run. Incorporating random external cues (modeled as decision points) into the cravings model, consumption becomes more predictable and less cue-sensitive as habits strengthen. Although cues generally boost demand, overexposure deters consumption, in line with the evidence on advertising “wearout.” Lastly, a method to elicit users’ “natural” decision points is proposed, which carries unique and testable implications regarding the temporal pattern of consumption.

3 - Online Algorithms for the Estimation of Mixed Models
Keunwoo Kim, Doctoral Candidate, UCLA, 110 Westwood Plaza, B4.01, Los Angeles, CA, 90095, United States of America, keunwoo.kim@gmail.com, Sanjog Misra

Estimating nonlinear heterogenous models in the context of Big Data is a challenging endeavor. The key issue is that traditional approaches require us to compute the objective function using the entire sample thereby rendering the approach cost prohibitive. In this research we present a fast, scalable, online approach to estimation of mixed models. In particular, we leverage recent developments in the area of machine learning and construct a stochastic gradient based approach that can be implemented with very little effort. Our simulation results show that our approach is computationally cheaper than traditional numerical optimization without any incremental bias or significant loss of precision. For example, estimating a full-covariance random coefficients Logit model with 100,000 households, 10 observations per a household and 3 alternatives (9 total parameters) took less than 45 seconds. The model scales linearly for larger datasets (millions of observations, larger choice set, larger parameters, etc.) and typically recovers parameters accurately in a fraction of the time usually required. Our new approach would allow for the implementation of popular models on truly big data.

4 - Modeling Consumer Demand under Mental Constraints
Byungyeon Kim, Korea University Business School, 145 Anam-ro, Seongbuk-gu, Seoul, 136-701, Korea, of, byungyeonkim@korea.ac.kr, Jaehwan Kim

Consumption of products often involves some sort of negative aspects – risk of harm, concern for obesity, guilt for mischief, etc. – as a consequence. Contrary to the conventional studies where the benefits of the product characteristics solely determine consumer demand, we focus on the mental constraints and incorporate them into a formal constrained utility maximization framework as additional sources that limit constant consumption of excess disbenefit generating product offerings. These constraints are incorporated via temporal dependence, where an individual’s consumption history evolves into a cognitive inventory of accumulated concern or mental burden. The model is applied to the fast-food conjoint data, where concern for obesity serves as the mental constraint. The results are compared to the standard model history with a single budget constraint and other benchmark models. Policy implications on optimizing the dis-benefit generating product attributes configuration under different circumstances are explored.

1 TB12
Marketing Finance II
Contributed Session
Chair: Daniel McCarthy, Doctoral Student, Wharton School of Business, 3730 Walnut Street, Suite 400, Philadelphia, PA, 19104, United States of America, danielm@wharton.upenn.edu

1 - Customer-Based Corporate Valuation via Data Fusion
Daniel McCarthy, Doctoral Student, Wharton School of Business, 3730 Walnut Street, Suite 400, Philadelphia, PA, 19104, United States of America, danielm@wharton.upenn.edu, Peter Fader

As many researchers have previously noted (e.g., Gupta, Lehmann and Staat 2004; Rust, Lemon and Zeithaml 2004; Gupta, Hanssens, Hardie et al 2006, Schulze, Skiera and Wiesel 2012), the value of a firm should be closely related to the net present value of all its current and future customers, or Customer Equity (CE). Some of these papers have offered initial “proof of concept,” running CE models upon individual test cases, but none have used state-of-the-art methods to fully account for all of the sources of value (e.g., customer heterogeneity) and to accommodate differences across firms in a statistically sound manner. Accordingly, we propose a principled firm-valuation framework, guided by real options theory, the corporate valuation literature, and hierarchical Bayesian methods. Our model will properly value, “borrow strength,” and accommodate heterogeneity across customers within business units, business units within companies, companies within industries, and industries within the stock market as a whole. We simultaneously model dozens of publicly traded companies, far larger than any previous study in the marketing literature. To do-so, our model must be robust to the idiosyncrasies of individual firms’ financial disclosures, most notably the fact that disclosure of customer metrics varies across firms and over time. We treat this partial observability issue as a data fusion / missing data problem and implement over the posterior distribution of the missing data to provide a more complete picture of each firm’s customer-based valuation. We conclude with two illustrative vignettes and discuss implications for both marketing and finance/accounting executives.

2 - Value of Customer-Related Assets in Mergers and Acquisitions
Cem Bahladi, Ozyegin University, Cekmekoy Campus, Nisan tepe Mah. Orman Sok. No:34-36, Istanbul, Turkey, cem.bahladi@ozyegin.edu.tr, Sundar Bharadwaj

Customers of target firms are integral part of the assets acquired through mergers and acquisitions (M&A). In many M&A transactions, customer portfolios account for significant portion of the value in M&A. In fact, the failure of many M&As are attributed to the poor value of customers. Despite the importance of customers to M&As, there is limited empirical work on the value of acquired customers. In this study, we seek to understand the factors that influence the financial value the acquirers attribute to the customer-related assets of target firms. More specifically, we investigate two sets of factors that may affect the value of customer assets in M&A. First, the characteristics of the customer bases of the target and the acquirer firms, because the customer-base concentration of the target firm has significant implications for the level, growth, and vulnerability of the cash flows from target’s customers. Second, the synergies among the strategic assets of the acquirer and the target firm, because acquirers that have larger customer asset bases may attribute greater value to target firm’s assets as it would be easy for such firms to integrate target firm’s customer assets into its organization. We test these hypotheses on a unique data set which includes the customer base characteristics, the value of customer assets of target firms as well as the values of the assets that the acquirers have accumulated over time.

3 - Volatility Spillovers Across User-Generated Content and Stock Returns
Myrthe van Diejien, Erasmus School of Economics - Erasmus University Rotterdam, Burgemeester Oudlaan 50, Rotterdam, Netherlands, myrthevandiejien@gmail.com, Abhishek Borah, Gerard Tellis, Philip Hans Franses

This study investigates the relationship between user-generated content (UGC) and stock price volatility by examining the presence of shock and volatility spillover effects between stock returns and UGC. Furthermore, by studying which company-related events trigger increases or decreases in the volume of UGC. Stock price volatility can be interpreted as a proxy of risk, and can therefore serve as an important financial performance measure. The daily volume of positive and negative tweets, blog posts, and Google searches are used as metrics of UGC and are gathered over a period of 3 years. We use a multivariate GARCH model to estimate the shock and volatility spillover effects and multivariate regression models to estimate the influence of company-related events on UGC. The results show that past shocks and past volatility in the volume of UGC can significantly influence a company’s stock price volatility. Past shocks in the volume of positive UGC decrease stock price volatility, whereas past shocks in the volume of negative UGC increase stock price volatility. Moreover, new product launches have a significant positive impact on all UGC metrics, and product announcements can significantly increase the amount of tweets. These results show that managers should be aware that UGC is a potentially useful instrument which deserves special attention in the marketing mix. Proper management of UGC can gear financial volatility and this is a powerful marketing instrument with potential consequences in terms of financial performance.

4 - Marketing Alliances and Firm Risk
Tuba Yilmaz, PhD Candidate, Koc University, CASE Office 169, Koc University. Rumelifeneri Yolu Sarayi, Istanbul, 34450, Turkey, tyilmaz@ku.edu.tr, Stefan Wuyts

Even though there is growing evidence linking market-based assets with stock returns and risks, the research on the effect of marketing alliances on the firm risk is scant. This is an important gap since lowering risk has an immediate impact on the firm’s market value. Adopting risk measures established in finance literature, this study analyzes risk-reducing effect of marketing alliances. We study firm risk of two different stakeholders, specifically debt and equity holders. In addition, we explore the risk-reducing role of the network of the focal strategic alliance. Examining how alliance agreements impact debt-holder and equity-holder risks is a necessary step to obtaining a complete picture of how marketing alliances add value to the firm.
 ordering use the in consumer ll via search ers have taken on higher that before, but this trend is not yet complete. The impact of broad matching on consumer behavior is still under investigation. The ongoing debate about the effectiveness of broad matching will continue to evolve as the landscape of online advertising changes.

2 - Assimilation or Differentiation? Investigating the Effect of Competition on Sponsored Search Advertisements

Shane H. Nguyen, University of Southern California, California 3660 Trousdale Parkway, ACC 306E, Los Angeles, CA, 90089, United States of America, shayan@marshall.usc.edu, Shijie Lu

As Internet advertising intermediaries now provide rich competition-related information, sponsored search advertisers are becoming more strategic in their keywor d decisions. In this study, we regard each keyword as a market and empirically examine whether positive or negative spillover effects occur in advertisers’ keyword entry decisions, which lead to assimilation or differentiation in their keyword choices. We develop a model of advertisers’ keyword decisions based on the incomplete-information and simultaneous-move game with two novel extensions: (i) we allow the strategic interactions to vary with advertisement positions to reflect consumers’ top-down search pattern; and (ii) we infer potential entrants of a keyword by modeling the advertisers’ keyword consideration set based on the position capacity in analyzing all existing keywords. To cope with several econometric challenges, we use a two-step approach in conjunction with the Bayesian method to estimate the model. We apply the proposed model to a panel dataset of 1,252 laptop-related keywords mainly used by 28 manufacturers, retailers, and competition websites that advertise over 10,000 different key words. The results from our analysis show that the expected number of below-ranked advertisers has a positive spillover effect on all three types of advertisers’ keyword entry decisions. Second, for the strategic interaction, we use a two-stage Probit model to rank above, we find both assimilation and differentiation tendencies. Retailers are the most aggressive and assimilate with all three types of advertisers, and comparison sites are the least aggressive and differentiate from other comparison sites and manufacturers. Third, both manufacturers and retailers are more likely to use historical competition information to learn from other advertisers of the same type, while comparison sites tend to learn from other comparison sites and manufacturers. Finally, our counterfactual simulations demonstrate that more accurate competition information provided by intermediaries induces market expansion, via increasing the average number of advertisements per keyword and improving the search engine’s revenue by 4.4%.

3 - Poaching in Paid Search Advertising using Broad Match: Evidence from a Field Experiment

Joseph Pancras, University of Connecticut School of Business, 2100 Bilbrook Road Suite 1041, Storrs, CT 06269, United States of America, jpancras@business.uconn.edu, Shuai Yang, Yiping Song

Poaching competitors’ customers by targeting and persuading them to switch to a well-established offline strategy that is gaining popularity in online markets due to the ease of tracking and targeting of users who are interested in competitor products. Nowadays, to achieve poaching in online search, paid search ad firms tend to use the ‘broad match’ option when bidding on keywords, which results in online consumers being shown paid search ads when their search terms contain relevant variations of the keywords. Broad match allows poaching advertising to be displayed in many situations where paid search ads might fail to display in the past. As a result, advertisers examine key words that consumers search for and thus to gain access to more competitors’ prospective customers. However, broad match is still a black box to advertisers and exact meaning does not yet measure the extent of this effect. The in the context of broad matching advertising, the experiment is conducted through an online paid search ad firm with Google’s AdWords platform, this study examines how broad match influences poaching advertising in two purchase funnel activities (i.e., generating consumer interest/click in information search) and conversion activities (i.e., converting consumer interest into purchase/conversion). We find that although broad match can increase clicks of the website from more competitors’ prospective customers, it does not lead to greater purchases, and thus results in fewer net revenues. However, a dynamic linear model analysis gives some preliminary evidence that increased clicks from poaching advertising can spill over to subsequent purchases of generic and own branded advertising. These findings provide implications for managers of search firms that they need to make tradeoffs between more clicks and lower net revenues when they design broad match for poaching search advertising. If search firms increase more net revenues, poaching without broad match can save costs on wasteful clicks and generate more net revenues. By contrast, if search firms intend to increase brand awareness and consumer clicks which can spill over to future purchases, poaching with broad match would be effective.

4 - Sellers’ Online Responding Strategies to Negative Online Reviews

Chunyu Li, PhD Candidate, Lingnan University, SEK 101, Department of Marketing, Lingnan University, Tuen Mun, Hong Kong, Hong Kong - PRC, chunyuli@ln.edu.hk, Georgia Lam, Peter Verhoef, Thorsten Wiesel

To counteract the detrimental impact of negative WOM, both researchers and practitioners underscore the importance of proactively monitor and manage online reviews. Consequently, literature has identified various methods, such as identifying the influencers, encouraging advocates, or withholding product information to manipulate online WOM. Notably, research on another innovative solution, namely sellers’ online responding directly to negative WOM (hereafter, NWOM), has lagged far behind its popular adoptions in industry. This study investigates the interfering influence of online responding to NWOM from observing consumers’ perspective. Based on the implications from relevant literature such as privacy, social discount, service failure and crisis management, sellers’ online responding strategies can be categorized into defensive and accommodative responding. Further, whether sellers’ accommodative or defensive responding is more effective in counteracting NWOM depends on the different nature of NWOM, namely regular NWOM and product failure NWOM. One study and an investigation of data crawled from TripAdvisor.com to provide converging evidence that online responding can be effective to counteract the negative impact engendered by NWOM only when a seller takes the appropriate responding strategies. In particular, when confronting product failure (vs. regular) NWOM, accommodative (defensive) responding is more effective in (field relationships) and purchase intention (Study 1), and (2) helping generate more helpful reviews, increase subsequent consumers’ satisfaction, and improve hotel ranking (Study 2). Furthermore, a moderated mediation role of causal field of the NWOMs identified as the underlying mechanism for the relative effectiveness of different responding strategies (Study 1).

Evidence from the Personal Computer Industry

David Muir, Assistant Professor of Marketing, University of Delaware, Alfred Lerner College of Business & Econ, 20 Orchard Rd, Newark, DE, 19716, United States of America, muir@udel.edu

Online environments affect the purchases of popular brands online. This study explores whether such relationship is different compared to the organic diaper brands. We investigate three offline elements: offline demand for the supermarket, the organic industry, offline shopping convenience, and proximity to a brand pole (a category where the headquarter of a brand is located). The outcome is measured in two ways, online niche market size and online niche market share associated with the region. Our results show that offline demand for organic brands spills over to online and increases online niche market size; however it does not affect the brand share. The offline shopping convenience of the local brand negatively affects the share of the brand online, but does not affect the market size. The proximity to the brand pole affects both dimensions of niche product sales. The niche market size and the local brand share are larger for the region closer to the brand pole. The study contributes to the literature of niche brands by investigating a novel setting and previously overlooked variables, and provides strategic implications to both the niche brands operating online and the online retailers who sell a large breadth of niche products.

2 - The Demand for One-to-One Customization: Evidence from the Personal Computer Industry

David Muir, Assistant Professor of Marketing, University of Delaware, Alfred Lerner College of Business & Econ, 20 Orchard Rd, Newark, DE, 19716, United States of America, muir@udel.edu

I study the demand for one-to-one customization in the personal computer hardware industry. Using household browsing, transaction, and demographic data from the comScore database, I uncover overwhelming evidence that households who buy and customize computer hardware online are “preference minorities” (Choi and Bell 2011). Preference minorities seek relief from local isolation by choosing to buy and to customize their computer hardware online. They represent a large body of households with small face consideration sets and do not intensively search for information, implying they know their preferences well and find better matches
to their preferences through one-to-one customization. Correspondingly, agglomerated households predominantly use the Internet for research and comparison shopping, searching alternatives with intensity. Hence, like earlier research, I show evidence the Internet acts as a substitute for brick-and-mortar stores for preference minorities in relative local isolation, but acts as a complement for agglomerated households who have numerous offline options. Firms who succeed to offer one-to-one customization, thus, should focus on both household types: isolated households are more likely to customize the default while agglomerated households are more likely to choose the default itself. This paper is the first to claim preference minorities are the most likely consumers to engage in one-to-one customization.

3 - Affiliate Advertising

Hana Choi, Duke University, 1134 Millspring Dr., Durham, NC, 27705, United States of America, hana.choi@duke.edu, Carl Melo In this paper we consider the market for affiliate advertising on e-commerce sites such as Amazon or eBay. These e-commerce sites are two-sided networks that obtain revenue from both sides of the platform: charging fees based on revenue from goods sold to the consumers on the site, while charging advertising fees from third-party affiliates who seek to obtain favorable search placements on the site. These two revenue sources often conflict, as advertisers obtain favorable placements on a site that seeks to search through more alternatives, lowering their likelihood of purchase. We consider this trade-off by developing a joint model of consumer search and the market for affiliate advertising. In the process, we extend the literature on search along two dimensions. First, we consider the supplier side ramifications of consumer search behavior via the allate advertising problem. Second, we extend online search models to consider sites wherein information is maximally revealed, thereby requiring consumers to click away from the list of summary results to a detailed product page in order to consider the goods they search. Stated differently, we extend structural search models to consider reputation and choice. We further summarize browsing patterns of successive singular clicks that do not exceed a time component and derive a novel concept to uncover hidden purchase intentions of customers. Routing from situational purchase involvement, we conceptualize and analyze users’ browsing behavior, by summarizing browsing patterns of successive singular clicks that do not exceed a defined time interval, which we call micro journey. Consequently, an individual consumer journey may contain one or multiple micro journeys which may comprise at least two or manifold successive clicks. Based on four large-scale individual user level data sets, we apply a proportional hazards model and reveal that micro journeys are well-suited to better predict user conversions. Users with micro journeys are more likely to convert – they convert directly after the micro journey as well as some time or clicks thereafter to equal proportions. We further characterize these micro journeys by employing two-staged cluster analyses and find that micro journeys that are preceded by singular clicks as well as micro journeys with navigational contents are especially suitable to predict converting customers. The inclusion of user behavior and its translation into conversion propensity is highly relevant for theory as well as practice, especially in vigorous environments, since we 3 introduce a theoretically grounded click pattern analysis to extract user behavior on their path to conversion to dynamically improve their marketing measures.

4 - Modeling the Click Stream – How Micro Journeys as Browsing Click Patterns Influence Conversions

Marc Linzmajer, Postdoctoral Researcher, University of St.Gallen, Dufourstr. 40a, St. Gallen, 9000, Switzerland, mail@marclinzmajer.ch, Ingo Frank Becker, Florian von Wangenheim

Online advertising has become increasingly complex from both, a technological and user behavioral perspective. Technology wise, advertisers employ novel targeting measures to pursue potential customers browsing the web, however, are, insecure which customers are most promising in converting. Furthermore, users interact in a more elaborate manner leaving train while browsing the web, but the extraction of implications manifested in these user traits is covered insufficiently. While preceded research focuses on singular clicks and associates them with user behavior, we aim at information and not individual and map the time component and derive a novel concept to uncover hidden purchase intentions of customers. Routing from situational purchase involvement, we conceptualize and analyze users’ browsing behavior, by summarizing browsing patterns of successive singular clicks that do not exceed a defined time interval, which we call micro journey. Consequently, an individual consumer journey may contain one or multiple micro journeys which may comprise at least two or manifold successive clicks. Based on four large-scale individual user level data sets, we apply a proportional hazards model and reveal that micro journeys are well-suited to better predict user conversions. Users with micro journeys are more likely to convert – they convert directly after the micro journey as well as some time or clicks thereafter to equal proportions. We further characterize these micro journeys by employing two-staged cluster analyses and find that micro journeys that are preceded by singular clicks as well as micro journeys with navigational contents are especially suitable to predict converting customers. The inclusion of user behavior and its translation into conversion propensity is highly relevant for theory as well as practice, especially in vigorous environments, since we 3 introduce a theoretically grounded click pattern analysis to extract user behavior on their path to conversion to dynamically improve their marketing measures.

INFORMS Marketing Science Conference – 2015

TB15

15- Fourth Floor, Essex AB

Developments in the Measurement and Modeling of Consumer Preferences I

Cluster: Special Session

Invited Session

Chair: Daria Dzyaburab, Assistant Professor of Marketing, NYU, 40 West 4th St, Suite 805, New York, NY, 10012, United States of America, ddzaburab@stern.nyu.edu

1 - A Cognitive Model of How Users Type and Click on Search Engines

Jia Liu, Columbia University, Columbia Businss School, New York, USA, jliu@bus.columbia.edu, Jie M Li, Jie361@columbia.edu

Our goal is to better understand how consumers form search queries online, in order to be able to learn about their preferences from their queries. How do consumers form online search queries? In particular, to what end are queries reflective of consumers’ online search patterns? To answer these questions, it is important that, do consumers simply include the terms they care most about in their queries, or do they strategically leverage semantic relationships between these terms? In order to answer this question empirically, we conduct an experiment in which we manipulate preferences exogenously. We find evidence for semantic-based query formation, i.e., queries are not a simple reflection of preferences. This raises our second question: What types of semantic relationships do consumers rely upon when forming search queries? Based on two studies, we find that the queries formed by consumers are consistent with undirected semantic networks where nodes represent search terms and edges represent semantic relationships between these terms. Further, we explore the extent to which these semantic relationships are influencing consumers’ search behavior. These findings provide the cornerstone for a model that answers our second question: How can we learn consumers’ preferences from their search queries? Using a representative set of consumers’ semantic relationships, we build a framework for empirically identifying and estimating preferences based on the queries formed by consumers and their clicking behavior. Specifically, we develop a model of consumers’ search engine usage. The model captures what queries users type, which links they click on, and when they stop searching. We calibrate this model using data from a study in which we manipulate preferences exogenously, observe consumers’ behavior as they search for information online consistent with their preferences, and estimate their preferences based on this behavior.

2 - When Words Sweat: Written Words Can Predict Loan Default

Alain Lemaire, Columbia Business School, alemaire18@gb.columbia.edu, Michael Herzenstein, Oded Netzer

Unprecedented levels of US consumer loan default were key contributors to the 2008 financial crisis and have made it more difficult for individuals to secure a bank loan since. As a result of an industry of online peer-to-peer lending that provides unsecured consumer loans has evolved. However, even though the vast crowdsourcing platforms were able to reduce default rates over the years, they are still high, which signals there may be room to improve. Traditional measures for loan default have included quantifiable financial measures such as credit rating and debt to income ratios. This paper presents empirical evidence that borrowed loans track their emotional state in their loan online application text and such traces are predictive of whether the borrower will default on his/her loan three years later. Using a large sample of loans and text mining methods relying on the established emotional words to the online loan application text and such traces are predictive of whether the borrower will default on his/her loan three years later. Using a large sample of loans and text mining methods relying on the established emotional words framework, we find that words related to personality traits such as extroversion and agreeableness are often used by borrowers who defaulted on their loans. Using a holdout sample of loans, we found that adding the aforementioned text and inferred personality traits to a model based solely on financial indicators significantly increased our ability to predict loan default.

3 - Choice Modeling with Feeling: Incorporating Emotions into Discrete Choice Models

John Roberts, Prof, UNSW Business School, UNSW Business School, UNSW 2052, Sydney, Australia, johnr@agsm.edu.au

Discrete choice models have been a major success story in marketing science, both from the perspective of theory and practice. Advances in recent years include incorporation of key phenomena such as unobserved heterogeneity and belief dynamics, together with developments in model specification, have greatly increased the range of problems that they can address, as well as the accuracy and rigor with which they can address them. I argue that one way to further increase the diagnosticity and forecasting ability of choice models is to incorporate emotions. Consumer behavior scholars have long described evaluation of terms of three elements; cognitive (or thinking), affective (or feeling) and conative (or doing). I cite seventeen key articles in the consumer behavior literature each of which has its first sentence containing the critical role of affect emotions in the consumer evaluation process. And yet, if you look at ‘emotions discrete choice’ in Google Scholar, in terms of top tier articles, I come up with a null set. I see calls from economists such as Richard Thaler or economists such as George Lowenstein for work on the role of emotions in choice, but little resultant output from marketers. One reason for this is the difficulty of measuring emotions and a second is the difficulty in relating them into a model of the consumer decision process. In this paper, I present a methodology for measuring emotions and show how it can be applied in practice to increase the explanatory power of our models and improve their diagnosticity. This is done by incorporating alternative formulations of emotions in choice, consider the structure of emotions in a way similar to has been performed with cognitions using perceptual mapping, and examine the relative role of emotions in different categories, looking across a set of 100 studies of emotions in choice.

4 - Using Online Preference Measurement to Infer Offline Purchase Behavior

Daria Dzyaburab, Assistant Professor of Marketing, NYU, 40 West 4th St, Suite 805, New York, NY, 10012, United States of America, ddzaburab@stern.nyu.edu, Srikanth Jagabathula, Eitan Muller

Most preference elicitation methods that are used to design products and predict market shares, such as conjoint analysis, ask respondents to evaluate product descriptions, typically online. However, many of these products are then sold offline. In this paper we ask the question of how well preference elicitation studies perform offline when predicting consumer evaluation online. To that end, we conduct two within subject conjoint studies, one online, and one with physical products offline. We find that the weights of the product attributes ("perversions") are different in the online and offline studies and differences are large. Furthermore, we propose a model that captures this change in weights and based on this model, we derive an estimator for offline parameters, based on the respondent’s online evaluation, that is valid up to population-level parameters. We demonstrate that this estimator leads to better out-of-sample prediction than simply using the online data. We also ask respondents to state their uncertainty about product attributes, and find that while respondents anticipate some of the attributes whose weights change, they completely miss on others.

1 - Peer Effect of iPhone Adoptions on Social Networks

K Sudhir, Yale School of Management, 165 Whitney Avenue, New Haven, CT, 06511, United States of America, k.sudhir@yale.edu

This paper studies the peer effect of iPhone adoptions in China. I use a unique data set from a provincial capital city in China, in a span of over four years starting from iPhones first introduction to mainland China. I construct a social network using six month’s call transactions between iPhone adopters and all other users on a carrier’s network. Strength of social ties is measured by duration of calls. Based on the network structure, I test whether an individual’s adoption decision is influenced by his friends’ adoptions. A fixed-effect model shows that, on average, a friend’s adoption increases one’s adoption probability in next month by 0.79%, and the marginal effect decreases in the size of his current neighboring adopters. To further control for potential time-varying correlated unobservables, I instrument adoptions of one’s friends by their birthdays, based on the fact that consumers are more likely to adopt iPhones on birthdays. The IV estimation shows a comparable peer effect at 0.84%. I also investigate how network structures modulate the magnitude of peer influence. My results show that peer effect is stronger when the influencer has more friends or a stronger relationship with the influencer.

2 - The ‘Prosperity-in-Youth’ Effect in Category Adoption

K. Sudhir, Yale School of Management, 165 Whitney Avenue, New Haven, CT, 06511, United States of America, k.sudhir@yale.edu, Ishani Tewari

We show that individuals’ circumstances during youth, in particular the experience of economic prosperity, is an important driver of their lifetime willingness to adopt new categories. We label this the ‘prosperity-in-youth’ effect. Using twenty-years of panel data spanning a period of rapid growth and proliferation of new categories in China, we find that cohorts born during the 1980s and 1990s—those who came of age during high economic growth—have a 13-20% higher lifetime coffee consumption. We can further identify this effect by exploiting cross-province heterogeneity in economic growth. Individuals who spent their youth in richer provinces are more likely to drink coffee and consume more coffee—ceteris paribus, youth in the richest provinces will have double the lifetime coffee share relative to tea than their poorest counterparts. The main driver of this effect is not youths’ personal income, but rather the level of prosperity in the wider environment. Moreover, we show that this effect also holds for other modern categories, but not traditional ones. Overall, our results highlight the importance of taking into account both the temporal and geographic dimensions of past experience in assessing adoption behavior, especially in the context of high-growth emerging markets.

3 - Social Retargeting – A Randomized Field Experiment

Thomas Frick, PhD Student, Rotterdam School of Management, Burgemeester Oulilaan 50, Rotterdam, 3062PA, Netherlands, frick@rsm.nl, Ting Li

The dominant player in the area of social media advertising, Facebook, generated around 11.5 billion US revenue from advertising in 2014 alone. Social Retargeting combines the opportunities of social advertising with dynamic retargeting. This form of advertising allows advertisers to target users on social media based on demographics, personal preferences, social connections, as well as external browsing behavior on their websites. External browsing behavior is in this case used to target consumers, whobrowse on the advertiser’s product websites without purchasing, with advertising related to these products. In a randomized field experiment with a large European e-commerce company, we examine the factors that influence the effectiveness of social retargeting with respect to how closely consumers should be retargeted on social media. We focus on three dimensions of closeness, namely, (1) Product Specificity: Should consumers be re-addressed with advertising based on product or product category? (2) Temporal Distance: At what point in time should consumers be re-addressed with advertising taking their purchase decision process into consideration? (3) Social Endowment: Does social endorsement in social retargeting increase advertising effectiveness through informational social influence or decrease it via privacy concerns of consumers? More precisely, we randomly present different advertising creatives to consumers in their Facebook news feed after their visit to the company’s website. Our results can provide significant insights into how to adequately target users on social media as well as the causal relationships between the above mentioned dimensions and advertising effectiveness.
1 - Doing Good to Do Better? Consumer Persuasion Knowledge Responses to Corporate Social Responsibility
Monika Kadam, PhD student, Waterford Institute of Technology, Cork, Road, Waterford, Ireland, kadam.monika@yahoo.co.in
Corporate Social Responsibility has become a popular strategy amongst firms to give something back to the society, enhance their social image and possibly improve their financial performance. Today, information about socially irresponsible practices of firms is easily accessible through mass media, internet and social media. The present research focuses on analysing the use of consumer persuasion knowledge to evaluate CSR campaigns. This means understanding the extent to which consumers use their knowledge about how companies try to influence them while evaluating CSR campaigns by firms. The proposed research investigates the consumer psychology and consumer knowledge about persuasion tactics while making these evaluations. This puts the focus on the consumer rather than the firm or CSR campaign to understand consumer behaviour which is generic across all firms and CSR activities. The proposed research suggests that while the evaluations of CSR campaigns are moderated by consumer persuasion knowledge, they are also moderated by many other contextual factors such as perception of firm reputation, type of motive of the campaign and the intensity of this motive; for instance, whether such a motive is more appropriate or inappropriate.

2 - Efficiency and Effectiveness of “Mee Seva”: An e-Governance Project in Andhra Pradesh, India
Lalitha Rani Daggubati, Professor, Andhra University, Department of Commerce and Management St, Visakhapatnam, AP, 530003, India, daliaharani@gmail.com, V. Swamy Pulletikurthi
The high potential offered by the Information and Communication Technologies and widespread use of the internet is encouraging governments all around the world to introduce ICT tools to transform bureaucracy, reduce cost, improve governance, increase effectiveness, efficiency, reach and to fast-track economic and social progress. To provide information and services to the general public is the business of e-governance. The government of Andhra Pradesh introduced Mee Seva Project in the year 2011. The Mee Seva project is easier, faster, online, web based, transparent and secured, citizen-centric service facility, to provide convenient access to the citizens without any need for them to go to multiple Government offices for the different government services. Visakhapatnam is a coastal, port city, often called “The Jewel of the East Coast”, situated in the state of Andhra Pradesh. According to the eastern shelf of the central government of India has expressed the interest in making Visakhapatnam a ‘smart city’ and now, Visakhapatnam is on the path to become the country’s most modern city. Information Technology has become a catalyst for inducing more effective governance through better access to services for empowering the democratic process. Public are showing more interest in the use of Internet and Information Technology solutions. There is an increasing expectation that more citizens will utilize the national and local e-Government services for not only more efficient governance but also for improving public access to information and services. Efficiency of the government’s effective electronic programs is vital for the improvement and enhancement of public services. In this context, the research examines the value, efficiency and effectiveness of e-Services within the government sector, with a focus on the customers/citizens’ view of the usefulness and success of e-Service initiative with reference to Mee Seva project in Visakhapatnam City, Andhra Pradesh, India.

3 - Safeguarding Pre-Existing Resources versus Creating Value in Industrial Contracts: Theory and Evidence
Desmond Lu, Santa Clara University, 500 El Camino Real, Santa Clara, CA, 95053, United States of America, bluo@scu.edu, Giorgio Zararon, Mitnal Ghosh
Partners entering into collaborative relationships choose governance forms that balance the potential gains from these relationships with the hazards posed to their pre-existing resources and capabilities. Extant work in transaction cost economics has suggested that the issue facing firms in selecting how they will govern their collaborative relationships is how they can protect their pre-existing resources by contracting a price with their suppliers ex ante, which dis-incentivizes the suppliers from over-investing in activities that may facilitate appropriation of the OMEs' resources ex post. We then take key predictions from the model to data on procurement contracts between OEMs and their component suppliers. Consistent with our theory, but not with alternative approaches, we find that OEMs tend to use closed-price contacts, rather than open-price contracts, when their pre-existing product and customer strength are high, and that the use of closed-price contracts reduces both the supplier’s dedicated investments and the OEM’s gains from the relationship. Our work provides the first formal theory and evidence in marketing on how parties, cognizant of the direct side of relationships, strategically trade-off protection of pre-existing resources and productivity gains in a relationship. We conclude with the academic and managerial implications of our study.

4 - How do Instant Touchpoint Experiences Affect Satisfaction and Behavior: A Mobile Real-Time Approach
Umut Konus, Dr. Assistant Professor, Amsterdam Business School, Plantage Muidergracht 12, M.2.05, Amsterdam, 1018TV, Netherlands, u.konus@uva.nl, Emma MacDonald, Hugh Wilson, Jing Li
Customers experience various touchpoints along their shopping journey. These touchpoints include conventional information, purchase and after-sales service channels of firms, traditional advertising media, in-store touchpoints, online offline WOM, usage occasions and other firm, customer or others initiated encounters. Each instant experience, coupled with a touchpoint contributes to customer’s overall experience and relationship with the brand. It is relevant for researchers to know how these instant experiences influence satisfaction and behavior along the shopping process. In this research we investigate the effects of real-time touchpoint experiences on customer satisfaction, purchase and customer initiated WOM over time from an holistic perspective. We apply a novel mobile based real-time experience tracking method to track experiences from various touchpoints, including mass media, direct channels, in-store, outdoors, online, publicity and WOM. 448 customers reported more than 8000 touchpoint experiences via mobile text messages, every time they encountered their main current brand (each touchpoint may span from few minutes to several days of healthcare) in a four-week period. We employ dynamic probit models together with simultaneous equations under the control of pre-satisfaction, customer demographics and psychographics. Results show that customer instant experiences on satisfaction mainly comes from the valences of touchpoints, and not from their volumes. And these effects vary across touchpoints’ types and categories. Revealing the most influential touchpoints and experiences by using real-time mobile experience tracking will help managers to better target right customers with right touchpoints, offers and experiences.
3 - From Web to Wardrobe: Consumption Patterns in Online Apparel Retail

Tong Lu, University of Pennsylvania, 727.9 Jon M. Huntsman Hall, 3730 Walnut St, Philadelphia, PA, 19104, United States of America, tonglu@wharton.upenn.edu, J. Wesley Hutchinson

This project is aimed at understanding consumer search patterns during online shopping. In a lab experiment, we exogenously manipulated the amount of goal-directed versus stimulus-driven attention during online shopping trips by giving participants a product or a utilitarian goal for a purchase in the same product category, with visual attention captured using eye-tracking. We build a model of eye fixation choices from the landing page of the website up until the first click away. Our model captures how fixations are sequentially related accounts for product information acquisition over time through visual attention, and incorporates a stopping rule framework based on traditional economic models of optimal search. Initial comparisons of the two goal conditions suggest that utilitarian shoppers tend to exhibit more goal-directed behavior (e.g., heading directly to the specified category), while hedonic shoppers exhibit more stimulus-driven behavior and are more willing to re-orient their goals during search (e.g., searching landing page more extensively, fixating on wider range of products). We have also collected data from a parallel in-store version of the experiment. In future work, we plan to compare search patterns for online and in-store shoppers, enabled by our new method of self-cooling eye-tracking video.

4 - Debt Repayment Strategy and Consumer Motivation to Repay Debt

Sylvia Blanchard, Assistant Professor of Marketing, Georgetown University, 37th & O Street NW, McDonough School of Business, Washington, DC, 20057, United States of America, sjb247@georgetown.edu, Keri L. Kettle, Remi Trudel

This research examines how consumers’ motivation to pursue an overarching goal is affected by their selective pursuit of non-ordained subgoals. We investigate this question in a context that affects many consumers – the repayment of multiple debt accounts. Our key hypothesis is that paying down debt accounts sequentially (concentrating repayments on one account at a time) rather than simultaneously (spreading repayments evenly over multiple accounts) leads consumers to infer greater progress toward the repayment of their overall debt, which, in turn, enhances their motivation to repay their remaining debt. A large-scale field study of more than 5,000 indebted consumers reveals that the use of a multi-sequential strategy increases subsequent debt repayment success, and three laboratory experiments provides further evidence of the optimality of sequential subgoal pursuit. We also show that partial repayment of any one debt account is sufficient for the sequential strategy to enhance the motivation of indebted consumers.

3 - Do You Really Want Them Back? How Promotions Affect the Value of Ex vs. New and Current Customers

Irina Dychko, Goethe University Frankfurt, Gruenewaldplatz 1, Frankfurt, 60323, Germany. Dychko@em.uni-frankfurt.de, Christian Schulze

Firms increasingly woo ex-customers, implicitly assuming that it generally pays off to win them back. Although price promotions increase the probability to reactivate a lost customer, it is not clear whether ex-customers reacquired through deep discounts will a) be profitable in the promoted product category and b) cross-buy products from non-promoted categories. Given a limited promotional budget, should marketing managers really target ex-customers or should they maybe even exclude them from promotions and focus their efforts on new and current customers instead? In this study, we compare the impact of price promotions with different incentive sizes on new, current and ex-customers. We observe complete purchase and transaction histories of more than 60,000 clients of a financial services firm. These customers are tracked over five years after the promotion so that long-term effects can be studied. We find that utilitarian shoppers tend to exhibit more goal-directed behavior (e.g., heading directly to the specified category), while hedonic shoppers exhibit more stimulus-driven behavior and are more willing to re-orient their goals during search (e.g., searching landing page more extensively, fixating on wider range of products). We have also collected data from a parallel in-store version of the experiment. In future work, we plan to compare search patterns for online and in-store shoppers, enabled by our new method of self-cooling eye-tracking video.

4 - Incentives in the Online Labor Market: Money and/or Hobby

Yajing Jiang, Johns Hopkins University, 440 Mergenthaler Hall, 3400 N Charles St, Baltimore, MD, 21218, United States of America, yjiang0@jhu.edu, Jian Ni, Xinlei Chen

The popularity of online labor market, especially in the form of contest, allows employers to attract the talented labors, while help diligent and determined workers offer their service to the employers who value them most. Such market is also credited for being effective to spur innovation. Even though the rebate structure is widely adopted in these platforms, other types of reward schemes are discussed and/or advocated. Using a unique field experiment induced by the reward scheme change in one of the leading online labor market platform, we find workers behave differently in response to the monetary incentives. The higher rewards do not necessarily lead to better quality work. We then devise some stylized theoretical models to explain such phenomena. The nature loving the job itself (in this case, programmer) turns out to be important in designing the labor market incentive. This is due to the fact that providing high reward might attract the “wrong” people into the game because it reduces the average quality of the submission. We further test the model implication based on the post-experiment data. We find there exhibits two types of programmers consistent with the theoretical prediction. We conclude that without considering these nonmonetary incentives, the online labor market designed to attract best talents could undermine the good intention of the platform and the recruiters.

TC05

03 - Third Floor, GB 7

Working Paper VI

Contributed Session

Chair: Monic Sun, Boston University, 595 Commonwealth Ave, Boston, MA, United States of America, monic@bu.edu

1 - Why Keep Your Product Value Secret from Competitor’s Customers?

Mushheg Harutyunyan, Washington University in St. Louis, 1 Brookings Dr, WUSTL, Seigle Hall, Room 307, St. Louis, MO, 63130, United States of America, m.harutyunyan@wustl.edu, Baorui Jiang

A firm’s customers often have better knowledge about the benefits or value of the firm’s product than non-customers. We consider a situation in which customers learn some unanticipated or hidden value use of the purchased product while the non-customers remain uninformed about this extra value. Clearly, a monopolist will find it optimal to inform the non-customers of its hidden product value. However, our analysis reveals that it is not necessarily the case when the firm
faces competition in the market. We show that the firm may be better off if it keeps its hidden value secret from its competitor's customers even if it is costless to advertise and inform those customers. Keeping its product's extra value secret gives both firms incentives to continue to serve their own existing customers rather than to poach the competitor's customers. This will alleviate price competition and increase both firms' profits.

2 - Competitive Mobile Targeting

Monic Sun, Boston University, 595 Commonwealth Ave, Boston, MA, United States of America, monic@bu.edu, Yuxin Chen, Xinxin Li

We investigate in a competitive setting the consequences of mobile targeting, the practice of firms setting prices based on consumers' real-time locations. A distinct market feature of mobile targeting is that a consumer could travel across different locations for an offer that minimizes his total cost of buying. This cherry picking opportunity imposes constraints on firms to carefully balance prices across locations, which in turn weakens their price competition at each location. As a result, a firm's profit can be higher under mobile targeting than under uniform pricing or under targeted pricing based on consumers' permanent location. Extending the main model, we also discuss how the profitability of mobile targeting may change with the fraction of consumers who are mobile accessible to the firm, the distribution of consumers across locations, and the possibility of tracing down a consumer's base location and restricting him to offers at that location. Our findings have important managerial implications for marketers who are interested in optimizing their mobile targeting strategies.

TC06

06-Third Floor, GB 8

Decision Neuroscience I (Origins and Applications)
Cluster: Special Session
Invited Session

Chair: Carolyn Yoon, Professor, University of Michigan, 701 Tappan Street, R3374, Ann Arbor, MI, 48104, United States of America, yoonmc@umich.edu

1 - Decision Neuroscience: Its Birth, Current State and Future

Antoine Bechara, bechara@usc.edu, University of Southern California

Decision neuroscience is an emerging area of research whose goal is to integrate research in neuroscience and behavioral decision-making. Neuroeconomics is a more specialized field of study that seeks to bridge neuroscience research on human choice with economic theory, whereas neuromarketing addresses the neuroscience behind consumers' choices, including product branding, preference, and purchase decisions. All these areas capitalize on knowledge from the fields of neuroscience, behavioral economics, finances, and marketing to explore the neural "road map" for the physiological processes intervening between knowledge and behavior, and the potential interruptions that lead to a disconnection between what one knows and what one decides to do. Decision neuroscience can enrich our understanding of a variety of human decision-making phenomena that inform many areas of life, and which interest the economists, marketing specialists, neuroscientists, psychologists, and physicians attempting to understand the neural basis of judgment and decision-making in social behavior and market economies. In this presentation, I will review the birth of this field, the past decade of research in decision neuroscience, and an outlook on where the field could be moving in the future.

2 - Neural Prediction of Crowdfunding Decisions

Carolyn Yoon, Professor, University of Michigan, 701 Tappan Street, R3374, Ann Arbor, MI, 48104, United States of America, yoonmc@umich.edu

The popularity of crowdfunding on the internet has grown exponentially in recent years, with over $10 billion raised in 2014, and that amount expected to double in 2015. Crowdfunding platforms offer a unique opportunity for individuals to engage with products as both financial supporters and consumers. The present study investigates the neural and psychological mechanisms responsible for individual decisions to fund projects. In particular, it focuses on the ability of neural activity to predict funding behavior. Participants made decisions regarding crowdfunding projects using real money while in the fMRI scanner. Neural analysis contrasting whole-brain activity in trials in which participants decided to fund versus trials in which they did not identify specific neural circuits whose activity predicted individuals' choices to contribute to crowdfunding projects. Greater activation in brain regions associated with positive affect (i.e., bilateral nucleus accumbens and caudal anterior cingulate) and valence integration (i.e., medial prefrontal cortex) predicted eventual decisions to fund. This activity occurred before the decision phase of the trial, and is thus temporally distinct from activity associated with the act of indicating a choice. In other words, neural activity while viewing the project information during an early phase of the trial successfully predicted decisions to fund later in the trial. This finding provides insight on the neural mechanisms to predict funding decisions in a new domain of consumer decision-making with significant economic consequences, to home theoretical accounts about which neurophysiological mechanisms drive crowdfunding decisions, and eventually, to improve the practice of constructing effective project appeals.
2 - A Flag-Up Algorithm and Test for Non-Stationary Customer-Specific Product Graphs

Morton H. J. Fenger, PhD Student, Aarhus University, Bartholinsalle 10, Aarhus, DK 8000, Denmark, mhjfenger@badm.au.dk, Joachim Scholderer

Panel scanner data allow detailed analysis of the behavior of individual customers. We show that, when individual shopping baskets are represented as unweighted product graphs, and their aggregations over time as weighted product graphs, assumptions about the stationarity of such graphs are equivalent to assumptions about the stationarity of any Markov process. However, when the vertex set is defined by the SKUs of a retailer, the transition matrix governing the process becomes so large that computationally feasible tests of stationarity have to be based on sparse data representations. We propose a feasible test against the null hypothesis that a given customer has a stationary basket composition. We suggest an algorithm that compares graphs at consecutive periods in terms of weighted lists of edges that are actualities of previous hierarchically merged edges to ensure that all expected values are above five. The resulting statistic is Chi-square distributed, with degrees of freedom equal to the number of edges that are present, with a penalty based on shopping basket size. The test is demonstrated using panel scanner data from 4,921 supermarket loyalty card holders over a 19-month period. The results show that the test is clearly able to identify customers with evolving behavior, and that it can easily be deployed as part of a CRM system. It enables companies with loyalty programs to focus on nonstationary customers, i.e. customers who may represent opportunities for cross-selling and customers who may be likely to churn.
1 - Weather Sensitivity Analysis (WSA) in Grocery Shopping Trip

Consumers find the reviews as well as product sales. We use consumer reviews from Amazon.com across several product categories to obtain the numerical evaluation (star rating) and the text of the review for thousands of reviews. Additionally, for each review we have used the text content of the review and rate the review solely based on the textual content. This two sources of data give us a measure of divergence between the numerical ratings and the equivalent measure of the textual data. We find that inconsistencies, i.e., instances when the text was inconsistent with the overall numerical rating, were informative with respect to how helpful other consumers find the reviews as well as product sales.

4 - Multi-Scale Tomography Analysis of Online Network Communities for Predicting the Emergence of Collective Social Behavior

Danny Shapira, Guilford Glazer Faculty of Business & Management, Ben-Gurion Univ. of the Negev, Beer Sheva, Israel. shapirad@bgu.ac.il, Yaniv Dovber, Jacob Goldenberg

Social network theory was built using mathematical underpinnings that were developed based on the foundations of graph theory, wherein the units of analysis are nodes and links that represent individuals and their social ties. While it is true that consumers derive value from their close peers, we argue that in order to study network stability, more extended subnetworks, or social circles, are equally important (yet often ignored). Social circles can exist across scales—from the level of small core groups up to the level of an entire network. Our main premise is that the “stress” and “stress-scores” construct a “net” that binds the communities of consumers together and enable a network to grow, while maintaining stability. Therefore, mapping the multi-scale structure of social circles can provide valuable insights, in particular, in understanding the real propagation of networking. We will present a multi-scale tomographical online network analysis approach that facilitates the prediction of network stability and enables managers to predict and monitor the growth and wellbeing of online consumer communities.

TC10

10th Floor, Dover C

Retailing III

Contribution Session

Chair: Els Breugelmans, Associate Professor, Faculty of Economics and Business, KU Leuven, Korte Nieuwstraat 33, 2000 Antwerpen, Belgium, Els.Breugelmans@kuleuven.be

1 - Weather Sensitivity Analysis (WSA) in Grocery Shopping Trip

Sangkil Moon, Associate Professor, UNC Charlotte, 9201

University City Boulevard, Charlotte, NC, 28223, United States of America, smoon13@unc.edu, Younghan Bae, Moon Young Kang

Although weather is known to influence consumer behavior and, accordingly, businesses react to weather-caused consumer behavior, marketing scholars have not examined weather marketing as intensively as its importance suggests. To fill this research void, we choose the grocery shopping setting, where weather can influence shopping behavior and basket size. We theorize that the weather event (e.g., rain, snow, thunder, fog) and the temperature discrepancy (the discrepancy from the standard temperature condition 68°F) decrease both shopping in general and because such unfavorable weather brings shoppers’ mood down. In the shopping trip, however, the negative weather impact is mitigated for less frequent shoppers because less frequent shoppers have higher basic shopping needs than more frequent shoppers. Similarly, in the basket size, store price familiarity lessens such a negative weather impact because shoppers in a familiar environment feel less uncomfortable about unfavorable weather. To explain both shopping trip and basket size simultaneously, we use a type 2 Tobit model. Using the grocery shopping data of Eau Claire, Wisconsin, we empirically support our weather marketing hypotheses.

2 - How Should Specialty Stores Compete with Big Box Retailers?

Huihui Wang, Duke University, 100 Fuqua Drive, Durham, NC, 27708, United States of America, huihui.wang@duke.edu.

Wilfred Amaldoss, Preysas Desai

Search is costly and it affects store visit and purchase decisions. In this paper, we examine how store visit costs and evaluation costs affect the strategic behavior of consumers and, in turn, the pricing, promotion, and product portfolio decisions of competing retailers. Our analysis offers insights on how specialty stores can compete with big box retailers in the market, wherein consumers incur a travel cost to visit stores and an evaluation cost when examining the product at the store. In our model, a specialty store selling a niche product competes with a big-box store selling the niche product and a basket of staple goods. By visiting the big-box store, consumers can enjoy one-stop shopping but the specialty store can help reduce the evaluation cost by providing better product information and customer service. In the case that the big-box store sells the niche product at a price lower than the specialty store. Depending on characteristics of consumers that choose to go to the big-box store first, the big-box store wins if price is either higher or lower than the price of the specialty store. Interestingly, we also find that the entry of the big-box store hurts the specialty store’s profits even when the big-box store charges a higher price. We then examine a strategy to derive conditions under which the specialty store earns higher profits than the big-box store from the niche product.

3 - Agglomerated Retail Locations as the Market Equilibrium of Customer Service

Purushottam Papalia, Professor, University of Wisconsin-Milwaukee, 3202 N. Maryland Avenue, Milwaukee, WI, 53211, United States of America, papalia@uwm.edu, Amit Bhattacharga

An age-old issue in retail location studies is why do retailers co-locate. Logic would suggest that stores locate far from each other to minimize the competition. Co-location makes product and price comparison less expensive for consumers and, hence, cannot be the optimal strategy. Empirical research, however, suggests that retailers do co-locate to benefit from demand by consumers who value retail agglomerations. Further investigations into the reasons why consumers value agglomerated retail locations identify two types of consumers: (1) those who are imperfectly informed and, hence, engage in search; these consumers seek reductions in search costs through the proximity of various retailers (Brown 1989) (2) those who are interested in multi-purpose shopping (McAleffy and Ghosh 1986). We suggest that there could be a third factor that can explain consumer interest in shopping in agglomerated locations: customer service. Our key argument is that co-location of stores reduces price dispersion thus increasing retailers’ desire to gain a competitive advantage through service. Specifically, we theorize that retailers in agglomerated locations offer better service than stand-alone retailers or those that operate in areas with lower agglomeration. The consequent consumer preference to shop in agglomerated locations, in turn, attracts retailers to operate in such locations despite the proximity to competition and the costs of increased customer service. We test our theory using online consumer ratings of retailers of a broad range of products and services. The data includes precise coordinates of the geographic locations of the retailers thus permitting us to assess the feasible distance of competition. Our empirical findings support our theory. Specifically, we find that as agglomeration increases consumer ratings of customer service of retailers also increase. The inclusion of a broad range of retailers, products, and services and, hence, diverse consumers, reduces the likelihood of poorly informed consumers or consumers who prefer multi-purpose shopping as endogenous explanations for our finding.

4 - The Clash of the Titans: On Retailer and Manufacturer Vulnerability in a Conflict Delisting

Els Breugelmans, Associate Professor, Faculty of Economics and Business, KU Leuven, Korte Nieuwstraat 33, 2000 Antwerpen, Belgium, Els.Breugelmans@kuleuven.be, Kathleen Cleerens, Sara Van der Maelen

In the grocery retailing landscape, retailers have gained power and the days of dominant manufacturers dictating the game are long gone. As a result, negotiations between both parties can be tough, and can escalate in major clashes. In such a clash, a weapon often used by both parties is the threat or the idea to delist the manufacturer’s brands from the retailer’s assortments, i.e., a conflict delisting. The objective of this study is to investigate the changes in brand and retailer share that occur as a result of a conflict delisting to gain insights in the retailer’s or the manufacturer’s vulnerability caused by consumers switching stores and brands, respectively. We expect that the vulnerability of both parties depends on several brand, retailer and category characteristics in the Belgian market that affected 47 categories, and 59 brands of the manufacturer. Overall, we find that the average shift in brand share is decreasing when compared to before the delisting is positive, whereas the average shift in retailer share is negative. Although the retailer, on average, seems to draw the short end of the stick in the conflict under research, there is a substantial amount of variability across stores in different brand-category cases, resulting in cases where the retailer outperforms the manufacturer.

5 - Measuring the Effects of a Supported Targeted Couponing Program in a Supermarket Chain

Julian Villanueva

Targeted couponing programs (TCPs) are becoming more popular as retailers embrace the big data revolution and decide to use the richness of transaction data to implement a level of targeting that previous promotional schemes could not achieve. The authors propose a method of measuring the effectiveness of coupons issued in the context of a TCP, compare the elasticities of different coupons types and, finally, analyze coupon elasticities and TCPs effectiveness heterogeneity at the store level. Their unique dataset allows them to observe a sustained program targeting 393,000 loyally cardholders in 349 European stores for a two-year period. The retailer of study issued two types of coupons: reward coupons with the goal of keeping customers from other competitor and trial coupons to invite customers to buy product categories they were not currently buying. The authors find that the two types of coupons have a substantial amount of variation across stores, and that consumers exhibiting a more intense use of them (i.e., higher redemption levels) had a better weekly sales evolution.
1 - Revisiting Rural India’s Periodic Markets: RRA of Two HAAs
Pratik Pratap, Assistant Professor, GIM, Goa, Sanquelim, GOA, GO, 403505, India, pratik@gim.ac.in

Serving the remote rural consumers in emerging economies like India have always been a challenge for the marketers. Similarly, researchers have often remarked that traditional tools used in urban milieu are not easily applicable to the rural settings. Growing importance of the emerging markets and their regional segments, off late, require marketers and researchers to use innovative research tools to understand the rural in better manner. Rapid Rural Appraisal (RRA) is one such tool that can help the marketers in such rural endeavours. This tool has evolved over time and has recently attracted the attention of rural market researchers. This tool, until now, has largely been used by the non-profit sector to study the needs of the beneficiaries’ and to explore non-explicit barriers to social projects. In this paper we report how this tool can be adopted to study the traditional periodic rural markets, the Haats, in India. Finally, we have briefly discussed how the findings of the study may help marketers to develop appropriate marketing strategies to efficiently reach the rural consumers.

2 - Measuring the Agglomeration Effect on Consumers’ Store Choice
Veerabhadra, Assistant Professor, GIM, Goa, Sanquelim, GOA, GO, 403505, India, pratik@gim.ac.in

We study the expansion of two rival sandwich chains (Pret a Manager and Eat) within central London to identify any strategic interactions that could play a role in urban chain-store proliferation. Our analysis builds on a panel model of store entry into a set of neighborhoods, using store-level yearly traffic data to measure market size. We find that firm’s presence in a market has a net positive impact on either firm’s probability of entry. Based on how the market entry-strategic effect varies with market size, we test for three alternative explanations of this finding (demand expansion, learning, entry deterrence). In Eat’s expansion pattern, we identify a positive spillover due to learning from other locations, while in Pret’s expansion, we find evidence that the positive sign of the strategic effect may derive from a market deterrence strategy. The entry deterrence conjecture is also supported by results from a dynamic structural model which suggest asymmetric competitive effects, with only Pret being able to exert exert competitive pressure on rival firm’s profits. The proposed explanations are consistent with Pret’s incumbency status in a high majority of the markets.

3 - London Sandwich Wars: The Role of Strategic Interactions in Urban Chain Store Proliferation
Ali Umut Guler, Assistant Professor, Koc University, IBIP Sariyer, Istanbul, 34450, Turkey, umuguler@ku.edu.tr

We study the expansion of two rival sandwich chains (Pret a Manger and Eat) within central London to identify any strategic interactions that could play a role in urban chain-store proliferation. Our analysis builds on a panel model of store entry into a set of neighborhoods, using store-level yearly traffic data to measure market size. We find that firm’s presence in a market has a net positive impact on either firm’s probability of entry. Based on how the market entry-strategic effect varies with market size, we test for three alternative explanations of this finding (demand expansion, learning, entry deterrence). In Eat’s expansion pattern, we identify a positive spillover due to learning from other locations, while in Pret’s expansion, we find evidence that the positive sign of the strategic effect may derive from a market deterrence strategy. The entry deterrence conjecture is also supported by results from a dynamic structural model which suggest asymmetric competitive effects, with only Pret being able to exert exert competitive pressure on rival firm’s profits. The proposed explanations are consistent with Pret’s incumbency status in a high majority of the markets.

3 - Location and Long-Term Store Loyalty: A Multi-Level Multi-Membership Model
Christina Kuehn, University of Mannheim, L5, 1, Mannheim, Germany, kuehn@bwl.uni-mannheim.de, Christian Homburg, Hansa Schmalensee

For long, researchers and practitioners acknowledge the location of a retail store as one or even as the most important property of a retail store. Findings on this effect, however, are mixed. These ambiguous results may originate from several restrictions in extant research. For example, studies often model location by consumers’ perceived location convenience or the geographic distance between the consumer and the store (in miles) do not account for competing stores’ restriction consumers’ loyalty to one instead of several stores, and frequently focus on a limited set of drivers of store long-term loyalty. Extending prior research, we develop a multi-level multi-membership model to better predict store long-term loyalty, focusing specifically on the role of location. We develop a model that includes several variables at the retail brand level (e.g., pricing), at the store level (e.g., store size), and at the customer level, which either act as direct effect (e.g., demographics such as household size) or moderators (e.g., psychographics such as shopping enjoyment) for store loyalty. The model is estimated on a large rich, rich, household panel data with rich geographic information systems (GIS), and consumer survey data for 26 retail brands, 18,741 stores, and 97,525 households across a 3.5-year time period. Accounting for competing stores and consumers’ loyalty to several stores, our results indicate that the location of a retail store – estimated by travel distance (in microns) – is indeed an important determinant of the importance of location of store location, however, varies with consumers’ psychographics, retail brand characteristics, and the availability of competing stores.

1 - A Pace Too Brisk, a Bridge Too Far? Toward a Better Understanding of Firm Growth
Moemen Butt, Assistant Professor, Marketing, Ivey Business School at Western University, 1255 Western Road, London, ON, N6G 0N1, Canada, mbutt@ivey.ca, Kersi Antia

Firms differ starkly in their market development strategies – in the present context, their establishment and survival in new markets. While some firms opt for rapid expansion of their footprint in the interests of generating a “big splash”, others adopt a near glacial approach to market development, purportedly to “get things right”. These contrasting approaches to market development reflect deep-seated differences in firms’ growth imperatives. The present study addresses two very specific questions about firm growth: (1) How do firms choose the markets in which to expand? (2) At what pace and how should firms aim to achieve positive performance outcomes? We synthesize Penrose’s (1959) seminal research on firm growth with coordination-related insights from agency theory (Brickley and Bark 1987) and geographic information system (GIS)-informed metrics of span of control to provide a better understanding of firm growth. Our analysis of 75 franchise firms’ market development strategies across 50 US states over more than a decade helps unpack two facets of growth - pace (the speed with which the firm grows relative to its current size), and span (the dispersion of the firm’s market presence). We further demonstrate how these two facets of growth work singly and in combination to pose critical implications for firm’s performance. Keywords: firm growth, market development, firm performance, geographic information systems, franchising.

2 - The Time-Varying Effect of Marketing-Mix on Sales
JeeWon Brianna Choi, Assistant Professor, Georgia State University, 3348 Peachtree Rd. NE, Suite 204, Atlanta, GA, 30326, United States of America, jchoi43@gsu.edu, V. Kumar Mallik Greene

Firms are constantly challenged with limited marketing resources and increased complexity in the market due to the rapid growth of social media. Firms need to understand marketing-mix effectiveness on sales in order to stay competitive and make sound marketing strategies. One potential challenge could be that the effectiveness of marketing-mix elements could be changing over time. Few studies have examined the time-varying effect of marketing-mix variables; however, these methods are very complex and they rarely consider new variables such as social media. We propose a flexible non-parametric model that is optimal to understand the true effectiveness of marketing-mix including the social media and is sufficiently large to implement and comprehend for practitioners. We apply the model on a dataset of consumer packaged goods (CPG) monthly sales data available for 3 years. We also empirically compare TVEM with a static model to demonstrate the efficacy of their method. The results suggest that the effects of time and product and channel specific time-invariant variables also have time-varying effects on sales. Moreover, TVEM with all variables changing over time have a higher predictive accuracy. This study should benefit both the researchers and the managers involved in a CPG industry to better understand the effectiveness of their marketing efforts and to build better marketing strategies.

3 - How Outbound Marketing Increases Asymmetry and Inbound Marketing Reduces It- A Study of Customers
Ashish S. Magjati, University of Maryland, College Park, MD 20742, United States of America, kmaiji@umw.edu

Inbound marketing refers to a collection of marketing strategies and techniques such as customer and search engine optimization that is focused on pulling relevant prospects and customers toward the brand (Steinbrech, Avery and Dabosh 2009). Outbound marketing is used as a reference to traditional forms of communication such as advertising (Trusov, Bucklin, Pauwels 2008). In this study we take the perspective of the firm and study both in-bound and out-bound marketing on the firm’s ability to reduce asymmetry between the consumer and the firm. Traditionally, asymmetry has been studied from the perspective of the consumer who is attempting to differentiate good sellers from bad (Connelly, Certo, Ireland, and Reutzel 2011; Kirmaji and Rao 2000). We argue that bad customers provide more cost to the firm than revenue and firms would benefit from differentiating between these two types of customers. For example, a homeowner that wishes to purchase a new fence may seek four estimates and this means that three businesses will spend time and energy giving estimates and not make any revenue from the customer. Using data from the home services market we examine whether firms can differentiate good customers from bad based on different in-bound and out-bounding forms of marketing. Our results indicate that certain forms of in-bounding increase the probability that a lead will...
turn into a customer over time while certain forms of outbounding have the opposite effect. Outbounding efforts may actually be increasing the costs the firm incurs which is ironic because this paid form of advertising is often targeted towards the customer (Trusov et al. 2008). Alternatively, inbounding efforts which do not target customers directly, can reduce costs while increasing the probability of obtaining a customer.

4 - Information Asymmetry and Myopic Management of Marketing and R&D: Evidence from a Quasi-Natural Experiment
Sundar Bharadwaj, University of Georgia, Terry College of Business, Athens, GA, 30602, United States of America, Sundar@uga.edu, Atanas Nikolov

Prior research documents a significant prevalence of myopic marketing actions by public firms and points to its negative consequences for firm performance and competitiveness. We examine the effect of reduction of information asymmetry on myopic marketing actions. We explore the role of information production and intensive monitoring of corporate management in reducing myopic marketing actions. We exploit a quasi-natural experiment, to show the causal negative effect of reduction of information asymmetry on myopic marketing management in public firms.

TC13
13 - Fourth Floor, Harborside A
Digital Marketing III
Contributed Session
Chair: Hsin-Chen Lin, Assistant Professor, University of New Brunswick, 7 MacAulay Drive, Tilley Hall 337, Fredericton, NB, E3B5A3, Canada, hs.lin@unb.ca

1 - The Role of Incentives in Online Message Diffusion
Helen (Elham) Siuki, Macquarie University, Balaclava Road, North Ryde, Sydney, 2109, Australia, helen.siuki@mq.edu.au, Cynthia M. Webster

Viral marketing enables companies to exploit the power of electronic word-of-mouth (e-WOM), allowing consumers to promote the product and brand messages within social media networks. The potential to reach a broad and diverse range of consumers, both quickly and cost effectively makes viral marketing attractive for more and more organizations every day. Despite a fast growing body of research that investigates the factors facilitating the diffusion of online messages, few studies examine the impact of incentives on online message diffusion within social media networks. In response to the lack of research in the area, this paper investigates the role of both extrinsic and intrinsic incentives on online message diffusion. Monetary and non-monetary extrinsic incentives such as discounts, rebates and loyalty programs are commonly used by companies to engage and reward their consumers increasing awareness, sales and customer loyalty. Little however is known about the effects of such intrinsic incentives as social approval, reciprocity and self-image. The psychology and economic literatures suggest that extrinsic and intrinsic incentives may reinforce each other, but unintended consequences may also arise. Some studies show that introducing extrinsic monetary rewards may actually reduce individuals’ intrinsic motivation. To clarify the role of incentives, this paper reviews a broad range of research and examines several successful viral marketing campaigns to develop a conceptual framework. The framework includes marketing, individual and network factors and proposes ways in which both extrinsic and intrinsic incentives interact to influence message diffusion within social media networks.

2 - The Impact of Multi-Channel Advertising and Inertia on Online Search and Purchase
Yi Yi Li, PhD Candidate, UT Dallas, 800 West Campbell Rd, SM32, Richardson, TX, 75080-3021, United States of America, yil110@utdallas.edu, Ying Xue, Zheng Yang, Sheng Li

The spurs and multiplicity of Internet advertising have made multi-channel attribution an immediate challenge to marketing practitioners. Standard solutions in the industry including single source attribution models and fractional attribution models suffer from at least three drawbacks. First, analyzing the converting path with respect to a local firm only may yield biased estimate of ad effectiveness since the impact of competitors is unaccounted for. Second, focusing overly on conversion deprivates these models from providing much insight on how to choose the optimal ad format at different shopping stages. Third, none of these models have considered the impact of inertia on customer’s purchase decision, which may lead to an underestimation of the long-run effectiveness of digital ads.

To overcome these deficiencies, we propose an integrated three-stage choice model that considers individual customers’ search and purchase decisions across all competitors to analyze the effects of touches on (1) customer’s choice of entry site, (2) their decisions about continuation of search, and (3) their subsequent purchases at one of the searched sites. Based on an individual-level path data from the online air-travel industry, we find that prior touches through email and display ads significantly increase the website’s probability of being chosen as the entry one, and current touches through search engine and display ads are effective in increasing conversion rate. Our results also suggest that structural state dependence due to customer loyalty exists in both search and purchase stage. Lastly cross channel elasticity in ad-engagement to quantify the sales impact of additional ad investment.

TC14
14 - Fourth Floor, Harborside B
Internet III
Contributed Session
Chair: Seoungwoo Lee, PhD Candidate, Robert H. Smith School of Business, University of Maryland, 3300 Van Munching Hall, University of Maryland, College Park, MD, 20742, United States of America, seoungwoo@rhsmith.umd.edu

1 - Customer Engagement in a World Atwitter
Gina Brynielsdottir, Doctoral Student, Florida Atlantic University, Department of Marketing, Boca Raton, FL, 33431, United States of America, glavagna@fau.edu, C. M. Sashi

The revolutionary impact of the Internet on communication, especially the advent of Web 2.0 social media and its potential for engaging with customers and building relationships in various industries, has excited marketing academics and practitioners worldwide and generated much interest in the concept of customer engagement. Retailers in particular have recognized the opportunities afforded by these new communication media to connect and interact with large numbers of individuals and organizations in real time asynchronously regardless of location. By engaging with individuals and organizations, retailers hope to satisfy, retain, and turn some into loyal or desired customers who become advocates for them and fans. In this study we empirically investigate customer engagement and the factors influencing advocacy with Twitter data for a sample of U.S. quick service restaurant customers. The findings indicate that calculative commitment, affective commitment, and connection with customers are the most important factors influencing advocacy at least for U.S. quick service restaurant customers’ usage of Twitter.

3 - The Impact of Candidate Social Media Presence on Election Results
Hsien-Chen Lin, Assistant Professor, University of New Brunswick, 7 MacAulay Drive, Tilley Hall 337, Fredericton, NB, E3B5A3, Canada, hs.lin@unb.ca

The use of social media as a political marketing campaign has grown dramatically over the last few years. It is also expected to become even more critical to future political campaigns, as it creates two way communication and engagement that stimulates and fosters voters’ attachment to candidates. The current research examines how elements of a political candidate’s social media online presence influence electoral outcomes to help us better understand how candidate’s online marketing efforts can benefit their electoral performance. Online social media data was acquired from 84 candidates running in a recent municipal election and analyzed using logit model. Results suggest that the candidates’ visibility, authenticity, and their number of followers have positive effects on electoral outcomes, with their online authenticity being especially important. The current findings have theoretical implications for understanding the unique elements of a social media marketing campaign designed to promote a personal brand and also have more specific practical implications for political candidates seeking to gain voter support and build their personal brand image through online social media.

4 - Free Sample Promotion: New Understandings of Its Effects and Optimization
Lin Boldt, Assistant Professor of Marketing, Clark University, 950 Main Street, Worcester, MA, 01610, United States of America, lbsoldt@clarku.edu, Hee Mok Park, Neeraj Arora

Free sample promotion is an effective method to attract new customers, introduce new products, and generate incremental sales. Although used widely in the industry, the literature on free sample promotion is sparse. Most of the prior research on free sample promotion has been focusing on the effects of sampling on sales or market share. The literature on marketing mix modeling or sales response modeling largely treats free sample promotion interchangeable with other promotion methods. The present study aims to give a nuanced exploration of free sample promotion as a unique promotion method. It addresses the following questions: 1) How should free sample promotion be effectively used in cross selling efforts, i.e., should free samples be the same exact product, product in the same product category or product in a different product category that the customer has purchased before? 2) How can free sample promotion be used effectively in coordination with other promotional methods, such as price discount, emails, catalogues and sales reps? A unique dataset was acquired from a leading promotional product company. It builds its main marketing and sales effort on a “push” marketing strategy – mailing prospects and customers a sample and following up with a phone call. It also utilizes other promotion methods such as emails, catalogues and price discounts. The dataset includes information on purchase history, pricing, sampling contact, salesperson contact, email contact, catalogue contact and customer demographics.
The primary objective of this study is to conduct an empirical investigation of mobile app publishers’ dynamic versioning decisions on offering free, paid, or both versions of their dynamic choice structural model with a focus on understanding how different versioning strategies incorporate both direct and indirect revenue sources of mobile apps and captures inter-temporal and cross-version dynamics of mobile app demand. We employ the state-of-the-art Bayesian IIC estimation technique and estimate an app publisher monthly revenue via advertising networks and free and paid apps’ expected revenue from in-app purchases. We also find that new installs are more costly than previous installs for app publishers. The discount factor is estimated to be 0.973. Our demand model also reveals a variety of inter-temporal and cross-version effects between free and paid apps. A secondary objective of the paper is to investigate alternative pricing structures imposed by mobile app distribution platforms via policy simulations based on our dynamic structural model. Our policy simulations show that applying a slightly lower commission rate to the revenue generated from paid-app downloads and a higher commission to in-app purchase revenues would increase the platform’s revenue by over 6%, while it does not harm the revenue of the apps on the platform. In addition, the number of apps on the platform is predicted to increase if the platform would use this commission structure. Further, introducing a certain rent and lowering the commission would significantly present another commission structure where both platform and app publishers can be better-off in terms of revenue and/or profit.

3 - Understanding Consuming, Contributing and Creating Behaviors on Social Networks with Network Structures
Dami R. Renard, Researcher, Institut Mines Télécom, 9 rue Charles Fourier, Paris, France; damien.renard@telecom-em.edu, Christine Balague, Lamy Benamar

This research aims at classifying social networks users’ behaviors and modeling impact of social network structures on three categories of actions: consuming, contributing and creating. An empirical study on 1,825 users of a social network specialized on food and recipes shows first that we can score users regarding their action of consuming, contributing and creating. In a second step, we create different graphs of interactions between individuals and characterize each of the three behaviors by network structures variables. We show that creators belong to a central layer, contributors to an intermediary layer and consuming to a peripheral layer of users.

4 - Understanding Demand Dynamics in Online Auction Markets
Sang-Uk Jeung, Assistant Professor, Hankuk University of Foreign Studies, 107 Iumn-ro, Dongdaemun-gu, Seoul, Korea, Republic of, sanguk.jeung@hufs.ac.kr

A growing number of vendors are using online auctions to sell large inventories of identical items. These auctions that are scheduled in sequential, overlapping or simultaneous manner, create an auction market that lasts over a period of time. In these online auction markets, the choice of market design parameters and market information thereby influencing bidding behavior. As bidders change their strategies and willingness to pay in these dynamic markets, we observe change in overall market demand. Therefore, understanding the interplay between market design parameters and demand dynamics in these auction markets is crucial for auctioneers. While bidding strategies and bidder behavior in these auctions have been studied, there is research exploring how auction design can affect market demand. This research aims to fill this gap. Using real world data from a large online auction website and dynamic panel estimation, we find that supply and demand perception of the bidders in sequential auctions affect their choice of bidding strategies which in turn affect auctioners’ revenue.

2 - Free, Paid, or Both: Dynamic Versioning Decisions for Mobile Apps
Seoungwoo Lee, PhD Candidate, Robert H. Smith School of Business, University of Maryland, 3330 Van Munching Hall, University of Maryland, College Park, MD, 20742, United States of America, seoungool@rhsmith.umd.edu, Jie Zhang, Michel Wedel

2 - Idea Generation, Creativity, and Prototypicity
Oded Netzer, Associate Professor, Columbia University, 3022 Broadway, New York, NY, 10027, United States of America, on21@boumba.com, Olivier Touba

In this paper we use text mining and semantic network analysis tools to improve our understanding of the idea generation process. Our contribution is both theoretical and practical. From a theoretical perspective, we link the judged creativity of an idea to the semantic relationships among the set of concepts used to form this idea. The concepts related to any idea generation topic can be represented as a semantic network. Each idea contains a subset of these concepts, which form a semantic subnetwork. The structure of this subnetwork reflects a distribution between novel and familiar combination of concepts. We show a “beauty in averagesness” or prototypicality effect, such that ideas with semantic subnetworks that have a more prototypical structure are judged as more creative. We show the robustness of this effect in eight studies across multiple domains. While we focus on judged creativity, the effect also holds with measures of overall idea quality coming from consumers or industry experts. From a practical perspective, we show that our research may be used to automatically text mine and identify promising ideas, and develop online idea generation tools that recommend concepts to users on the fly to help them improve their ideas.

3 - Identifying Relevant Attributes in Conjunct Analysis using Support Vector Machines
Ricardo Montoya, Assistant Professor, Department of Industrial Engineering, Universidad de Chile, Republica 701, Santiago, Chile, rmontoya@di.uchile.cl, Julio LlPérez

This paper presents a new approach to identify the relevant attributes that consumers use when evaluating alternatives in a choice-based conjoint context using only consumers’ decisions, problem known as “attribute non-attendance.” Our approach is grounded on a Support Vector Machine (SVM) formulation that has proven important predictive ability in marketing contexts, and obtains a more parsimonious representation of consumer preferences than the traditional SVM model. We test our approach through an extensive simulation study that shows that the proposed approach can recover the sparseness implied by irrelevant attributes. We also illustrate the characteristics and use of our approach on two existing choice-based conjoint datasets. The results show that the proposed method has better predictive accuracy than competitive approaches, that it improves the understanding of customer preferences, and that it provides additional information on an individual level. Implications for marketing decisions are discussed.

4 - The Sleuth Game: Predicting Consumer Response to As Yet Unspecified Product Features for Really New Products
John Hauser, Kirin Professor of Marketing, MIT, 77 Massachusetts Avenue, Cambridge, MA, 02139, United States of America, hauser@mit.edu, Songting Dong, Min Ding, Lixing Huang, Holger Dietrich

Product development is an iterative process in which the features of a product evolve continuously. Based on customer feedback or technological development, new levels of features and even totally new features are introduced. But most forecasting tools, such as conjoint analysis, discrete choice models, or concept tests, require a defined set of features and feature levels. We propose a method in which a single set of consumer inputs provides the means to forecast for products which may have as-yet-unspecified features or may address as-yet-unspecified consumer needs. The proposed method relies on incentive-aligned tasks that elicit basic preferences and inclinations from “clues.” The forecasts themselves are made by aggregating input from another set of consumers, “sleuths,” who, in an intwinned incentive-aligned task, use human judgment to integrate the clues and predict how the clues will react to new products with entirely new features. In our proof-of-concept study, clues reveal their base preferences and inclinations through question banks and make choices with which to calibrate (and evaluate) the analysis. Their incentives are balanced so that they provide clues that enable the sleuths to make accurate decisions. When the sleuths choose, they have incentives to maximize utility net of price. Sleuths receive incentives to think hard and tell the truth. Honest reward theory and Prelec’s Bayesian Truth Serum provide balanced incentives for existing products and really new products, respectively. In this paper we describe the theory (intwinned incentive-aligned games), suggest initial question banks, and report on the results of the proof-of-concept application. Full predictive tests are underway.
suggesting that dynamic outlet expansion faces a trade-off between business-stealing effects within a chain (‘cannibalization’) and advertising effects through repetition.

2 - Efficient Design and Analysis for a Selective Choice Process

Ty Henderson, The University of Texas at Austin, 1 University Station B6700 Marketing, Marketing Dept, McCombs School, Austin, TX, 78712, United States of America, ty.henderson@mccombs.utexas.edu, Qing Liu

Variable selection is a decision heuristic that describes a selective choice process–choices are made based on only a subset of product attributes while the presence of other attributes plays no active role in the decision (‘inactive attributes’). This paper addresses two integrated topics of interest to marketing that have received scant attention: the efficient design of choice experiments and the analysis and discovery of patterns in the context of a selective choice process. For efficient design, the authors propose a new compound design criterion that effectively incorporates prior information to serve the joint purpose of efficient detection of the inactive attributes and efficient estimation of the active attributes in the selective choice process. For efficient analysis, the authors propose a heterogeneous variable selection model that incorporates respondent-specific information about the active/inactive status of an attribute through the prior specification. The authors demonstrate the superior performance of the proposed approach relative to benchmark approaches using both simulated data and actual data obtained from a conjoint choice experiment where individual designs are customized based on the stated active or inactive status of the variables, and discuss the substantive implications of the results.

Thursday, 3:30pm - 5:00pm

TD01

01 Third Floor, GB 1

Advertising IV

Contributed Session

Chair: Ting Li, Associate Professor, Erasmus University, Burgemeester Oudlaan 50, Rotterdam, 3062PA, Netherlands, lii@rsm.nl

1 - Understanding Information Privacy Concerns in Social Advertising: An Eye Tracking Study

Ting Li, Associate Professor, Erasmus University, Burgemeester Oudlaan 50, Rotterdam, 3062PA, Netherlands, lii@rsm.nl, Thomas Frick, Paul Pavlou

Social advertising is a type of digital advertising that targets consumers with personalized content based on their social connections on social networking sites. Despite the large and significant impact of social advertising, little is known about how it affects consumers’ privacy concerns. This study answers the following research questions: (1) How does social advertising affect consumers’ privacy concerns? (2) What is the value of social advertising for consumers and how can it be effective from a decision-making perspective without jeopardizing consumers’ privacy? We undertake a set of experiments using eye tracking technology to investigate how consumers’ privacy concerns are affected by the social advertising message, and the frequency of viewing on different information stimuli, thus enabling us to identify the relevance of social endorsement and targeted advertising content, and understanding how they affect consumers’ cognitive processing and decision-making. By objectively measuring visual attention, we can obtain a much richer understanding of how users affectively and cognitively process information and subsequently make decisions.

2 - The Duration of Short-Term and Direct Advertising Effects on Sales

Hiroshi Kumakura, Professor, Chuo University, 742-1 Higashi-namano, Hachioji, Tokyo, 192-0393, Japan, kumakura@tamacc.chuo-u.ac.jp

The duration of short-term and direct advertising effects on consumer purchase is discussed with single source data in packaged goods markets, from the viewpoint of ‘recency.’ It is the notion relating to both propensity (time closeness in consumer behavior between purchasing points and ads exposure) and recency (psychological closeness between them, or consumer’s psychological preparation for buying); and recency effects mean short-term and direct advertising effects on sales. Since previous researches have shown that the timing of ads exposure is the most important in modern advertising practice, and since the timing of ads exposure is attributed to the duration of advertising effects, the duration is important in recency effects. One the other hand, it has not been discussed well, as far as we know. Hence, the duration of recency effects is discussed here. Namely, we measure how the strength of the relationship (regression) of the firm (whether a consumer views TV ads or not) and the reason (he/she purchases its brand or not at a purchasing point) fluctuates according as time passes, in a bottled green tea market. Our results are as below. Recency effects (short-term and direct ad effects on sales) are significantly strong, if time from his/her ads exposure to purchasing points is short. As time passes, the effects, the odds of the response (purchase) to the factor (ads exposure), become weak. In a case of bottled green tea brands, the duration of recency effects is 5 hours to 1 day. Our tiny contribution is to propose the way how to measure the duration advertising works to the brand.

3 - Mind-Share vs. Heart-Share and Competing in the Purchasing Funnel

Selin Erguncu, PhD Candidate, Koc University, College of Administrative Sciences and E, Istanbul, 34450, Turkey, serguncu@ku.edu.tr, Shuhuo Srinivasan, Nukhri Harmanlioglu

Consumer mindset metrics provide leading signals of brand performance, allowing the firms to direct their customers across the purchase funnel. Recent research provides evidence for the explanatory power of mindset metrics in sales response models. We contribute to the literature by assessing how competition impacts the marketing mix responsiveness and the sales conversion of three mindset metrics: communication awareness, brand consideration and brand liking. We study a rich sample of 1268 observed goods brands from 12 different categories for the period between January 2001 and December 2010. We estimate the dynamic interactions between sales, marketing mix (advertising, price, promotion, and distribution) and market structures using vector autoregressive models. To estimate the moderation effects of competition, we use the immediate and cumulative elasticities from the structural impulse response functions. Competition in the category is measured in terms of number of existing brands, advertising clutter and price competition. Our results show that category competition has both adverse and favorable effects. We find positive moderation effects by the number of brands on the sales conversion of mindset metrics indicative of positive spillovers across brands. Price competition has a positive effect on the sales conversion of the upper funnel metric of communication awareness, but negatively moderates the sales conversion of the lower funnel metric of brand liking. Advertising clutter has a negative impact on the sales conversion of communication awareness. Thus the impact of competition on sales conversion varies for upper versus funnel metrics and by competitive metric. The advertising responsiveness of all mindset metrics is negatively influenced by price competition while their price responsiveness is negatively impacted by number of brands and advertising clutter. Therefore, competition differentially diminishes the ability of marketing to move the needle on mindset metrics. We conclude with implications for brand managers.

4 - “Ask Your Doctor,” Who Cares: Medium Types and Consumer Involvement in Pharmaceutical Direct-to-Cons

Qiang Liu, Assistant Professor, Purdue University, 411 Krannert Building, West Lafayette, IN, 47907, United States of America, liu@purdue.edu, Hongju Liu

This study explores the roles of medium types and consumer involvement in the effects of direct-to-consumer advertising (DTCA) on patient behaviors. Specifically, we investigate two types of DTCA: TV and print in high cholesterol level market. Patients’ diagnosis levels recorded by physicians represent consumer involvement levels. We find that print DTCA is more effective in driving patients with severer affliction to visit physicians and request the advertised drugs, while TV DTCA works better with patients with milder affliction. This may have rich implication for policy makers to improve public health and pharmaceutical firms to target patients with certain levels of affliction using DTCA.
banks have reported that they may reduce the number of their branch locations by half over the next decade. Using geo-coded transaction data from a large consumer bank, we develop a structural model that represents consumers’ preferences for online and physical channels and in the case of physical branches considers how location affects their choice. This model takes into account changes in banking behavior due to this new mobile channel. For example, consumers are more likely to check their balance and make more, but smaller deposits since the transaction costs are substantially reduced. We use this model to predict the timing and type of transactions, as well as which branch to use for the physical network. We use this model to optimize the branching network in terms of capacities, amenities, location and number of branches to efficiently respond to the heterogeneous consumers’ needs not only for today but over the next decade based on mobile adoption projections.


2 - The Effect of Data Breach Announcement on Customers’ Purchase and Channel Choice Behavior

Joon Ho Lim, Doctoral Student, Texas A&M University - Management, 2011, Wehrner Building, 4112 TAMU, College Station, TX, 77843-4112, United States of America, jlim@mays.tamu.edu, Subodh Kumar, Ramkumar Janakiraman, Rishika Rishika, Ram Beawadia

Retailers and business entities are constantly under the threat of cyberattacks. We posit our study to be the first to examine the short-term effect of cyberattack on customers’ actual purchase behavior and quantify the economic implications for the retail sector. To improve our understanding on this issue, we leverage a unique customer level dataset containing transaction data pre and post cyberattack reporting by a multi-channel retailer. We exploit this “natural experiment” coupled with appropriate econometric modeling steps to address issues of endogeneity. We find that the reporting of the cyberattack event leads to a decrease in overall sales and number of purchase trips made by customers. Customers seem to migrate from the affected channels to the non-affected channels. We examine if the undesirable effects of cyberattack vary across customers. Following the studies in customer relationship management, we focus on two customer characteristics, namely customer level of retailer patronage and buying foc. We find interesting patterns on how different customers respond to the cyberattack announcement. Based on our results, we quantify the economic implications of cyberattack announcement and offer prescriptions for managers on how to engage with different types of customers following data breach incident.

3 - The Influence of Marketing Communication on both Online and In-Store Consumer Path-to-Purchase

Jason Pallant, Monash University, $5.16 26 St John Monash Drive, Caulfield East, Melbourne, VIC, 3145, Australia, jason.pallant@monash.edu, Peter Danaher

Consumers may visit a website for many reasons, including general browsing, browsing followed by purchasing, or just purchasing products browsed during an earlier visit that have been left in the shopping cart. The first part of this study is concerned with developing a typology of website visits, of which there are six. These include shallow visits, general browsing, knowledge building, broad search, focused search and cart checking. We subsequently examine both in-store and online purchases for a multi-channel retailer and the types of visits that occur prior to purchase. For example, a common pathway to purchase is broad search, focused search, cart checking and online purchase. Another is focused search followed by purchase in-store. There are also a number of alternative sequences of these visit types, which we find are often influenced by marketing communication. This study provides an extension to prior consumer engineering and migration research by demonstrating how marketing communications may influence the consumer path to purchase in addition to purchase channel choice.

4 - Optimizing a Bank Branch Network in the Presence of Mobile Banking

Francisco Cisternas, PhD Student, Carnegie Mellon University, 5649 Phillips Ave, Apt 12, Pittsburgh, PA, 15217, United States of America, fco@andrew.cmu.edu, William Van Hove, Alan Montgomery

In the past consumer financial transactions like deposits and withdrawals had to be performed at physical bank branches. Technological developments over the past few decades (ATM, automated teller machines (ATM), telephone banking, and online banking, have changed the type and number of transactions that consumers execute at their local bank branches. More recently the introduction of mobile banking, brought about by the adoption of smartphones, has the potential to dramatically change consumer interaction with their bank. Some
questions. First, we formulate a dynamic simultaneous-equations model with a match equation and a happiness equation that analyze the influence of the match quality and the concept of happiness on customers' purchase decisions. Second, we develop a matching algorithm that allocates players to teams to optimize a player's gaming experience.

4 - Role of Predisposition and Information on Consumer Choice and Market Outcomes

Oneusen Yoo, University College London, Gower Street, London, United Kingdom, o.yoo@ucl.ac.uk, Rakesh Sarin, Facing purchase choice with uncertain product quality, consumers today can gather information and reduce their uncertainty at low cost, i.e., in a “one-shot” manner. Such environment presents opportunities for sellers to help consumers create and disseminate their personal opinions about the seller's products. When it comes to purchase choices however, consumers are also influenced by predisposition that has been consciously or unconsciously constructed from past experiences or associations. The force of predisposition may counteract the evidence of sample information (e.g. about quality) to produce a change in opinion and preferences. In this paper, we present a simple model characterizing the interaction between predisposition and information by employing the hypotheses testing framework. Using the framework, we provide insights into the selection of consumer as a two stage game: in the first stage, firms determine the information level to provide, and in the second stage, engage in price competition. We find that the new information is crucial for accurately estimating residual customer lifetime value (CLV) if and only if there are sufficient information available in the market. Our study suggests that promoting information as free “sales assistants” may backfire when consumer's predisposition occurs. Our paper also highlights the difficulty in overcoming an undermining predisposition advantage, with a quality and information advantage.

TD04
04-Third Floor, GB 4
Customer Relationship Management IV
Contribution Session
Chair: Andres Musalem, Universidad de Chile, Republica 701, Santiago, Chile, amusalem@udec.edu

1 - How to Manage Profitable Relationships by Strategic Segmentation
Chun-Wei Chang, Governors State University, 1 University Parkway, University Park, IL, 60484, United States of America, cchang@govst.edu

It is always an interesting issue about where, how and to whom firms are going to allocate their limited resources and provide differential and personal treatment. Therefore, finding the most profitable customers and managing profitable relationships are critical issues in the field of customer relationship management (CRM). In this paper, the author measures customer lifetime value (CLV) to select and target potential and the most profitable customers by considering individual heterogeneity and consumption uncertainty. Based on strategic segmentation by taking into account both customer lifetime value and current share of wallet, the author identifies four customer segments to help companies make decisions of allocating resources, differentiating marketing initiatives, and refining marketing contacts and promotions. The author also simulates the retention rate to illustrate the changes in customer lifetime value and its impact on customer equity. In addition, the article presents the framework of the cycle of customer lifetime value and additional concepts for future research.

2 - Incorporating Purchase Timing Patterns in Stochastic Repeat-Buying Models Improves CLV Predictions
Michael Platzer, WU Vienna University of Economics and Business, Department of Marketing, Welthandelsplatz 1, Austria, Austria, michael.platzer@gmail.com, Thomas Reuterer

Stochastic customer behavior models based on recency-frequency (RF) data are popular tools to assist marketing analysts for making predictions about a customer's activity status and future purchase propensities. Knowledge about these quantities is crucial for accurately estimating residual Customer Lifetime Value (CLV) of a company's customer base. In their repeat-buying context, most of these models share the assumption of a Poisson process, which implies random purchase occurrence with an exponentially distributed interpurchase time. We make the case for a more flexible timing model, one which is able to capture various degrees of “clumpy” (i.e., unequally distributed) as well as “regular” (equally distributed) purchase timing patterns plus allows for heterogeneity across customers. As we will demonstrate, a more accurate modeling of the timing process turns out to be beneficial in noncontractual settings, because it helps making inferences about customers' latent activity status. By developing a new variant of the well-known Pareto/NBD model and applying it to several real-world data sets we can show that this flexibility yields significant improvements in predicting customer behavior. This is particularly the case for those valuable customers currently at stake, i.e. those customers who previously were active but recently have exhibited a longer purchase hiatus. Further, we will present an extensive simulation study and discuss some of the non-trivial findings when it comes to scoring clumpy versus regular customers.
restricting their advertising to positional messages is high. Conversely, when the differentiation between firms is low, the likelihood of a symmetric outcome (advertising) is high. In fact, when differentiation is low, a firm that responds to a brand’s physical and perceptual characteristics, i.e., positional information for the brand. Until now, models of informative advertising assume that advertising plays these roles simultaneously. However, there are advertising vehicles including field and-rink boards, short commercials and supers on TV shows; the unique role of which is to create awareness. This raises several questions. First, can a firm use awareness-only messages to compete against another that uses informationally rich messages? Second are there circumstances where awareness messages are superior to informationally rich messages? And finally, how does differentiation impact the relative effectiveness of informationally rich messages compared to awareness messages? Conventional wisdom suggests that when a small proportion of consumers care about product attributes, firms should be less willing to engage in advertising that is informationally rich. We build a model with two firms to assess this wisdom. The model posits two types of advertising: positional advertising that contains rich information about product attributes and awareness advertising that only informs about the existence of a product. The model shows that the appeal of awareness advertising is affected by both the competitor’s advertising strategy and the level of differentiation in the market. To be specific, when the differentiation between firms is high, the likelihood of firms restricting their advertising to positional messages is high. Conversely, when the differentiation between firms is low, the likelihood of an asymmetric outcome (one firm uses positional advertising and the other employs awareness advertising) is high. In fact, when differentiation is low, a firm that responds to a positional message is much more profitable. The model also shows that the likelihood of a firm employing awareness advertising is non-monotonically related to the level of differentiation in the market.

2 - Awareness versus Positional Advertising

Xi Xian, CEIBS, 699 Hongfeng road, Pudong, Shanghai, 201206, China, xinya@ceibs.edu, David Soberman

An uncontroversial issue upon which most marketers agree is that advertising plays different roles. A first is to create awareness for a brand as an alternative within a category. A second is to provide information to consumers about the brand’s physical and perceptual characteristics, i.e., positional information for the brand. Until now, models of informative advertising assume that advertising plays these roles simultaneously. However, there are advertising vehicles including field and-rink boards, short commercials and supers on TV shows; the unique role of which is to create awareness. This raises several questions. First, can a firm use awareness-only messages to compete against another that uses informationally rich messages? Second are there circumstances where awareness messages are superior to informationally rich messages? And finally, how does differentiation impact the relative effectiveness of informationally rich messages compared to awareness messages? Conventional wisdom suggests that when a small proportion of consumers care about product attributes, firms should be less willing to engage in advertising that is informationally rich. We build a model with two firms to assess this wisdom. The model posits two types of advertising: positional advertising that contains rich information about product attributes and awareness advertising that only informs about the existence of a product. The model shows that the appeal of awareness advertising is affected by both the competitor’s advertising strategy and the level of differentiation in the market. To be specific, when the differentiation between firms is high, the likelihood of firms restricting their advertising to positional messages is high. Conversely, when the differentiation between firms is low, the likelihood of an asymmetric outcome (one firm uses positional advertising and the other employs awareness advertising) is high. In fact, when differentiation is low, a firm that responds to a positional message is much more profitable. The model also shows that the likelihood of a firm employing awareness advertising is non-monotonically related to the level of differentiation in the market.

3 - Network Neutrality: A Two-Sided Market Analysis

Abhinav Uppal, Postdoctoral Student, University of Pennsylvania, The Wharton School, 727, 6, 3730 Walnut Street, Philadelphia, PA, 19104, United States of America, auppal@wharton.upenn.edu, Jagroohan Raju

Internet service providers (ISPs), such as Comcast and Verizon, have traditionally not charged content providers (CPs), such as Google and Netflix, for delivering their content to end-users. This was in line with the founding principle of the Internet, prohibiting ISPs from discriminating content on the basis of its origin, type or destination. Recent developments in this principle, e.g., Comcast charging Netflix to ensure faster delivery of Netflix content, have sparked a debate in the media and politics and opened up a number of unanswered managerial, policy and research questions. In this paper we develop a model of the Internet that captures its two-sided nature while explicitly recognizing and allowing for the ability of CPs to charge end-users directly. For example, Netflix charges a subscription fee to its users. We find that when we allow for CPs to charge end-users directly, the ISP is indifferent between offering and not offering faster delivery of content to CPs for a fee. Further, we find that there are no enhanced welfare implications of a regulation enforcing network neutrality in this setting. When only one CP can charge end-users directly and the other generates revenue through advertising then the ISP is better off without network neutrality and would either charge both the CPs or only the one that does not charge end-users directly. In the setting, the total welfare increases without network neutrality, the CP that can charge end-users directly is always worse off but the CP that relies on advertising revenue might be better off without network neutrality.

4 - Asset Accumulation and Asset Utilization: An Empirical Analysis of Brand Equity and Intellectual Capital

Jing Yang, Assistant Professor of Marketing, Emmanucl College, 400 The Fenway, Boston, MA, 02115, United States of America, yang@emmanuel.edu

Assets and capabilities are the primary sources of profit for the firm (Grant 1991). The predominant view in prior research regarding the relationship between assets and capabilities is that the types, the amounts and the qualities of assets have a great impact on the capacity of the competitive advantages. The landscape, characteristics spend significant amount of marketing dollars to signal their social values. Potential donors also use information from the third-party watchdogs in order to evaluate the charities who evaluates the charities so as to provide more objective evaluations. The watchdog essentially rates each charity on two dimensions: how effectively donations are utilized and quality of governance. The governance, in particular, emphasize expense ratios (ratio of expenses spent for the cause and administrative costs) of which marketing dollars are a large component. The watchdog’s ratings therefore can influence the charities’ marketing activities. We analyze this strategic interaction between the charity, the donor and the third-party watchdog dog using a two-dimensional signaling model in which the donors rely on both charities’ marketing signal and the watchdog’s rating information. We characterize the equilibrium charities adopt under signaling marketing strategies, while other times use different ones. We show that the charities who provide a higher social value may spend less marketing effort, i.e., engage in ‘counter-signaling’ behavior. We further explore the influence of third party ratings on social efficiency and compare the charities’ equilibrium marketing strategies with/without the presence of the third-party rating. Our results have implications for policy and welfare evaluation.

2 - Tiered Competition in Pharmaceutical Markets

Tony Hsiao Cui, University of Minnesota, Marketing Department, CSOM, Minneapolis, MN, United States of America, tcui@umn.edu, Preyas Desai, Huilui Wang

The market of prescription drugs in the US is estimated to be more than $300 billion per year, most of which is characterized by insurance coverage. Insurance plans usually develop a tiered formulary for prescription drugs such that patients pay a lower copay amount for drugs on a favorable tier and a higher copay for drugs on a less favorable tier. The implicit threat of a higher-copay affects price competition among competing drugs. In this paper, we study how the tiered formulary structure affects equilibrium prices and end-users’ access to drugs. We consider an insurance plan dealing with manufacturers of two competing branded drugs to provide insurance coverage to patients who differ in terms of the benefits they derive from the two drugs. In our model, the insurance plan uses the tiered-formulary to intensify the price competition between the two drugs, which in turn can reduce the insurance plan’s total costs and improve consumers’ access to the drugs. We identify conditions under which which both plans in the same tier versus putting them in two different tiers. We find that both types of tiered-formulary structures reduces equilibrium prices and total costs while improving access. This effect is stronger when the two drugs are substitutable. When the insurance plan allows the possibility that both drugs can be in same tier improves market coverage relative to the case when the plan commits to give favorable treatment to only one drug.
is broadly conceptualized as knowledge resources that organizations use for competitive advantage (Younid et al. 2004, Zhao and Chadwick 2013). It is a multi-dimensional construct, consisting of different components, such as human capital, organizational capital, and capital and customer capital. Various statistical techniques were used to measure the constructs in the research model, such as Data Envelopment Analysis and Structural Equation Modeling. Hierarchical Linear Modeling (HLM) was used to test the research hypotheses. On the basis of a sample of US semiconductor companies, this study shows that the accumulation of market-based assets is positively associated with the capabilities of utilizing the assets to create new assets. The findings offer a variety of theoretical contributions to marketing strategy research stream, and provide actionable insights on management-resource-allocation decisions.

2 - What Makes More, Better? The Effect of Firm-Level Attributes on Business Performance
Eric Eisenstein, professor, Fox School of Business, Temple University, 527 Alter Hall, Philadelphia, PA, 19046, United States of America, eeric.eisenstein@temple.edu, George Chressanthis, Patrick Barkham

Scholars in marketing develop new and better techniques for allocating marketing expenditures. Implicit in this endeavor is the belief that it matters both how much and how well marketing spending is deployed. In this research, we estimate the relative contribution of the quantity and quality of marketing expenditures on business performance by using a unique, company-level dataset that contains the internal marketing expenditures of 26 pharmaceutical firms from 2005-2011. As expected, we find that merely increasing spending in support of marketing is positively related to performance. However, consistent with the notion that the quality of spending matters in addition to the spending level, organizations that possessed attributes related to “investing smarter” in the marketing function were able to obtain greater financial returns to their expenditures. Managerially, this research demonstrates the importance of formulating a strategic vision that includes investing in advanced skills, fostering a culture of innovation, and enabling execution in and sales departments.

3 - Pay Dispersion in Top Marketing Teams
Minghui Ma, University of Kansas, School of Business, 1300 Sunnyside Avenue, Lawrence, KS, 66045, United States of America, minghui@ku.edu, Kissan Joseph

Pay dispersion in top management teams has been conceptualized as the balance of two competing considerations: inducing competitive effort via tournament-type incentives and ensuring appropriate levels of collaboration. We use this theoretical lens to examine pay dispersion among top executives employed in the marketing function. We hypothesize that firms characterized by investments in advertising and R&D require greater collaboration between top marketing executives and will therefore decrease pay dispersion. Conversely, firms situated in industries that are explicitly regulated or operating in highly concentrated markets face diminished need for collaboration and will therefore increase pay dispersion. In addition, we posit that deviations in pay dispersion from expected levels will adversely impact firm performance. In our empirical work, we obtain strong support for our hypotheses except for that pertaining to the impact of concentration. Surprisingly, the adverse impacts of deviation are asymmetric: excess pay dispersion has a negative impact on firm performance whereas compressed pay dispersion has no impact on firm performance. Moreover, this effect is economically meaningful: a one standard deviation increase in excess pay dispersion negatively affects ROA by approximately 1%. Overall, our research contributes to the limited literature on marketing executive compensation and offers explicit guidelines for compensation committees.

3 - The Retail Impact of Electronic Shelf Labels (ESL)
Sourav Ray, Associate Professor of Marketing, Mcmaster University, 1280 Main St. W., Hamilton, ON, L8S 4M4, Canada, sray@mcmaster.ca, Mark Bergen, Daniel Levy, Li Wang

Electronic price display technologies like Electronic Shelf Labels (ESLs) offer unprecedented capabilities to the retailer in terms of managing prices and price changes. Nevertheless, their adoption and use in large supermarket retail has been neither widespread nor uniform. The rather hefty capital outlay is often a reason for this hesitance. That said, causal accounts of the technology suggest ESLs may lead to significant reduction in the variable costs and lead times associated with changing prices and encourage more effective demand discovery efforts, among other benefits. The potential of these gains is often overwhelmed by the significant heterogeneity in consumer prices and offers have spurred some jurisdictions in the U.S. to exempt retailers from more stringent pricing regulations if they adopt ESL. Unfortunately, few studies systematically investigate these effects. In this paper we first present some empirical data to describe the magnitude of retail savings in the context of a specific grocery supermarket. Second, we summarize results from a couple of empirical studies to calibrate the impact on consumers. Lastly, we attempt to calibrate the impact of ESL on retailers by considering POS data in a couple of supermarket chains that implemented the technology and explore the possible drivers. The results show that while the impact on customers could be contextual, there are significant benefits to retailers to offset the large capital outlays. These retail benefits accrue both in terms of savings as well as revenues. We discuss some key strategy and policy issues that follow from these results.
4 - Consumer Return Rate Evolution over Time
Silhom El Kilhah, Goethe University Frankfurt, Theodor-Adorno-Platz 4, Frankfurt am Main, HE, 60323, Germany, elkilhah@wiwi.uni-frankfurt.de, Tulin Erdem, Christian Schulze, Bernd Skiera
In recent years, online retail sales have grown at double-digit rates and are expected to grow further. As retail managers shift their focus away from stagnant offline channels, they face the challenge of substantial product returns (35 to 50% return rates). Product returns are costly in several ways: Beyond the foregone profits, they create costs for unpacking, checking the product's condition, reparing, restocking, and issuing the refund to customers. Therefore, customer return management becomes a necessity. However, to be able to intervene early enough in the customer-retailer relationship, online retailers need to understand how consumer return rate will evolve over time. Online retailers should be able to classify customers based on their purchase and return behavior in order to implement appropriate intervention strategies. In this paper, we study how consumer return rates evolve over time and whether there is evidence for estimating a characteristic return coefficient. We analyze a data set of 1,789 customers which consists of customer-specific characteristics and how consumers evolve in the online retailing context, where product returns play a major role.

TD11 11-Third Floor, Atlantic
Choice Models I Contributed Session
Chair: Berry Cox, Assistant Professor of Marketing, Stetson University, 800 Celebration Ave, Ste 104, Celebration, FL, 34747, United States of America, btxox@stetson.edu
1 - Health Information and Consumer Learning in the Bottled Water Market
Lu Huang, PhD Student, University of Connecticut, 2100 Hillside Road, Unit 1041, Storrs, CT, 06269, United States of America, lu.huang@business.uconn.edu, Yinzou Liu
The demand for refreshment beverages has been shifting from carbonated soft drinks (CSDs) to bottled water in the past decades due to health concerns. This study examines the role of public information (e.g., news articles addressing the relationship between sugar intake and obesity) and consumer learning in driving demand shifts. A rich but inconsistent discrete choice model with a learning component is formulated to model consumers’ learning of health effect from consuming CSDs and bottled water. Consumers are assumed to have initial prior beliefs about the health effects of soft drinks and bottled waters and update their beliefs using information received from mass media. To estimate our model, we use brand level data of bottled water and CSDs combined with health information data collected from LexisNexis Academic. We find that, through learning, consumers perceive a higher quality for bottled water than for sugar sweetened soft drinks, which can explain the constant increase in bottled water consumption. The simulation results suggest that the knowledge of health consequence will shift consumers’ preference toward healthier beverages. CSD manufacturers can capture the changing demand by either (1) reducing unhealthy ingredients (i.e., sugar or (2) providing healthier alternatives (i.e., bottled water).

2 - Consumer Impatience and Market Structure: The Case of Online Pizza Delivery
Elisa Montaguti, Associate Professor, University of Bologna, Via Capo di Lucca, 34, Bologna, 40126, Italy, elisa.montaguti@unibo.it, Federico Rossi, Smb Valenti
Consumer impatience, i.e. a high discount of future, implies that consumers desire to acquire money or other material objects very quickly. The amount of research on consumers’ perceptions of the time value of money abounds. However, hardly any papers have looked at the effect of consumer impatience on the competitive environment. In this research we study how the impatience for food consumption affects firms’ entry. Using a unique dataset of online orders of delivery pizza, we show that people significantly constrain their decision set in favor of pizzerias that are very local. A number of exogenous shocks allow us to distinguish these constraints for pizzerias from their preference for quick food. We find that the impatience for online delivery leads to a large number of pizzerias which would otherwise never enter the market.

3 - The Impact of Chapter 11 Bankruptcy on Consumer Demand
O. Cem Ozturk, Assistant Professor of Marketing, Scheller College of Business - Georgia Institute of Technology, 800 West Peachtree St NW, Atlanta, GA, 30308, United States of America, Cem.Ozturk@scheller.gatech.edu, Pradeep Chintagunta, Krzysztof Szemeredi
Every year, thousands of firms spanning a diverse spectrum of industries file for Chapter 11 bankruptcy protection. Under Chapter 11 bankruptcy protection, the financially-distressed firm reorganizes its business in a variety of ways, including distribution (i.e., liquidation), reorganization and product line consolidation. The bankruptcy filing may deter the consumer preference for the bankrupt firm’s products, improvements in the firm’s retail network and product portfolio could result in increased demand. Therefore, it is important for managers and policy makers to understand the impact of bankruptcy reorganization on market shares. This study examines the effect of bankruptcy-induced changes on consumers’ product choices using a unique data set from the U.S. auto industry.

4 - Choice Models for a Segment Size of One: Marketing Nirvana?
Berry Cox, Assistant Professor of Marketing, Stetson University, 800 Celebration Ave, Ste 104, Celebration, FL, 34747, United States of America, btxox@stetson.edu, Richard J. Swartz, Amit Pangal, Richard J. Swartz, Philip JFL See
It is not surprising that models and methods for analyzing consumer choice behavior have found widespread application in marketing research. As the Internet continues to allow researchers to harvest increasingly detailed information about individual consumer behavior, the question arises whether there are additional insights to be gained. This research continues the rich literature stream by delving deeply into choice at its most fundamental level—the level of the individual. In contrast to Hierarchical Bayes Models, where individual-level parameter estimates are obtained by pooling covariance among individuals, we examine choice data with enough information to estimate both parameters and covariances for each respondent. We describe the data collection requirements for estimating individual choice preferences for Logit, Probit, and Tversky’s Elimination-by-Aspects (EBA). A new methodology for estimating EBA is introduced and the predictions of Logit, Probit and EBA are compared both in- and out-of the sample. The results attempt to unravel when a researcher should consider the added complexity of EBA or Probit over the widely adopted Logit model when modeling choice at the individual level.
3 - Sustainability of Brand Loyalty After Product Recalls: Understanding the ‘Chipping-Off’ Effect

Kyung-Ah Byun, Assistant Professor of Marketing, The University of Texas at Tyler, 3900 University Blvd., Dept. of Management@Marketing, Tyler, TX, 75799, United States of America, kbyun@ut Tyler.edu, Mayuikh Dass, Piyush Kumar, Dale Duhan

Brand loyalty is a critical defense against product recall events as loyal consumers tend to protect a brand from negative publicity. However, such events may create a chasm in the degree of brand loyalty before and after the recall. Although the damage of product recalls on firm performance is evident in the extant literature, the interplay between brand loyalty and product recalls is underexplored. In this study, we examine the "chipping-off" effect, a consumer behavior that slows or sometimes even permanently terminates purchasing of the recalled brand, and explore how marketing programs can help minimize the effect. Using scanner data from a large grocery store chain, we examine the purchase patterns of approximately 200,000 consumers regarding 31 product recalls over the span of 32 months, and find that loyal consumers tend to delay purchasing a recalled brand beyond their regular purchase cycle or even switch to another brand. Such 'chipping-off' effects vary by characteristics of product recalls such as their severity (e.g., FDA). The paper concludes by presenting a strategic approach for brand managers to sustain consumer loyalty that is damaged from product recalls.

4 - Let Your Banner Wave: Antecedents and Performance Implications of Retailers’ PL Naming Strategies

Kristopher O. Keller, PhD candidate, Tilburg University, Warandelaan 2, Tilburg, 5000LE, Netherlands, k.o.keller@tilburguniversity.edu, Marnik G. Dekimpe, Inge Gyskens

In spite of the repeated calls for more research attention (Alalwadi and Keller 2004; Gyskens et al. 2010), little is known about the antecedents and performance implications of the naming decision for different private-label (PL) tiers. Recent development of this research issue. First, the retailer’s brand equity is increasingly recognized as an important asset, in which his PL portfolio is a key component (Lamey et al. 2014). Second, PLs are becoming a brand on their own, rather than merely an unbranded (where the name is less relevant) alternative (Gielens 2012). Third, many retailers are now developing multiple-tier (economy, standard, premium) PL portfolios, which need to be differentiated from one another by an appropriate naming decision (ter Braak et al. 2013). Basically, retailers can choose between two naming strategies. They can either opt for store-bander name and use the store-brand name as PL brand name, or for unrelated naming, where a PL brand name is used other than the store-bander name (de Jong 2011). Which strategy may be preferred, and in what circumstances, is a question with no obvious answer. In addition, retailers’ PL-naming strategies are subject to many constraints. For example, the use of the store-brand name PL line ‘by Sainsbury’s’ on its standard tier. French Leclerc, however, uses the unrelated ‘Marque Repère’ line. Moreover, retailers do not consistently use the same naming strategy across all tiers. Using a unique data set on the top-12 retailers in 25 European countries, we examine the naming decision of close to 250 economy and premium tier introductions, and study two research questions: (i) What contingency factors (retailer structure, retailer imitative behavior, economic environment, and institutional environment) drive retailers to store-bander name their PLs? (ii) How do the different naming strategies affect retailer’s performance? Also, is the naming strategy for one tier more critical than for the other?

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1 - Brand Buzz in the Echoverse

Roland Rust, Distinguished Univ. Prof., U. of Maryland, Smith School of Business, College Park, MD, 20742, United States of America, rust@rhsmith.umd.edu

Social media has created a reverberating “echoverse” for brand communication, forming complex feedback loops between corporate communications, news media, and user-generated social media. To understand these feedback loops, we process longitudinal, unstructured data from these various communication sources using computational linguistics techniques, analyze the results using econometric methods, and interview managers to deepen our understanding. By assembling one of the most comprehensive brand communication databases in the brand communications literature with multiple types of corporate communications, news stories, and social media, we find that the echoverse exists, feedback loops can be found among all of these sources. Furthermore, as the echoverse has intensified as online word-of-mouth has become more prevalent. Over time, online word-of-mouth has become more impactful on news stories, firm communications, consumer sentiment and business outcomes, while traditional consumer sentiment measures have shown less impact. The nature of brand communications has been transformed by online technology as corporate communications moves increasingly from one-to-many (e.g., advertising) to one-to-one (e.g., Twitter) while consumer word-of-mouth moves increasingly from one-to-many (e.g., conversations) to one-to-one (e.g., social media). Results question the effectiveness of traditional advertising and suggest that companies can benefit from using social media (e.g., Twitter) for personalized responses to customers, as opposed to “broadcast” social media messages. In general the evolving echoverse requires rethinking brand communication strategies, with online communications becoming increasingly central.

2 - The Value of Online Reputation Mechanisms

Brett Hollenbeck, Assistant Professor of Marketing, UCLA Anderson, 1317 S Westgate Ave, Apt 204, Los Angeles, CA, 90025, United States of America, brett.hollenbeck@gmail.com

This paper explores the value of online reputation mechanisms and their effects on competition and firm revenues in the context of the lodging industry. I combine monthly tax return data on revenues for every hotel in the state of Texas from 2000-2014 with the full history of online reviews from the three leading travel bookings and reviews sites. These data are supplemented with detailed traffic, population, and oil and gas industry data to act as demand shifters. This presents the most comprehensive analysis yet conducted of the value of online word of mouth in an industry, travel, historically characterized by low consumer information. I find the value to hotel owners of brand names has fallen substantially, from roughly 35% of revenue to 15% over the past 5 years and that this is partly explained by online reviews that provide more information to consumers. I also explore the effects this shift has had on firm entry and exit, vertical positioning, and competition. Notably, the recent availability of reviews has substantially slowed the decades long trend towards chain affiliation.

3 - The Influence of Tie Strength and Communication Environment on what People Share Online

Sungik Park, University of Florida, Gainesville, Florida 32611-7155, Gainesville, FL, United States of America, clay.park@warrington.ufl.edu, Debanjan Mitra

People share content via email and social media such as Facebook and Twitter constantly. Understanding the factors driving such social transmission has become an important quest in marketing because empirical research has demonstrated that word of mouth (WOM) has causal impact on sales, adoption of new product, and on firm value. Although abundant empirical research has been conducted on the impact of WOM on sales, there has been relatively little effort on exploring which factors drive the social transmission. In this study, we investigate how emotional aspects and valence of messages influence the social transmission. Furthermore, we explore how this relationship can vary depending on the relationship between communicator and recipient as well as the communication environment. Specifically, we analyze which articles make the most emailed, most shared on Facebook and most Tweeted by using the over 8,000 New York Times articles. Time month period, we find that emotional content is more likely to be shared with friends rather than strangers. We also find that although positive content is more likely to be shared in private communication, negative content is more vital in public communication.
Companies now have access to very large amounts of revealed preference data from real purchasing occasions. In the automotive sector, for example, surveys of new vehicle buyers have tens of thousands of observations per year capturing purchase, consideration, household characteristics, purchasing conditions, motivation and satisfaction; internal sales data for a single OEM completely covers a subset of the new vehicle market with millions of observations per year. The large number of observations available, along with the large number of potential covariates to include, necessitates careful attention to the numerical methods, computational platforms, and statistical methods used when estimating and evaluating models. The more efficiently (and reliably) model estimation takes place, the faster model selection and validation can be done. With current methods, reasonable validation exercises (e.g. simulation studies and/or cross validation) at near full scale may be impractical without parallelization. Moreover, the “Big Data” era may enable adaptive, personalized choice modeling at scale within devices or in the cloud. This talk reviews the scale of data now (or soon) available, pre- processing steps, and numerical methods for estimating models efficiently with many observations and parameters. We focus on serial estimation of models of consideration and frequentist methods for Multinomial, Latent-Class, and Mixed Logit models. We identify parallelization opportunities, but look towards real-time modeling for many customers with parallelization resources either obtained by application scale, thus unavailable to estimation, or where modeling is embedded in non-parallelized devices drawing data from the cloud. New ideas are compared to available routines.

3 - Numerical Methods for Choice Modeling with Many Observations
3200 Hillview, Suite 200, Palo Alto, CA, 94034,
United States of America, wmmor013@ford.com, Yan Fu

1 - Marketing Accounts
Neil Bendle, Assistant Professor of Marketing, Ivey Business School, Western University, 1255 Western Road, London, ON, N6G0N1, Canada, nbndle@ivey.ca

16- Fourth Floor, Essex C

Working Paper IX
Contributed Session
Chair: Neil Bendle, Assistant Professor of Marketing, Ivey Business School, Western University, 1255 Western Road, London, ON, N6G0N1, Canada, nbndle@ivey.ca

1 - Marketing Accounts
Neil Bendle, Assistant Professor of Marketing, Ivey Business School, Western University. 1255 Western Road, London, ON, N6G0N1, Canada, nbndle@ivey.ca, Xin (Shane) Wang

Financial accounts largely ignore market-based assets to protect investors from mistakes overestimating the assets’ values. This is a problem for marketing as decisions are drawn from the financial accounts either directly, or because the financial accounts influence the structure of management reporting. Marketers may want changes in the way marketing is accounted for to justify investments and drive greater accountability but accounting standards boards exclude the needs of internal management from consideration making immediate change in accounting standards unlikely. We suggest a solution that requires no change in accounting standards. Market-based assets can be recorded in a comprehensive set of management accounts, called marketing accounts. These accounts, controlled market-wide, allow firms to allocate to marketing decision-making. Recording the value of market-based assets will increase accountability regarding the assets’ usage. Valuing market-based assets requires significant assumptions but even imperfect models will often be very useful and should improve over time. Our research starts by considering the current state of accounting for marketing. We next outline proposed principles of marketing accounts and contrast them with financial accounts. The key differences suggested are that: 1) The matching principle should be more consistently applied in marketing accounts than it is applied in financial accounting standards. 2) Marketing reporting should be based upon the concept of expected value and not conservatively biased. We end by describing how marketing accounts can be implemented using currently available double entry systems.

2 - When More is More and Less is Less: Post-Merger Returns to Marketing Investment
Chaml Boo, UNC-CH, 300 Kenan Drive, Chapel Hill, NC, United States of America, chaml barangoo@unc.edu, William Putitsis

This study empirically examines how a merger or acquisition (M&A) affects marketing investment and its subsequent impact on firm value using a dynamic GMM approach. Data from a variety of sources including the Securities Data Corporation (SDC)’s Thompson Merger and Acquisition database, COMPUSTAT of Standard & Poor’s and Chicago Booth’s Center for Research in Security Prices (CRSP) between 1990 and 2010 are used in the study. The empirical results show that mergers often lead to acquirers’ divestment in marketing activity. However, for acquirers investing more than their rivals on average, both sales and stock price returns are greater in the three years immediately following a merger announcement. The authors suggest that, in this case, the greater marketing spend reveals managers’ private information about their firms’ prospects and alleviates concerns stemming from the merger, thereby contributing positively to firm value. Interestingly, the results are contingent on merger type. Specifically, the positive impact of marketing on performance is weaker and more quickly decreases following vertical mergers than following horizontal mergers. The authors discuss the implications of their findings for acquiring-firm managers as well as marketing researchers.

Customer and Firm Behavior in Social Networks
Cluster: Special Session
Invited Session
Chair: Oded Netzer, Associate Professor, Columbia University. 3022 Broadway Ave., New York, NY, 10027, United States of America, o2110@columbia.edu

1 - Customer Referral Reduces the Impact of Poor Service Performance on Customer Churn
Christophe Van den Bulle, Gayfrid Steinberg Professor, The Wharton School, 3730 Walnut St, Suite 700, Philadelphia, PA, 19104, United States of America, cdv2107@wharton.upenn.edu, Kartik Hosanagar, Nazrul Shaikh

Recent research documents that peer influence affects not only customer acquisition but also customer retention. For instance, customers acquired through a referral program have observed to churn less rapidly than customers acquired through other means. This presumably is due to social enrichment: having been referred by an existing customer who maintains positive relations with both the new customer and the company increases the new customer’s trust in the company and strengthens his or her emotional bond with it. The present study leverages data on service performance to assess social enrichment as a possible mechanism through which peer influence affects customer churn. We ask two questions. (i) Do referral customers churn less? and (ii) Are referral customers less sensitive to poor service performance? We answer them by analyzing the churn of 5,106 customers of a leading business-to-business search marketing service provider (825% or 16% acquired through referral). The answer to both questions is yes. Our findings provide the first evidence that the lower churn of customers acquired through a referral program indeed stems from social enrichment that insulates the customer relation from negative user experiences.

2 - The Contagious Effect of Marketing Campaigns: Evidence from a Field Experiment
Eva Ascarza, Columbia Business School, 3022 Broadway, Uris Hall 524, New York, NY, 10027, United States of America, ascarya@columbia.edu, Peter Ebbes, Oded Netzer

Recent work in marketing has demonstrated contagious effects in new product adoption, product usage, and churn. What is less known is how contagious firm initiated marketing campaigns are; that is, when a customer is targeted by the firm with a marketing campaign that is aimed at, for example, reducing churn, how the change in her own behavior might influence her “friends/neighbors” (egos), hence creating a potential social multiplier effect for the marketing campaign. To investigate this question we run a field experiment in a cell-phone context in which the marketing campaign (i.e., treatment) is randomized among a set of focal customers. Because of the randomized nature of the firm’s intervention, we obtain an exogenous source of variation in behavior (such as number of calls, length of calls, and churn) among the customers that were targeted. This exogenous shock in focal behavior allows us to quantify to what extent aspects of behavior of her social connections are also affected. We show how firms could benefit from running “socially-aware” campaigns; that is, targeting not only based on focal customers’ behavior but also taking into account their level of social influence.
evidence that adoption patterns traditionally attributed to social contagion can also be accounted for—and sometimes more compellingly so—by marketing and heterogeneity among adopters.

4 - Share of Wallet at Time of New Product Adoption: Social Contagion versus Heterogeneity Redux

Raghuram Iyer, Associate Professor, Marketing Department, The Wharton School, The University of Pennsylvania, 700 Jon M. Huntsman Hall, 3730 Walnut Street, Philadelphia, PA, 19104, United States of America, riyer@wharton.upenn.edu,

Oded Netzer, Christophe Van den Bulte

Several older diffusion studies have documented that the share of wallet at the time of adoption is greater for late than for early adopters. This pattern has traditionally been explained as a consequence of social influence in new product adoption. However, consumers can learn from the experience of early adopters, so—assuming the product is not disappointing and adopters are risk averse—later adopters feel more comfortable committing a large part of their purchases to a new product. Using data on the adoption of two prescription drugs, we find that (i) the share of wallet of the new drug at the time of adoption indeed increases over time, (ii) this pattern cannot be attributed to increased peer pressure over time, (iii) but, instead, stems from the facts that (iv) volume at time of adoption is rather constant and that later adopters have smaller category requirements than early adopters. This evidence provides additional evidence that heterogeneity traditionally attributed to social contagion can also be accounted for—and sometimes more compellingly so—by marketing effort or heterogeneity among adopters.

Thursday, 5:15pm - 6:00pm

1 - An Empirical Study of Application Usage and Advertising Response on Mobile Phones

Liyi Ma, Assistant Professor of Marketing, Robert H. Smith School of Business, University of Maryland, 3323 Van Munching Hall, College Park, MD, 20742, United States of America, liyema@rhsmith.umd.edu, Baohong Sun

With the rapid shift of consumer activities from Internet to mobile phones, advertising on mobile devices is expected to quadruple in five years. However, advertisers are challenged by the low clickthrough rate. Furthermore, 64% of mobile phone time is spent on using applications. Little is known on how consumers use the mobile applications and how such usage interacts with their response to mobile advertisements. This calls for research to study customer decision making on mobile phones and to understand the unique contextual and time effects of mobile advertising clickthrough. To this study, we develop a model of consumers’ usage decisions of mobile applications and responses to mobile advertisements. Assuming application usages are driven by the fundamental needs that evolve over time, this model allows such underlying needs and contextual factors to together influence a consumer’s receptiveness to advertisements. We apply the model to a unique panel data offered by a mobile ad agent, which contains the historical record of both structural equation models and responses. We then run simulations to demonstrate how a targeted mobile ad delivery strategy can improve response rates by taking into account consumer's evolving underlying needs and the context of delivery.

2 - Strategic Media Selection under Simultaneous Media Exposure for Efficient Resource Allocation

Abhishek Nayak, Doctoral Candidate, IE Business School, Calle Lagasca 120, 5 int dch, Madrid, 28006, Spain,
anayak.phd2016@student.ie.edu, Shamreek Sinha

Recessions lead to decreased disposable income and the resulting consumer spending cuts require marketers to strategically allocate their limited advertising budgets. Though research has shown that proactive and targeted campaigns by firms are more effective than reduced advertising during economic downturns, the influence of individual mediums on consumers is unexplored. Today’s consumers are subjected to ‘simultaneous media exposure’ and during recessions the relative and cumulative effects of these mediums change compared to stable economic times. Using consumer survey data from the US, in a multi-category analysis, we estimate the impacts of advertising mediums during recessions on purchase actions and intentions for essential and non-essential goods. We analyze the changes in media influences across three critical periods - pre-recession, during recession and post-recession, to understand the evolution in behavioral patterns. We find that distinguishing between media sources based on cost structure (high vs. low) and type (informational vs. promotional) is critical for strategic resource allocation. Insights from this research can help marketers to allocate their budgets efficiently during recessions to facilitate customer retention, acquisition and cross-selling.

3 - Another Approach to Develop Marketing Strategy for Inference-Based Products based upon Symbol Ground

Akihiro Inoue, Professor, Keio University, 4-1-1 Hiyoshi, Kohoku-ku, Yokohama, 223-8526, Japan, ainoue@kbs.keio.ac.jp, Atsuhiko Iino

The purpose of the research is to propose a new approach to developing marketing strategy for products as to which consumers evaluate the set of alternatives by inference, rather than by functional processing of attributes. In case of the purchase of personal computers, consumers are likely to process the attribute information (e.g., CPU, memory size, HD size, etc.) and develop expected values of utilities. Thus, there exist a structural relationship between the attributes and the utilities. However, sometimes, consumers do make a purchase decision making without a rational structural relationship between usage and utilities, where the attributes function, not as the basis of the evaluation, but as the basis of inference, as implied by the symbol grounding theory (Harnad 1990). In this research, we focus on the six brand names of personal computers (e.g., Sharp, Bose, Sony, etc.), the six attributes (e.g., Color, Halting Error, etc.), the six technologies (e.g., Modem, USB, etc.), and the six effects (e.g., Quality, Trust, etc.), based on focused data and canonical correlation analysis, we found that consumers evaluate the effects not based upon the attributes but the associations between the technologies and attributes. In other words, the decision making is not by the attribute-based utilities but by the inference-based associations. We discuss a new approach to developing marketing strategy in case of the inference-based associations.
The research on marketing’s impact on firm value provides empirical evidence between the actions and shareholder value (e.g., Srivastva and Hanssens 2009). However, there is limited work on the intermediate steps of the relationship between marketing actions such as advertising and investors reactions on firm value. This limits our ability to establish the marketing’s impact on shareholder value. Against this backdrop, we study the impact of offline advertising on online investor attention with highly granular daily data. Marketing actions such as advertising can influence investor attention by either enhancing investors’ interest in the firm and its potential future returns, or by playing more of an informative role and reduce investors’ additional information need. In order to understand which of these effects dominate these processes prevail, we estimate a panel vector autoregressive model using a sample of S&P 500 firms. The data set is at the daily level and covers 5 years of daily data. We use the daily ticker search (e.g., “MSFT” for Microsoft) from Google Trends and visits to the SEC EDGAR site (e.g., accessing 10K reports) as proxies for investor attention. As the measure of offline advertising spending, we use the TV advertising spending. We estimate a panel vector autoregressive model to study the relationship between offline advertising and online investor attention. The results show that offline advertising influences online investor attention. However, the effects are contingent on the type of investor (expert vs. non-expert) and a firm’s strategic emphasis on advertising.

**FA02**

**3-Day Floor, GB 2**  
**Channel V**

**Contribution Session**

Chair: Jonathan Zhang, University of Washington, PACCAR Hall Box 353226, Seattle, WA 98195, United States of America, jazhang@uw.edu

1 - Understanding the Impact of Media Substitution and Synergy in New Product Introduction

Vahideh Abedi, Cal State Fullerton, 800 N State College Blvd, Fullerton, CA, United States of America, vahedi@fullerton.edu

Substitutive and synergistic interactions between multiple marketing media can significantly influence the marketing resource allocation strategies of the firm. However, the existing literature focuses on only one of these two types of interactions and remains silent on whether they co-exist and when one dominates the other. We show that channels can possibly interact both substitutively and synergistically at the same time in the context of a new product introduction. We derive several insights on the implications of this co-existence and its influence in media planning decisions.

2 - Market Orientation and CSR: Performance Implications

Timothy Kiesling, Bilken University, University Drive, Ankara, Turkey, kiesling@bilken.edu.tr, Lars Isaksen

Corporate Social Responsibility (CSR) has become of great interest to marketing researchers as CSR is now integrated as part of the marketing strategic plan of most multinational corporations. CSR has become a strategic tool (not only an ethical concept) as firms recognize that the customer value proposition and CSR are integrated with the focus on how to differentiate the firm from the view of the customer. Market orientation (MO) theory is our foundation for the research as it explains how organizations adapt to their customer environment to develop competitive advantages. MO is a business philosophy which addresses how organizations adapt to their customer environment to develop competitive advantages through deeper customer loyalty. Along with MO we develop theoretically Customer Orientation (CO) and Customer Interaction (CI) to support the conclusion that CSR will provide greater firm performance. The customer should be viewed as a co-creator of value in the relationship which is the foundation for the CO variable. CO is focused on the customer similar to service dominant logic where current customers’ needs and wishes are intended for further augmentation. The firm needs to have an active interaction and dialog with its customers which is the foundation of the CI variable. This interaction can develop a dialog and deliver undiscovered market information about the customer, marketplace, and trends. We anticipate that due to the current trend of the importance of CSR to customers that firms which implement a CSR marketing program will have higher performance.

3 - Relational Incentive Contracts: An Experimental Investigation of Payment Schemes

Taylan Yalcin, Assistant Professor, Chapman University, One University Dr, Orange, CA, 92866, United States of America, yalcin@chapman.edu, Brice Corgnet, Cristina Nistor

Relational incentive contracts are informal relationships that arise between trading partners when formal contracts may be impossible to enforce or too expensive to specify. Both parties in a relational contract will stay in the relationship as long as they benefit from fulfilling their promises rather than reneging on them. As such, the future value of the relationship becomes very important as a driver of current and expected behavior. Some examples of relational incentive contracts is principal-agent work relationships or goods exchanges between firms. Theoretical literature focused on investigating the optimal payment scheme that induces optimal effort in principal-agent employment relationships and suggested a simple yet powerful representation of all possible investment obligations. The main result is that a payment scheme based on a fixed wage and a nonlinear discretionary bonus will induce optimal effort for a worker employed by a firm. This result contradicts the practice most businesses use when trading goods in a channel. In fact, to the best of our knowledge, there is not a single example in the literature of two businesses which transact repeatedly in a relational contract and use a “fixed payment plus discretionary bonus” type of scheme. We use experiments to investigate the discrepancy between the predictions of recent theory and the practices of the firms. In a controlled lab experiment, we allow sellers and buyers to repeatedly trade goods and have the option to enter into relational incentive contracts to improve the quality of their products. We pay the value schemes available across conditions in order to determine what level of effort is induced. We also investigate the strength and length of the relationships formed under each payment scheme. Our results suggest that in reality firms are getting close to the same level of quality for their products by employing linear payment schemes.

**FA03**

**3-Day Floor, GB 3**  
**Consumer Behavior IV**

**Contribution Session**

Chair: Ronald Larson, Associate Professor, Western Michigan Univ, 1903 West Michigan Ave, Schneider Hall, Marketing Dept, Kalamazoo, MI, 49008, United States of America, ron.larson@wmich.edu

1 - Testing the Consequence of Religiousness for Explaining Food Attitudes

Ronald Larson, Associate Professor, Western Michigan Univ, 1903 West Michigan Ave, Schneider Hall, Marketing Dept, Kalamazoo, MI, 49008, United States of America, ron.larson@wmich.edu

Many researchers have worked to develop religiosity or spirituality scales. These measures have been linked with internet usage, media trust, shopping behavior, store and brand loyalty, interest in fair-trade products, environmental concerns, criminal acts, and health. Some have suggested that religiosity or spirituality could be considered a sixth dimension of personality. This research examines common religiosity and spirituality factors to learn if they can help explain some food preferences. A national survey of 750 adults in the U.S. included 34 value statements that formed six religiosity or spirituality factors. Respondents also rated their attitudes toward eight food issues with seven-point Likert scales. Binary logit regressions using demographics were used to predict the probability of “top-two-box” responses for each food issue. For most of the regressions, adding the religiosity or spirituality factors significantly improved model fit.

2 - Understanding Attention Bias under the Three-Stage Choice Process Framework

Yi Li, PhD Candidate, IHEC Paris, 1, rue de la Libération, Marketing Department, IHEC Paris Jouy en Josas, 78350, France, y.li2@hec.edu, Selin Atalay

Process tracing research has identified an attention bias during the choice process: individuals pay more attention to the ultimately chosen option compared to other alternatives in the choice set. Understanding the cause of this phenomenon makes it possible to predict individuals’ choices even before they are announced. Two perspectives in the literature offer explanations to this attention bias, each holds a different view on when and how attention bias emerges in the choice process (Shimozjo et al. 2003; Glaholt and Remigol 2010). This study adopts a stage-based choice perspective and connecting the attention bias within the underlying cognitive process in each stage. Under the framework of a three-stage choice process (Russo and Leclezier 1994), across two eye-tracking experiments involving choices between multiple unfamiliar brands and using dwell analysis methodology, we demonstrate that attention bias does not emerge in the
orienting stage, where individuals familiarize themselves with the alternatives. The attention bias emerges in the evaluating and comparing stage: more attention allocated to the ultimately chosen option is caused by the selective information processing of the attention bias. In the decision-making stage, attention bias persists and increases its magnitude only in the preferential choices (i.e., choose what you like). In this stage, an influence of liking on attention allocation is observed. Our linear-time varying attention bias explanation to the attention bias. By linking this visual attention phenomenon to the cognitive process, we reveal the dynamic nature of the attention bias. Moreover, we resolve the existing two explanations and show that they can jointly explain the attention bias, in different stages.

3 - Consumers’ Preferences as to Consumption Timing: An Examination of Discounting Rates in Deferring Consumption versus Expenditure Consumption Atsuko Okada, PhD Student, Keio University, 4-1-1 Hiyoshi, Kohoku-ku, Yokohama, 223-8526, Japan, a.68451325@z6.keio.jp, Akiko Inoue, Consumers are constantly faced with decision-making about the timing of their consumptions. These decisions involve tradeoffs between cost and benefits. For example, regarding delivery options for purchases, consumers need to make a decision in between a fast-and-more-expensive delivery and a longer-and-cheaper delivery. In recent years, because of the increasing growth in e-commerce and also because of the online-payment services, the situations where consumers have to face the temporal choices have been increasing. Our research focuses on these different responses both to the postponement of consumption. Prior research has demonstrated that when people postpone outcomes, they believe as if they have higher discount rates for shorter periods than for longer periods. When referred to as present-biased preferences or hyperbolic discounting (e.g., Strotz 1955; Thaler 1981). We propose that the temporal framing of a consumption decision (namely, defer versus expedite) will lead to different levels of preferences in terms of the time. Under the postponing framing, consumers will be more present-biased and will exhibit decision biases that are consistent with prior research (e.g., Thaler 1981). However, under the expediting framing, this pattern will be attenuated. We examine this proposed interactive effect and use it to understand the psychological drivers underlying inter-temporal decisions. We conjecture that the mental representations associated with the two temporal framings (i.e., not only more concrete but also feasibility representations in the postponing frame than in the expediting frame) may explain why consumers might be more present biased in delay than in expeditious decisions.

4 - How Much Did I Like It? Examining Mood-Based Biases in Consumer Reviews Dongling Huang, Rensselaer Polytechnic Institute, 110 8th Street, Troy, NY, United States of America, huang3@rpi.edu, Yu Wang, Judy Ma, Consumer reviews are prominent sources of information in today’s marketplace. That can facilitate or hamper the success of products and services. Ideally, firms with high quality products and services should receive more favorable reviews from consumers. However, there is no guarantee that reviewers are objective when evaluating products and services. While biases in consumer reviews can result from various factors, this study focuses on one type of bias, unattained temporal subjectivity. More specifically, we examine how a consumer’s temporary status—namely, affective state—may bias his or her retrospective judgment of a product or service. Using purchase data from the hotel industry and laboratory experiments, we empirically examine the impacts between consumers’ temporary affect states at the time of consumption and the time of review on reviews. We find that the impacts of the consumers’ reviews is significant for both mood, proxied by weather and sensory conditions, at both stages. Moreover, we find evidence of an interaction effect: changes in mood from the time of experiencing to the time of evaluation have a significant impact on consumers’ judgment of the experience. Our findings have important implications for producers and retailers with regards to soliciting consumer reviews.

Firms spend a large amount of resources on their customers in Business to Business (B2B) markets as the firm and customer interact more closely and frequently. To cultivate a strong buyer-seller relationship, B2B firms need to understand the customer’s heterogeneity and how it evolves over time. In the first stage, we study the customer behavior of the purchase behavior, (2) customer churn behavior, and (3) customer lifetime value. We develop two probabilistic models, the Pareto/NBD model and the Mixture Cure Competing Risks (MCCR) model, to answer these research questions. The former model provides a probabilistic prediction of customer behavior and is used to model time-varying customer perceptions of quality using purchase data, (3) study the moderating effect of customer perceptions of quality on the effect of marketing actions on customer purchase behavior, and (4) evaluate the effectiveness of different marketing strategies on customer retention. These results provide an optimal marketing resource allocation model that enables marketers to customize marketing resources and improve firm’s financial performance.

2 - Examining the Role of Winback Offers in the Likelihood and Timing of Reacquired Customer Defection Angeliki Christodouloupolou, Doctoral student, Georgia State University, Tower Place 200, Suite 204, Atlanta, GA, 30326, United States of America, achristodouloupolou1@gsu.edu, Agata Leszkiewicz, Pulak Ghosh, V Kumar, Churn is a concern to most customer oriented firms. Predicting who is most likely to defect, as well as when and why, is fundamental for efficient churn management. When acquisition opportunities are limited, it may be beneficial for firms to attempt to win back their lost customers. Addressing the issues which underlie defection, the customer will be more likely to come back to the firm. Furthermore, if these efforts heal the damaged relationship with the firm, there is a chance that the customer will not defect for the same reason in his/her second lifetime. While the literature focused on the prediction of multiple reasons for churn in the first lifetime based on the competing risks (CR) framework, formerly proposed methods do not account for the existence of a win-back offer and its effect on likelihood and future reasons-to-churn of defected customers. To address this gap, the authors propose a Mixture Cure Competing Risks (MCCR) model, in which a targeted win-back offer serves as a distinct defecting motive. We provide a comprehensive framework for joint estimation of the second lifetime duration, multiple churn probabilities, and customers’ heterogeneity within the MCCR framework. Win-back is tested using a rich data set from a US-based telecommunications provider, which includes monthly customer activities and firm’s marketing efforts for both the first and the second lifetime behavior.

3 - The Impact of Transaction and Relationship Focused Marketing Activities on Buying Behavior in B2B Market Kihyun Hannah Kim, Georgia State University, 3348 Peachtree Rd, Tower Place 200, Suite 204, Atlanta, GA, 30326, United States of America, kkim21@gsu.edu, V Kumar, From Conversion to Churn to Winback: Customer Relationship Management V Ke Li, Assistant Professor, Northern Michigan University, 918 Cleveland Ave, Apt 11, Marquette, MI, 49855, United States of America, kli@nmu.edu, Eric T. Bradlow, The authors propose a Mixture Cure Competing Risks (MCCR) model for the reacquisition of churned customers. The MCCR model allows for the existence of competing risks, such as the possibility of new offers or new products, and accounts for the heterogeneity of customer churn behavior. The authors use a large dataset of customers from a B2B service firm to test the model. The results show that the MCCR model significantly improves the prediction accuracy of customer churn behavior compared to traditional models. Additionally, the authors investigate the moderating effect of customer perceptions of quality on the effect of marketing actions on customer purchase behavior, and evaluate the effectiveness of different marketing strategies on customer retention. These results provide an optimal marketing resource allocation model that enables marketers to customize marketing resources and improve firm’s financial performance.

4 - The Role of Seasonality in CLV Estimation Patrick Bachmann, University of Zurik, Andreastrasse 15, Zurich, 8050, Switzerland, patrick.bachmann@business.uzh.ch, Markus Meierer, René Algersheim, Valuing customers is key to the success of any firm. It enables marketers to identify and target key customers. Customer lifetime value (CLV) is a central metric for valuing customers. It describes the long-term economic value of customers and gives managers an idea of how customers will evolve over time. To model CLVs in a non-contractual business setting, probabilistic customer attrition models such as the Pareto/NBD model are preferred in the literature. However, empirical evidence suggests that standard probabilistic customer attrition models do not outperform basic management heuristics. The question why is this case has not been answered. A possible explanation is that standard models fail to account for the dynamic nature of customer perceptions of quality using purchase data, (3) study the moderating effect of customer perceptions of quality on the effect of marketing actions on customer purchase behavior, and (4) evaluate the effectiveness of different marketing strategies on customer retention. These results provide an optimal marketing resource allocation model that enables marketers to customize marketing resources and improve firm’s financial performance.
1 - Effects of Micro-Transactions on Pricing and Product Strategies

Tianxin Zou, PhD Student in Marketing, Olin Business School, I Brookings Drive, Saint Louis, MO, 63130
United States of America, tzhui@wustl.edu, Baojun Jiang

In many industries, consumers have time-varying demand or need for the product or service quality. However, firms have not allowed the customers to frequently alter the subscribed level of service or product quality as those needs change, mainly due to the high transaction costs and the long time lag needed to process the consumers’ requests. With advances of mobile and information technologies, many firms now have the ability to alter a customer's service quality on demand and the transaction costs for processing small payments for both the firms and the consumers have significantly dropped. Firms have begun to an increasing level of “micro-transaction” capability, by which we mean that they can allow for and process a customer's request for short-term (e.g., daily or hourly) service upgrade in real time, and efficiently manage these micro-transactions. This paper provides an analytical model to examine the effects of a firm's micro-transaction capability on its optimal pricing and quality decisions. We find that when consumers' needs for a product vary substantially over time and the difference between the consumers' expected valuations is large enough, micro-transaction will strictly improve the firm's profit. Our analysis also reveals that the firm will increase the quality of its high-end product/service and reduce the quality of its low-end product when it covers the whole market, but it will increase the quality levels of both products if it serves only part of the market.

2 - Platform Pricing in Mixed Two-Sided Markets

Ming Gao, Assistant Professor, School of Economics and Management, Tsinghua University, Haidian District, Beijing, 100084, China, gaom@sem.tsinghua.edu.cn

When a consumer can appear on both sides of a two-sided market (2SM), such as a user who both buys and sells on eBay, the platform may want to bundle the services provided to two sides. We develop a general model for such “mixed” 2SMs, and study when a monopolist platform would have an incentive to bundle and what the optimal pricing strategy is. The answers to these questions are expressed in simple and testable formulas using familiar price elasticities of demand, which embody the bundling effect, and price-cost margins adjusted for network externalities, which incorporate “two-sidedness”. Given the optimal separate prices for two sides, the platform will be more inclined to introduce a bundle discount for joining both sides either when the bundle demand is more elastic, or when the total demand is less elastic, no matter if these elasticities are measured with the price for side 1 or side 2. In particular, bundling may be profitable even when the bundle demand is less elastic than the demand for either side. The magnitudes of these elasticities are moderated by the adjusted price-cost margins to jointly determine the incentive to bundle, exhibiting a seesaw pattern where the impact from different sides are separable. The optimal pricing rule for mixed 2SMs generalizes the familiar Lerner formula that applies in non-mixed 2SMs, where the optimal adjusted price-cost margin on each side may be higher or lower than the inverse price elasticity of demand, contingent on a comparison between how well the platform performs on the opposite side and in the intersection of two sides. Comparative states and potential applications are also discussed.

2 - How Cross-Tariffs on an Elicit Good Affect Markets of Other Goods

Amirreza Fazl, University of Washington, United States of America, fazl@uw.edu, Jeffrey D. Shulman

Caremark, one of the largest Pharmacy Benefit Managers in the US, has required customers to make extra payments on any prescriptions filled at a pharmacy selling cigarettes. Whether such a penalty is effective in shrinking the illicit market and how it impacts other affected markets are the focus of this research. We develop an analytical model to examine the effect of a cross-tariff penalty in which a firm is penalized in its primary market for participation in an illicit market. The results show that under certain conditions, symmetric firms can choose asymmetric strategies in their choice of whether to operate in the illicit market. Introducing asymmetry to the model, we find that cross-tariffs can actually increase profitability of competing firms. Interestingly under certain conditions the profit of the inferior firm can even be higher than the superior firm. Our results have implications for regulators and marketers dealing with illicit goods.

3 - Why Does Not the Firm Provide Low Quality Input to the Rival?

Michelle Lu, McGill University, Canada, yli@yale.edu, Jiwoong Shin, Dae-Hee Yoon

We analyze the channel competition where the upstream input provider is also a rival of downstream competition in the product market. For example, Samsung is providing LCD panels to Sony who is the main rival in LCD TV market, and also provides key components for iPhone to Apple who is its major competitor in the cellular phone market. This paper analyzes the competitive interactions between firms’ pricing strategy in the downstream market and its investment motives to increase the total market size. If the upstream supplier knows that it is competing with a rival in the downstream product market, it has the incentive to distort its upstream market such that it may maintain its competitive advantage in the profitable downstream market. However, our analysis shows that it is sometimes in the best interest of the firm to provide a high quality inputs for the rival firms in the downstream market to induce the higher investment from the rival firms to boost the total retail demand by sharing the costs of market expansion.

4 - Salesforce Contracting under Supply Uncertainty

Tinglong Dai, Johns Hopkins University, Carey Business School, Baltimore, MD, United States of America, dail@jhu.edu, Kinsbuhk Jerath

We consider a scenario in which a firm hires a salesperson to market a product with uncertainty in both demand and supply. For instance, consider a producer's problem of marketing an agricultural product. At the beginning of the growing season, the producer only has expectations on the yield (i.e., future product availability); at the end of the season, the yield outcome is known. The producer may hire the salesforce either during or after the growing season. We build a principal-agent model of the above situation and study the optimal structure and timing of the contracts, and obtain a number of interesting results. If the firm contracts with the salesperson before the yield uncertainty is resolved, the compensation package will have to be specified for every possible inventory and demand outcome. On the other hand, if the firm contracts after the yield uncertainty is resolved, the yield is revealed, and the compensation will only be contingent on the demand outcome. We find that bonus contracts are optimal in both cases, and the bonus may be higher if the yield is lower. In terms of timing, as the probability of high yield increases, the firm may be more inclined to wait until after the yield outcome is revealed before contracting with the salesperson. When it is difficult to infer marketing effort from observing the sales outcome, it may be in the best interest of the firm to contract with the salesperson before the inventory information becomes available.
Due to the development of wireless technologies and penetration of smartphones, mobile commerce is witnessing an upsurge. China already has the largest pool of mobile device users (360 million) and India has the largest number of new mobile adopters every month (about 3 million) that is expected to reach 450 million by 2020. Therefore, it is no surprise that shopping through mobile phones in emerging markets is gaining popularity and its importance as a potential research area is being realized by academicians now than ever before. Barraging a few studies, not many have shed light on the customers of emerging markets and their adoption behavior. Our model posits that perceived ease of use, perceived usefulness, and perceived enjoyment are positively related to attitude towards mobile shopping. We have hypothesized that perceived ease of use leads to perceived usefulness which in turn results in formation of positive attitude towards mobile shopping (indirect effect). We also hypothesize that, in addition to the direct effect of ease of use on attitude towards mobile shopping, the former is expected to have an indirect impact on attitude towards mobile shopping through perceived enjoyment. We hypothesize mobile self-efficacy as a moderator in the relationship between perceived ease of use attitude towards mobile shopping. Consumer attachment is conceptualized as a moderator between perceived enjoyment and attitude towards mobile shopping. Perceived risk is posited to moderate the relationship between perceived usefulness and attitude towards mobile shopping. We discuss the results obtained from a survey of adult consumers (n=511).

2 - Sales Forecasting by Utilizing Big Data from both Internal and External Sources
Kai Yao, Student, Guanghua School. Peking University. Changchunyuan 61, Building 207, Beijing, China. Jasonoyaopku@gmail.com, Yuxin Chen, Meng Su
Firms such as online retailers typically have plenty information on the visits and transactions made by their own consumers at their own sites. Yet their efforts of applying Big Data technology in sales forecasting is limited by the lack of information from external sources, i.e., firms usually do not know the activities of the consumers at other firms. Some third party data collectors have seized the opportunities by providing firms with consumer behavior (including visits and purchases) information from external sources. A challenge, however, is that the value of such external data is largely unknown. In this paper, we propose a novel framework and conduct a series of tests to examine the value of consumer behavior information from external sources as supplement to firms’ internal data in the context of sales forecasting. The empirical results suggest that higher forecasting accuracy is usually achieved by combining data from both internal sources and external sources than utilizing internal data alone, yet the values of external data vary by their sources and may not increase monotononically with the size of the data.

3 - Matching Pennies in the Campaign Trail
Pinar Yildirim, University of Pennsylvania, The Wharton School, Philadelphia, PA, United States of America, pyild@wharton.upenn.edu, Camilo Garcia-Fijmeno
In this paper we propose a new way of thinking about how the media to constrain politicians’ behavior in an electoral democracy. We suggest that the relationship between the media and politicians in a campaign is shaped by both a dimension of alignment of preferences, and a dimension of misalignment, which leads to a strategic environment resembling a matching pennies game. As a result, making inferences about politicians’ ideologies or policy stances based on media reports is not possible. We take an explicit account of how each player’s behavior affects the other. Based on this observation we develop a simple structural model of bipartisan races where the media makes reports about the candidates, and candidates make decisions along the campaign trail regarding the type of constituencies to target with their statements and speeches. We show how data on media reports, electoral results, and poll results, together with the behavioral implications of the model, can be used to estimate its structural parameters. We implement this methodology on US Senatorial races for the period 1980-2012. These parameters are useful, among other things, to predict the evolution of races during the campaign trail, and to understand the forces shaping candidates speech during campaigns.

1 - Does Income Inequality Matter in Marketing?
Rafael Becerril Arreola, University of South Carolina, 1014 Greene Street, Columbia, SC, United States of America, rafael.becerril@moore.sc.edu, Randolph Bickel
Income inequality in the US has significantly increased in recent years, challenging marketers to rethink their strategies. The popular press reports that manufacturers and retailers are reconfiguring their product lines and assortments. However, the academic literature lacks a broad-based, empirical assessment of the impact of inequality on marketing. We conduct a large-scale analysis of consumer product categories in the US to study the impact of inequality on product availability. To this end, we analyze scanner data on store-level UPC availability across the U.S., aggregated to the county level. The scanner data spans 860 CPG product categories sold across 1,742 US counties during the 2007 to 2012 period. Demographic data includes the Gini index, instruments for Gini, and extensive demographic variables as controls. We use these datasets in a panel regression analysis on county-level, category-specific, UPC counts to establish temporal causation. We find that increased income inequality generally leads to fewer options available to consumers on the shelves in their market area. A 0.1 change in the Gini index is associated with a 4% loss in product availability, as measured by UPC counts. The “elasticity of inequality” on availability is estimated to be -0.19. In addition, the relationship is an inverted-U: the maximum availability occurs at a low inequality level (Gini=0.38 with the US average at 0.43) and a rapid drop in availability occurs at higher inequality levels. The findings may support better informed product line and assortment decisions and suggest the potential for welfare loss due to reductions in product availability.
In this paper, we study promotion-induced competition between supermarkets and drugstores via increased channel switching and category overlap between the two channels. Specifically, we measure the relative effectiveness of price cuts and feature advertising on drug category sales, and the within- and cross-channel effects of these promotional instruments. Generalizing across household-level purchase data from five categories carried by both supermarket and drugstores, the findings suggest that, because they are visited more frequently than drugstores and their store flyers are read more often, supermarkets gain more from price cuts and feature ads than drug chains. The results also suggest that channel competition is highly asymmetric: supermarkets’ promotional sales gains come from rival supermarket chains and, to a lesser extent, drugstores, while drugstores’ promotional sales lift is primarily at the expense of supermarkets. Managerial implications are discussed.

3 - An Investigation of the Role of Category Centrality on Sales Dynamics
Dalah Ahmad, PhD candidate, Texas Tech University,
703 Flint Avenue, Lubbock, TX, United States of America,
dalah.ahmad@ttu.edu, Dale Duhan, Dennis Arnett, Mayukh Das, Vish Kumra
Category management has drawn increasing attention due to its importance in achieving retailing profits. Extant literature on category management has mainly focused on understanding how category roles, characteristics, and variations due to promotions affect sales. However, we have limited understanding on how category’s popularity (i.e., category centrality) among other factors, such as market basket size, market basket value, category size, category price labels, and price promotions impact sales dynamics. In this research, we use functional data analysis to (1) investigate the dynamics of category sales, (2) explore how various purchase characteristics such as market basket size, market basket value, category size, category price labels, and price promotions impact sales dynamics, and (3) examine the moderating role of category centrality on sales dynamics. We examine these research questions on the least 20 product categories from 10 stores in several weeks of scanner data collected from a national grocery chain. We conclude the paper with managerial implications, and insights for category management.

4 - An Empirical Analysis of Space-Time Network Effects in Groupon’s Evolution
Munir Motwani, Professor of Marketing, University of Missouri,
Trulskick College of Business, 403 Cornell Hall, Columbia, MO, 65211, United States of America, mantralal@missouri.edu,
Bernd Skiera, Yeji Lim
In this research, we develop and empirically investigate models of the growth of a two-sided e-commerce platform over space and time. The focus is on the first two weeks of the daily deals website, Groupon. Our goal is to draw lessons from Groupon’s initial growth history that would help scholars as well as promoters of other similar ventures better understand the relative strengths, effects, and evolution of key forces driving growth as visualized in the Groupon business model. More specifically, the evolution of such a platform firm’s revenues depends on the growth of both sides of its market (retailers and consumers) and their interactive effects. In the case of Groupon which launched in the city of Chicago, and successively expanded its presence to other major metropolitan centers of the United States, there are three types of effects that potentially were drivers of its phenomenal growth: (1) same-side (retailer on retailer and consumer on consumer) network effects, (2) same side intercity or spatial spillover effects, and (3) cross-side (retailer on consumer, and consumer on retailer) network effects. So far, however, the relative importance of these effects in driving Groupon’s initial growth has not been examined. In this paper, we present, considering the nature of the two-sided platform, we propose and estimate novel simultaneous equations-based spatiotemporal regression model of the evolution of Groupon’s market. Our results indicate that all network effects influenced Groupon’s growth but spatial spillover effects became more important than same-side and cross-side network effects over time.

n FA11
11 - Third Floor, Atlantic
Choice Models III
Contributed Session
Chair: Sri Devi Duvvuri, Assistant Professor, University of Washington
Bothell, 219 Beardslee Building, Bothell, WA, United States of America,
sdduvvuri@uw.edu

1 - Assessing Design-Induced Artifacts in Stated Choice Models
Kyuseop Kwak, University of Technology, Sydney,
UTS Business School, PO Box 123, NSW, 2007, Australia,
Kyuseop.kwak@uts.edu.au, Paul Wang
Stated choice models based on the random utility framework are becoming increasingly prominent in marketing and applied economics literature (Louviere et al. 2000; Train 2003). In real-world stated choice studies, the required choice design often contains a large number of choice options that are necessary to describe the choice alternatives. However, respondent’s comprehension level drops significantly as the number of choice sets and the complexity of the choice task increase (DeShazo and Fermo 2002, Swait and Adamowicz 2001). To minimize respondent fatigue, a large choice design is often divided into several blocks or versions with a small (preferably 16 or fewer) and blocked choice design (Louviere et al. 2010; Louviere et al. 2000). Each respondent is then randomly assigned to one of the versions to complete the choice task. The primary purpose of this study is to identify and assess the effect of blocked choice design on preference heterogeneity. The need to account for preference heterogeneity has motivated researchers to develop various modeling approaches. Among the most commonly used are mixed logit (Train 2009), hierarchical Bayesian models (Rossi et al. 2005), and latent class models (Kamakura and Russell 1989). We use a large choice study data and Monte Carlo simulation to show how design constraints affect the analysis outcome in stated choice models. We compare the relatively new scale-adjusted latent class model of Magdison and Vermunt (2007) and the generalized multi nominal logit model of Fiebig et al. (2010) with the traditional ways to decompose heterogeneity and reduce confounds with various sources of error variability.

2 - Sequential Estimation and Design of Choice Experiments
Zoöl Sandor, Sapientia University, Faculty of Economic and Human Sciences, Piata Libertatii 1, Miercurea Ciuc, IA, 530104, Romania, zossan@gmail.com, Lazelo Illyés
We propose a method of jointly estimating and designing a choice experiment. According to this method first we collect choice data based on a reduced number of starting choice sets. Then we repeatedly alternate between estimating the parameters and constructing one choice set, for which we obtain a choice response. Construction of the single choice sets is performed by an exhaustive search over all possible choice sets and choosing the best set according to a design error criterion widely employed in the literature. Since we compute this design criterion based on the last estimate of the parameters, this method avoids the well-known difficulty that the choice sets are typically not good predictors of the parameters to be estimated. We illustrate the proposed method by simulation experiments conducted for the simple logit model and compare it to commonly used efficient design methods that assume a priori a fixed value of the unknown parameters. We compare the mean squared error of the estimates obtained from the two procedures. We find that under several scenarios the sequential design method performs better. The difference in performance is significantly larger when the prior value of the parameters is farther from their true value and when the number of different choice sets in the design is relatively low. In these situations the sequential design needs about 30% fewer responses in order to yield estimates with similar mean square errors as the other method.

3 - Multivariate Analysis of Consumer Preference Structures Across Multiple Categories
Sri Devi Duvvuri, Assistant Professor, University of Washington
Bothell, 219 Beardslee Building, Bothell, WA, United States of America, sdduvvuri@uw.edu
That consumers’ purchase behavior varies across categories is being documented actively by the marketing science community. The variation in such behavior can be attributed to the heterogeneity in consumer preferences across categories as well as the nature of categories (e.g., substitutes). In this research, we implement a model specification that helps deduce how the nature of a category influences a consumer’s preference structure for that category and other related categories. Over and above critically evaluating the results from this model, we also derive marketing metrics that would help us understanding the (i) effectiveness of a retailer’s pricing and promotional policies, and (ii) suggest directions for improving consumer relationship management. We use scanner panel data from several categories to estimate the model. Given the complexity of the modeling approach, we use Hierarchical Bayesian methods (MCMC) to obtain model parameters.

4 - Alternative Way of Identifying Attribute by Covariate Interactions in Choice Models
Paul Wang, University of Technology, Sydney,
UTS Business School, PO Box 123, NSW, 2007, Australia,
paul.wang@uts.edu.au, Kyuseop Kwak
Incorporating preference heterogeneity across different consumers into a choice model has been well studied (Kane 1997; Allenby and Rossi 1998; Train 2002; Louviere et al. 2008; Fiebig et al. 2010). When there is heterogeneity that cannot readily be explained, one analytical approach is to incorporate it into a random effects model, e.g., Mixed Logit or Probit. Alternatively, the amount of unobserved heterogeneity can be significantly reduced by incorporating observable individual characteristics, also known as covariates. Such covariates may include socio-demographic variables such as gender and income, psychographic variables such as personality, and behavioral variables such as usage level. Theoretically speaking, an effective way to account for preference heterogeneity across different consumers is to incorporate interaction terms in consumer choice models. However, interactions from all possible combinations can thus be a very challenging task. We introduce an effective way to identify interactions by combining such heterogeneous interactions in discrete choice models. This is important because modeling such interactions is an effective way to account for systematic preference heterogeneity across different consumers. Using a simulated data set we mimic a well known phenomenon of selective attention to design attributes, we tested our proposed approach in the banking service context. Our proposed approach was successful in detecting the attribute by covariate interactions by the data generation process and was found to outperform both full and stepwise interaction models.
FA12

12th Floor, Bristol
Marketing Strategy III
Contributed Session
Chair: Anindita Chakravarty, Assistant Professor, University of Georgia, 121 Brooks Hall, Athens, GA, 30602, United States of America, achakra@uga.edu

1 - Emergence of Supply Chain Risk Management as an Aid to Value Creation
Ganesh Prasad Neupane, PhD Candidate/Student, NIHI Norwegian School of Economics, Helvelien 30, 5045, Bergen, 5045, Norway.

Advances in supply chain risk management capability have enabled increased collaboration and integration in terms of demand, supply, and information management across firms, which can potentially lead to higher operational efficiency and effectiveness. In this study, I build upon prior literatures in transaction cost economics (TCE), resource based views (RBV), and supply chain risk management (SCRM) to posit that the supplier firms’ supply chain risk management capability makes them ready to agree on governance mechanisms, that is, relatively efficient and effective than what is prescribed by the standard transaction cost economics. This capability motivates firms to risk uncertain environment and substantive specific investment in order to attain sustainable competitive advantage. Dataset from industrial supplier firms are used for the testing purpose. SCRM ability could view a specific resource of the firm, which bears the resource attributes: valuable, rare, imperfectly imitable, and non-substitutable. Following this logic, I argue that SCRM capability of firms can become a specific resource that can bring changes in inter-organizational relationships. In this study, I plan to examine, how this capability affects coordination and adaptation activities of firms, following the current trend of increasing research that has been increased to focus less on contract structure as an instrument for safeguarding economic risk and more on how contract structure affects coordination and adaptation.

2 - The Impact of Partnering New Product Development (NPD) in Emerging Markets on Shareholder Value
Venkatesh Shankar, Texas A&M, 240B Wehner 4112 TAMU, College Station, TX, 77843, United States of America, vshankar@tamu.edu, Nicole Hanson

In recent years, global firms, such as Adobe Systems, Pfizer, Verizon Communications, and Procter & Gamble, have been increasingly looking to large emerging markets, such as India and China, for new product development (NPD). Emerging markets are attractive because they offer potential partner firms with a highly specialized and trained R&D workforce at low costs. Many global firms partner with local firms in emerging markets to develop new products. However, little is known about the effectiveness of partnering NPD. What is the effect of the announcement of partnering NPD in emerging markets on short-term abnormal returns? What are the determinants of this effect? We develop a conceptual framework and hypotheses related to these important questions and test them using a uniquely compiled dataset of 90 publicly traded North American headquartered global companies who utilized partnering NPD in India during 1990-2015. Our analysis reveals important insights on the effect of partnering NPD on short-term abnormal returns. The announcement of partnering NPD announcement leads to negative abnormal returns, but highlighting the quality of local employees leads to positive abnormal returns. However, past profitability moderates these main effects in the opposite direction. Financial leverage has a negative effect on the short-term abnormal returns to a partnering NPD announcement. However, the interaction of financial leverage and cost savings orientation has a positive effect on short-term abnormal returns. We discuss the significant theoretical and managerial implications of these findings.

3 - Antecedents and Consequences of Firm Learning from Recalls
Anindita Chakravarty, Assistant Professor, University of Georgia, 121 Brooks Hall, Athens, GA, 30602, United States of America, achakra@uga.edu, Guiyong Xiong, Alok Saboo

There has been an increasing number of product recalls in recent years, according to the Consumer Product Safety Commission (CPSC) and the GlobalRecalls Portal. Considering the substantial damage of product recalls, it is meaningful to examine whether and how firms learn from their past recalls in order to prevent future recalls from happening. We focus on the following issues in this study. First, we investigate how (1) the actual severity of a product recall (e.g., number of consumer injuries caused by the product) and (2) the severity perceived by the stock market investors (i.e., firm stock price change upon recall) drive learning about product recalls. Second, we extend our investigation to different industries, we find that, the effect of actual recall severity on the firm’s post-recall improvement in marketing capability is fully mediated by investor reactions. In other words, in the market for stock market many investors believe that the recall reduces the risks to consumers, and the level of the firm’s learning from the incident is in turn dependent on how much the investors punished it, but not directly dependent on how much the consumers were harmed. We also find that the firm’s learning from stock market reactions to the recall varies according to past financial performance of firms as well as the extent of change in the CEO’s cash bonus in the previous year. Finally, the level of learning from the recall does reduce the time to the next recall significantly.

FA13

13- Fourth Floor, Harborside A
Banner Advertising
Contributed Session
Chair: Bernd Skiera, Chaired Professor of Electronic Commerce, Theodor-Adorno-Platz 4, Frankfurt, 60323, Germany, skiera@skiera.de

1 - Wearout, Wariness, or Weariness? Measuring Potential Negative Consequences of Online Advertisements
Inyoun Chae, INSEAD, Inyoun.Chae@insead.edu, Fred Feinberg, Herman Bruno

The promise of online advertising involves better targeting and control over ad exposures. Yet conventional perspectives about advertised assumptions and liability to identify effective placement contribute to great waste in advertising. Extant models of advertising typically assume that the marginal effect of ad exposure is non-negative (i.e., that advertising is at worst harmless), precluding the possibility that consumers may be overwhelmed or annoyed by ‘excessive’ advertising. We investigate heterogeneous consumers’ responses to online advertising stock and differential effectiveness across various online publishers, and develop a flexible model that can accommodate different response shapes over the latent advertising stock and the timing of the individual exposures. Here, Adstock consists of repeated exposures weighted differentially across online publishers. A dataset containing individual-level online ad exposures and associated view-through behavior empirically reveals five classes of customers with distinct response shapes. In some cases, we observe the pattern of diminishing returns, while others exhibit a response function that either stabilizes (wear) or even decreases after a threshold (wear). We identify the heterogeneous Adstock rates as users’ general online behavior, such as their usage frequency and browsing breadth across distinct websites. Moreover, the model captures differential effects across publishers: the most effective publisher is 10 times more effective than those 40 placed down. Moreover, the variation is robust across different latent-class specifications. Our analysis also casts doubt on the naive notion that the bigger sites make the most effective publishers. Finally, we propose a superior advertising allocation schedule based on empirical findings from the model.

2 - Retargeting in Context: How Motive Congruence Drives the Effectiveness of Personalized Online Ads
Alexander Bleier, Assistant Professor, Boston College, 140 Commonwealth Ave, Fulton 448, Chestnut Hill, MA, 02467, United States of America, bleiera@bc.edu, Maik Eisenbeis

Firms track consumers’ shopping behaviors in their online stores, to provide individually tailored banners, in a method known as retargeting. A field experiment shows that this form of ad personalization increases click-through rates to similar extents for banners that appear on motive congruent and incongruent websites. By contrast, view-through, a consumer’s return to the online store in response to a banner that was not clicked, is only higher for personalization when ads and their display websites cater to the same motives. On motive-incongruent websites, personalizing banners actually decreases their view-through-effectiveness. Two follow-up lab studies uncover how perceptions of ad informativeness and intrusiveness drive these results depending on consumers’ experimental or goal-directed Web browsing modes.

3 - Consequences of Retargeting as Remedy against an Interrupted Online Shopping Momentum
Isabelle Kes, Technische Universität Braunschweig, Mühlenfeldstraße 23, Braunschweig, 38100, Germany, 1Kse@tu-bs.de, David Wössneck, Alexander Etting

Despite the fact that sales in e-commerce have increased tremendously in the last five years (e-marketer 2015), the estimated loss per year due to users aborting their online shopping process is projected at 1 billion Euro in Germany alone (Zimmer 2008). Psychological studies have proved that similar situations in offline situations function as an interrupted shopping momentum (Dhah et al. 2007). A shopping momentum is a phenomenon known from physics or sports that implies a self-boosting spiral process (Adler 1981) that increases the purchase likelihood. Dhah et al. (2007) proved a first completed checkout to initiate a shopping momentum. According to recent studies in several contexts, both short- and long-term momentum exist (e.g. Luhmann et al. 2011). These studies agree that moment can be interrupted, what in general might have a negative impact on the final outcome of a process (e.g. Lambricht et al. 2010). In case of an interrupted online shopping momentum, retargeting might be a mean to react to such interruptions. Retargeting combines personalized recommendations based on consumer internal browsing of a firm’s website with the use of external browsing data to track consumer browsing on the web and to bring them back to the primary visited website (e.g. Lambrecht, Tucker 2011). Our approach is three-folded: Firstly, it aims to prove the existence of the shopping momentum and its characteristics also in online retargeting but in the lab experiment. Secondly, it shows if retargeting is an effective short-term mean to close interruptions in the online shopping process and failurous patterns in long-term effects of retargeting. To answer the second research question we conducted a field experiment including users receiving no, standardized, and personalized ads. We jointly model buying and advertising processes with binary choice and simultaneous equations event history model. Our results show that retargeting is an adequate mean to re-entering the momentum. Still, the extent of effectiveness depends on when in the process the user interrupts. Finally, we used a Bayesian dynamic linear model (DLM) (West et al. 1985) to investigate long-term effects of retargeting on customer loyalty and onsite behavior with the help of daily behavioral data of 5 months. On basis of several results management and research implications are derived.
1 - Distraction or Enrichment? Understanding the Impact of environments could pose to be distracting or enriching, leading to varying task performance outcomes. From a managerial standpoint, the results of this research suggest that if marketers can assess the decision-making orientations of an consumer, they can customize the design of AR environments best suited to current marketing contexts.

2 - “Pull” Mobile Coupons: Scanning for Discounts at the First Moment of Truth

Paul Mills, PhD Candidate, Kent State University, 475 Terrace Drive, Kent, OH, 44242, United States of America, pmills76@kent.edu, Cesar Zamudio

How coupon distribution through mobile devices can play a role in retail marketing is of interest to researchers, manufacturers and retailers. Prior research has focused on coupons that are ‘pushed’ to consumers (i.e., where the marketer initiates coupon selection and delivery). Our research investigates an alternative “pull” mechanism in which consumers initiate coupon selection and delivery by scanning grocery items using their smartphone. Upon scanning, consumers are presented with coupons for the scanned product and for a set of related products as well. A field experiment in a grocery store allowed us to collect data over time comprised of scanning, brand, and quantity decisions, as well as coupon information. In addition, a behavior-based price discrimination mechanism was introduced by varying the value of each coupon according to a customer’s purchase history. This paper examines preliminary results from 186 supermarket shoppers who scanned a total of 2,128 products, and redeemed 1,183 coupons.

Although extant research has expressed concerns about mobile marketing adoption by older shoppers, we found the mean age of adopters to be quite high, at 47.6 years. Scanning and coupon redemption behavior was found to vary considerably across 5 product categories investigated. Finally, purchase behavior over time suggests that consumers respond to the behavior-based price discrimination algorithm on the basis of price differences across promoted products.

3 - Communication on Mobile Phones versus Online Social Networks: Complements or Substitutes?

Tingting Fan, Assistant Professor, Business School of The Chinese University of Hong Kong, Room 1113, 11/F, Cheng Yu Tung Building, No. 12 Chak Cheung Street, Shatin, N.T., Hong Kong, Hong Kong - PRG, tingtingfan@bsi.cuhk.edu.hk, Peter Golder, Eitan Muller

People communicate on two major platforms: mobile phones and online social networks. With mobile phones, consumers can talk, send text messages, and email others; with online social networks, consumers can post pictures, write blogs, and chat with friends. With all these communication tools, an interesting question arises: how does the communication on mobile phones influence the communication on online social networks, and vice versa? We call this externality the “cross-platform effect.” This cross-platform effect is understudied probably because of the lack of behavioral data on cross-platform usage. Mobile phone service providers only know people’s communication on mobile phones but not people’s communicate on online social networks; whereas managers of online social networks only know people’s communication on online social networks but not people’s communication on mobile phones. To address this limitation, we formed a panel of consumers and collected longitudinal survey data of their communications on two platforms – mobile phones and an online social network. We build an individual-level simultaneous equation panel data model that controls for the different sources of endogeneity. We find that at the platform level, the cross-platform effect is negative, suggesting mobile phones and online social networks are substitutes. But on the communication feature level we find both positive and negative cross-platform effects. For example, we find that voice calls on mobile phones motivate people to write blogs and post photos on online social networks; whereas chatting with friends on online social networks hurts the use of text messaging on mobile phones. In addition, we find that the cross-platform effects differ for heavy vs. light users. For heavy users, communication on online social networks reduces their communication on mobile phones. However, for light users, communication on online social networks enhances their communication on mobile phones. Our findings have managerial implications for mobile marketing and social media marketing.

4 - The Geography of Mobile Marketing

Jei Young Lee, PhD candidate, The State University of New York at Buffalo, School of Management, Buffalo, NY, United States of America, jeilee@buffalo.edu, Jeonghye Choi, Mitsuishi Trivedi

Location-based mobile marketing provides unique opportunities for retailers to connect with their customers in a proximity driven real time context (enterprise-apps today 2014). Through such location-based shopping apps, a mobile shopper can receive more relevant and customized information from nearby retailers, leading to increased mobile commerce, thereby creating benefits for both retailers and their customers. With the increased use of mobile messaging as a key marketing tactic (Shankar et al. 2010), it becomes critical to understand how retailers are using this media and more importantly, how customers are responding to this service. Currently, retailers are using their shopping apps in different ways. While large retailers such as Wal-Mart and Target manage their own branded shopping apps, small to medium sized retailers promote their products or services through online platforms such as Groupon (Storefront Social 2013). Given this, we examine the impact of user’s location-related factors on mobile shopping app browsing behavior and how this varies given the nature of the retailer. We model shopping app category choice with retail location characteristics, and app usage time with user’s own mobility characteristics. Our results suggest that daily deal app users show local searching behavior, while traditional retailer app users show relatively spontaneous usage behavior near the store location. We expect our findings will enable retailers to integrate user’s location information and more strategically target their customers.
FA15
15- Fourth Floor, Essex AB
Mobile Ads and Consumer Insights
Cluster: Special Session
Invited Session
Chair: Xueming Luo, Charles Gilliland Distinguished Professor of Marketing, Temple University, Department of Marketing, Philadelphia, PA. United States of America, luoxm@temple.edu
Co-Chair: Andrew Reinaker, PhD Student, Temple University, Department of Marketing, United States of America, reinaker@temple.edu
1 - Weather and Mobile Ads
Andrew Reinaker, PhD Student, Temple University, Department of Marketing, Philadelphia, PA, United States of America, Andrew.reinaker@temple.edu, Chenxi Li, Chen Zhang, Xueming Luo
Marketers are constantly on the lookout for better ways to connect with their customers. This study examines the role of environmental weather conditions in consumers’ likelihood to purchase a mobile ad promotion using large-scale field data with over 10 million customer interactions. Given the opportunity, marketers prefer to deliver product information and promotions to customers that are best situated to perceive the positive benefits of the product and are in the best position to buy. By controlling for location effects and other potential confounds, we find that individuals experiencing sunny weather are more likely to positively evaluate the benefits of a persuasive mobile ad. Conversely, the mobile promotion is less effective when viewed during inclement weather conditions. One potential strategy available to marketers is to adjust the message content of their promotions to complement the current state of their customers.

2 - Behavioral Science Research on and with Mobile Devices
Peter Zubcek, Assistant Professor of Marketing.
University of Florida, Gainesville, FL, 32611, United States of America, Peter.zubcek@warrington.ufl.edu, Alan Cooke
Traditional tools used to investigate consumer behavior are typically constrained in terms of the factors (time, location, etc.) that researchers can control and/or manipulate. We are developing a collaborative research system, mLab, which will circumvent many of these constraints. The solution is a client-server platform wherein the client applications run on smartphones. The system utilizes mobile technology, enabling researchers to interact with participants over time, controlling when, where and under what conditions participants receive particular questions. I will discuss the advantages of and challenges pertaining to our novel methodology and present preliminary results on data collected via the mLab platform.

3 - How Mobile Commerce is Different from PC Commerce
Chen Lin, Assistant Professor of Marketing, Michigan State University, N303 Business College Complex, 632 Bogue, East Lansing, MI, United States of America, linc@broad.msu.edu, Jeongwen Chiang
This research takes the first step in defining and examining mobile commerce vs. traditional e-commerce (P-commerce) using an unique dataset that contains both firm daily spending and sales, as well as individual customer data on PC and mobile platforms. We further discuss mobile promotional strategies and mobile consumer behavior. Finally, we propose a field experiment to study the optimal allocation on PC vs. Mobile across four types of advertising channels: sponsored search, display, referral and group buy.

4 - Mobile App Deep Engagement
Chenxi Li, PhD Student, Fudan University, China, lichenxi89@gmail.com, Andrew Reinaker, Xiaoyi Wang, Xueming Luo
Mobile apps allow us to be connected digitally and enjoy a smart life. While offering tremendous consumer benefits and business opportunities, most apps are either abandoned or used infrequently after initial downloads and install, thus generating minimal sales revenue. The key to success in mobile apps is customer deep engagement with consumption duration, spillover usage, and sustained in-app purchase. This study tests how marketers can leverage product interest and persuasive value appeals to boost customer deep engagement in mobile apps.

FA16
16- Fourth Floor, Essex C
Working Paper XI
Contribution Session
Chair: Meisam Hejazi Nia, PhD Candidate, University of Texas at Dallas, 800 W Campbell Rd | School of Management, Richardson, 75080, United States of America, meisam.hejazinia@utdallas.edu

1 - Impact of Attribution Metrics on Return on Keyword Investment in Paid Search Advertising
Alice Li, Assistant Professor, Indiana University, 1309 E. Tenth St, Office 2133, Bloomington, IN, 47405, United States of America, aliceili@indiana.edu
This paper analyzes the impact of attribution metric used for imputing conversion credit to search keywords on the overall effectiveness of keyword investments in search campaigns. Recently, firms have been experimenting with different attribution metrics to assign conversion credits to search keywords, appearing in their consumers’ journeys to purchase. These attributed credits affect a firm’s future bidding decision and budget allocation for keywords and, in turn, determine the overall return-on-investment of search campaigns. Using a six-month panel data of several hundred keywords from an online jewelry retailer, we empirically model the relationship among the advertiser’s bidding decision, the search engine’s ranking decision, and the consumer’s click-through rate and conversion rate, and analyze the impact of the attribution metric used on the overall return-on-investment of paid search advertising. Our analyses account for the simultaneity and endogeneity in the decisions made by the advertiser, the search engine and the consumers. The focal advertiser changed the attribution metric from last-click attribution to first-click attribution half-way through the data window, thus providing us data from a natural experiment. This allows us to estimate the impact of the two alternative attribution metrics on budget allocation that, in turn, influences returns realized for keyword investments under different attribution regimes. Given the mix of the keywords bid by the advertiser, the results show that the first-click regime leads to lower overall revenues and this reduction in revenue is stronger for the more specific keywords. In a policy simulation exercise, we find the advertiser would be able to increase its overall revenue by more than 5.7% by appropriately changing the attribution metric to better account for the real contribution of keywords.

2 - Social Learning and Diffusion over the Pervasive Products: An Empirical Study of an African App-Store
Meisam Hejazi Nia, PhD Candidate, University of Texas at Dallas, 800 W. Campbell Rd., / School of Management, Richardson, TX, 75080, United States of America, meisam.hejazinia@utdallas.edu, Brian Ratchford
The mobile app market reached 64 billion downloads with $18 billion revenue in 2012 up from 8.2 billion downloads with $5.2 billion revenue in 2010. The revenue of this market comes from two sources: the price of utilitarian apps and the advertising revenue of the hedonic ones, both fueled from the app adoption. The key agent of this market is an app-store platform that matches the app-developers/publishers with the consumers. The app-store platform has a lot of information about the mobile app-downloads of each individual, so it may be able to design various targeting policies to maximize the sum of its app’s diffusion. Many factors can drive the app adoptions, including: social learning, or the interconnectedness of consumer’s preferences, popularity signals, and utilitarian or hedonic intrinsic value of each mobile app. In this study, we combined a macro diffusion model, with a micro structural choice model to propose an approach that allows an app-store platform to identify the consumer segments to target its consumers at the micro level. In particular we use an Unsettled Kalman Filter (UKF) to recover the density of influential and imitators within the population from a diffusion macro model. To identify the potential influential and imitators at the micro level, we then use the filtered latent imitators’ density as a proxy for the level of the social learning signals in a mixture normal multinomial micro choice model of the mobile app categories. We use the estimated choice model to prescribe the optimal level of the app-store platform’s viral marketing intervention to maximize the expected adoption of the mobile apps on the app-store platform. At the micro level, we identify five segments of mobile app users, including imitators, differentiators, popularity concerned, utilitarian, and hedonic users. We find that the main driver of the adoption of the mobile apps, as a type of pervasive goods, is imitator’s trial of the mobile apps, in contrast to the imitation driver of the classical economy goods such as the radio-heads, the home PCs, and the 3 color TVs. We find that on average the consumer values the utilitarian mobile apps more than the hedonic ones, so it may not be a surprise that the utilitarian mobile apps use the paid revenue model rather than the freemium ones. Last but not least we find the trial pulsing of the mobile apps, an optimal strategy to maximize the expected mobile app-adoption. We discuss various managerial implication of this study.
1 - Optimal Advertising and Pricing in a Market with Counterfeits

Our research has important implications for how companies can detect the counterfeiters. In contrast, we incorporate the possibility that some knowledgeable customers could spot counterfeit goods. Companies’ ability to spot counterfeiters depends on the quality difference between counterfeiters and authentic goods. We study how an international brand firm should develop its marketing strategy (advertising and pricing) when it enters a local (emerging market). Marketing Science 2015 6/2/15 3:37 PM Page 45

The Role of Expected Learning Opportunities

Sales Rankings

When companies develop a new product, they need to decide on its complexity, i.e., on the number of features the product contains. It is not obvious whether more features help or hurt: they offer more capabilities and social value, but make the product more difficult to use. We suggest an additional driver of consumers’ choice between more or less complex products: learning opportunities. Consumers may be more likely to buy a more complex product now in order to learn about some new features and not lose track of technological developments. This new mediator implies new moderators of the effect of the number of features. Second, we test whether the context (e.g., advertisements) and context (e.g., the editorial context of advertisements) of marketing activities moderate the effect of the number of features on product choice. As features increase, such that learning opportunities are more salient when marketing content or context activates thoughts about learning opportunities or strengthens a consumer’s future focus. In a first study, we show that learning opportunities indeed moderate the effect of the number of features on choice. We plan to study several moderators in future experiments. Our research has important implications for how companies can enhance sales of complex products with advertising.

3 - Amplifying Digital Advertising Effectiveness through Published Sales Rankings

Yaniv Dover, Assistant Prof., Tuck School of Business, 100 Tuck Hall, Hanover, NH 03755-9000, Hanover, NH, 03755, United States of America, yaniv.dover@darmouth.edu, Scott Neslin

Digital platforms increasingly and ubiquitously provide real-time market-level information regarding the popularity of products. These developments suggest an important role for advertising. In particular, the objective of the advertising becomes not so much to produce an immediate sale, but to generate the market-level information that when displayed on websites, in turn drives sales. We will examine this dynamic for the case of digital advertising and popularity rankings (i.e., to what extent is the impact of advertising amplified by the generation of product popularity rankings). Using a unique, high-resolution, cross-country study of a number of countries, we study several aspects of the effect of published real-time rankings on advertising efficiency. We develop a multi-equation model of product sales, product rank, and advertising, and estimate it using three-stage least squares. First, since the app company only advertises through social media (Facebook), we exploit this opportunity to perform the first test known to us of whether digital advertising can be effective over a social network site. Second, we consider that the advertising mechanism acts as an amplifier. Third, using empirical simulations we test the hypothetical effect that such a ranking mechanism could have on the distribution of market shares in a market of mobile apps with heterogeneous advertising efficiencies. We find that: (1) Advertising over social media can be effective; (2) Published sales rankings is an important multiplier for advertising effectiveness; and (3) That due to the second finding, having the rankings mechanism in place can considerably increase the dispersion of market shares within a market.
4 - The Effect of Category Captainship in the Presence of Store Brands

Erik Bushey, Assistant Professor of Marketing, Marshall University, 1 John Marshall Dr., CH 410, Huntington, WV 25755, United States of America, bushey@marshall.edu, Udatta Palekar

The use of category captains (CC) and the carrying of store brands are two marketing strategies which are both growing in popularity among retailers. Retailers are eager to experiment with both, as both are capable of increasing retailers' leverage in negotiations with manufacturers. As the implementation of both these practices continues to spread across many types of product categories in practice, so too does the probability that retailers will soon face decisions regarding the joint implementation of both practices in a single category. While there has been no shortage of academic research studying the successful implementation of both category captainship and the introduction of store brands, there as of yet has not been any research into their joint implementation. Using a game theoretical model we find that the usefulness of category captainship for retailers who are looking to outsource both their category management responsibilities as well as the production of their store brands depends largely on the willingness of the manufacturers to market store brands as they are told. In our model, if the manufacturers are willing to let the retailer decide how its store brands are to be marketed, then the retailer is willing to use a CC, if not, then the retailer is only willing to use a national brand manufacturer as a CC for a limited number of conditions. When this occurs the possibility that the retailer may ask the external manufacturer to enter into the bidding process for category captainship. It is commonly argued that while category captainship may be harmful to members of the channel, the channel as a whole as well as consumers should expect to benefit from category captainship. While we do find evidence of category captainship leading to increases in both category profit and consumer surplus, the type of low quality product being captured is determined by how the consumer reacts. If the low quality products being carried are line extensions instead of store brands, consumers are much more likely to see increases in surplus. If not, the low quality products being captured are store brands, where CCs are unwilling to produce store brands modeled after the NCC's brand, under the majority of conditions both the channel and the consumers suffer.

3 - Financial Decision Making Among the Underprivileged: A Few Propositions Based on Consumer Psychology

Rahul Sareen, Assistant Professor, Indian Institute of Management Kozhikode, Faculty Block 2, Room 4 IIMK Campus, Kozhikode, KE, 673570, India, rahul@iimkk.ac.in

The underprivileged face a very different reality as compared to the financially resourceful. They face humiliation, social ostracism, and financial exclusion among other impediments to well being, resulting in great mental anguish and a pervasive sense of psychological ill being. This in turn is reflected in their choices and decision making. Consequently, developing products for this segment of consumers necessitates a good understanding of the psychological aspects underlying their choices and decision making. Our understanding of the psychological of financial decision making among the underprivileged, a field dominated by economists and sociologists, is limited, and can benefit greatly from research in consumer psychology. In this paper propositions based on the psychological aspects and the behavioral economics of financial decision making among the underprivileged are developed. It is proposed that mental simulation leads to greater proportion of choice of a larger microwav when flexibility in the repayment schedule is provided. Theoretical, managerial, public policy, and consumer welfare implications are discussed.

2 - Category Sales, Consumer Psychographics and Web Browsing Behavior

Akira Shimizu, Professor of Marketing, Keio University, 2-15-43 Midori, Minato-ku, Tokyo, 108-8345, Japan, akira@keio.ac.jp, Takashi Toda, Jeffrey Imman

In this research, we explain category sales using consumer psychographics and demographics. Prior research examining category structure analysis and category management analysis used product-based factors to explain sales, but did not include context. In this research, we use demographics factors, consumer psychographic factors, and media contact behavior to explain category sales of individual households. Our data are supplied by INTAGE Inc., which is the largest market research company in Japan. We examine 33 food categories and 4 non-food categories, create three usage segments (‘non-buyer’, ‘light’, ‘heavy’) using data from 2nd quarter of 2013, and estimate household category sales volume of heavy users for the 4th quarter of 2013. Three types of Poisson regression models are estimated to explain individual consumer's category sales volume. Our results show that not only demographics, but also psychographic and media contact behavior are effective in explaining category sales volume. Also, we model category purchase incidence for the ‘light’ segment to identify the factors that effect whether or not to buy the category. Compared to the sales volume model results, TV commercial viewing becomes effective in explaining whether or not to buy, but it does not explain category sales volume. Through these analyses, we identify the importance of consumer factors in explaining category sales, and the difference between whether to buy and how much to buy.

1 - The Joint Impact of Revenue-Based Loyalty Program and Promotions on Consumer Purchase Behaviors

Asim Ansari, Columbia Business School, 517 Uris, New York, NY, 10027, United States of America, maa48@columbia.edu, Jia Liu, Leonard Lee

Despite the large stream of academic research in loyalty programs, most prior research on the impact of loyalty programs on purchasing activity has been conducted in the context of frequency reward programs. In this research, we study the dynamics of consumer purchasing under another commonly used program structure - revenue-based loyalty programs (RBLPs). In RBLPs, customers get points based on their total spending and they can redeem points for rewards once their points inventory reaches certain thresholds. Our main objective is to examine the dynamics of the design features of the loyalty programs, including point structure, reward structure (timing and tiers), membership requirement and expiration, and their interaction with firm’s promotion activities on consumer purchasing. We use a data set from a department store that launched a RBLP about three years ago. This RBLP imposes requirements for a customer to become a member and to maintain her membership; it has multiple point redemption thresholds for obtaining reward vouchers, with different dollar amounts associated with these thresholds and there is also an individual-specific time horizon for a member to accumulate 04-Third Floor, GB 4

Customer Relationship Management VI

Contributed Session

Chair: Farnoosh Khodakarami, PhD Candidate, University of North Carolina at Chapel Hill, 300 Kenan Center Dr., Campus Box 3490, Chapel Hill, NC, 27599, United States of America, farnoosh_khodakarami@kennan-flagler.unc.edu

1 - The Joint Impact of Revenue-Based Loyalty Program and Promotions on Consumer Purchase Behaviors

Asim Ansari, Columbia Business School, 517 Uris, New York, NY, 10027, United States of America, maa48@columbia.edu, Jia Liu, Leonard Lee

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The interaction of these two variables measured in the first step and see how the levels of customer loyalty are different in each members.

Ours preliminaries suggest that a customer's behavior evolves within a local restaurants over an 18-month period, from October 2011 to March 2013. Our research develops a unified framework for the complete cycle of points collection and rewards redemption in consumer loyalty reward programs (RLPs). While previous research has concentrated mostly on rewards that are granted automatically to program members (such as access to a superior status tier), we focus on a typical program, which allows consumers to decide the redemption moment, as well as the size of the reward. We focus on redemption because it is a key aspect of RLPs, as it sets in motion the two main mechanisms that make RLPs effective: creating switching costs or points pressure and the rewarded behavior effect. The problem is interesting because participants in these programs show a preference for substantial balances, which hamper redemption, but which may not necessarily be part of RLPs. The data is ideal for addressing explanations such as consumers protecting their points balance in order to acquire a superior status tier, idiosyncratic unobserved need for the reward, redemption constraints or lack of involvement with the program. The proposed model asserts that consumers derive utility both from the rewards they claim and from the balances they keep. The estimated structural parameters are used to predict the effectiveness of the RP as well as to provide insights into policies that can improve it (e.g., best time to offer a promotional redemption period, encouraging consumers to treat the accumulated loyalty points as a more or less special type of cash).

- Examining the Moderating Effect of Type of Membership on the Relationship between Time of Rewards and Customer Loyalty

Dong Young Kim, Korea University Business School, Anam-dong 5-ga, Seongbuk-gu, Korea Univ. Hyundai Motor Hall #517, Seoul, 136-701, Korea, Republic of, kdy8999@korea.ac.kr, Sang Yong Kim

Many hotels place a great importance on a membership program in order to keep their customers staying loyal and patronizing the property instead of searching for new customers. There are two forms of membership in a hotel: a) paid membership requiring an annual membership fee from customers and providing them immediate access every time they visit the property; and b) free membership providing delayed rewards by redeeming points they accumulated. There are researches examining the relationship between time of rewards (immediate access) and customer loyalty with various moderating variables. However, there is a lack of research exploring how type of membership (paid vs. free) would affect the relationship between time of rewards and customer loyalty. Therefore, this study investigates how type of membership moderates the relationship between time of rewards and customer loyalty. First, we investigate the moderating effect of membership on the relationship between time of rewards and type of membership. Secondly, we analyze the moderating effect of these two variables measured in the first step and see how the levels of customer loyalty are different in each membership.

- Consumer Search, Purchase, and Reward Redemption Behavior across Loyalty Programs

Farmosho Khodakarami, PhD Candidate, University of North Carolina at Chapel Hill, 300 Kenan Center Dr., Campus Box 3490, Chapel Hill, NC, 27599, United States of America, Farmosho_khodakarami@kenan-flagler.unc.edu, J. Andrew Petersen, Rajkumar Venkatesan

Many firms across various industries offer loyalty programs with point-based reward systems to encourage customer retention. Many customers simultaneously participate in a number of loyalty programs. However, due to data limitations, research in CRM and specifically with regard to loyalty programs is often studied within the frame of a single firm. There is little research about a customer's interaction across firms and loyalty programs. The goal of this research is to investigate how activities with a firm's behavior impact the firm as well as how these activities spillover onto that customer's behavior with competing firms. We specifically analyze how a customer's search, transaction, and loyalty point accumulation and redemption behavior vary with time across firms. To do this, we use a novel dataset from a mobile app provider which partners with firms and allows customers to manage relationships with loyalty programs across those different firms. The dataset includes a random sample of 1,553 customers from the mobile app that have interacted with more than 15 local restaurants over an 18-month period, from October 2011 to March 2013. Our preliminary findings suggest that a customer's behavior evolves within a loyalty program at a firm over time and that a customer's behavior with the loyalty program at one firm (e.g. a customer redeems a reward) impacts that customer's search, transaction, and redemption behaviors at competing firms. In other words, there is a spillover effect in customer behaviors across loyalty programs across firms.

- Loyalty Programs: The Complete Collection-Rewards Redemption Cycle

Mihai Alina Mastasoiu, Ivey Business School, 1255 Western Road, London, Se, N6G 0N1, Canada, m mastasoiu.pibd@ivey.ca, Salvador Navarro, Mark Vandenbosch, Neil Bendle

Our research develops a unified framework for the complete cycle of points collection and rewards redemption in consumer loyalty reward programs (RLPs). While previous research has concentrated mostly on rewards that are granted automatically to program members (such as access to a superior status tier), we focus on a typical program, which allows consumers to decide the redemption moment, as well as the size of the reward. We focus on redemption because it is a key aspect of RLPs, as it sets in motion the two main mechanisms that make RLPs effective: creating switching costs or points pressure and the rewarded behavior effect. The problem is interesting because participants in these programs show a preference for substantial balances, which hamper redemption, but which may not necessarily be part of RLPs. The data is ideal for addressing explanations such as consumers protecting their points balance in order to acquire a superior status tier, idiosyncratic unobserved need for the reward, redemption constraints or lack of involvement with the program. The proposed model asserts that consumers derive utility both from the rewards they claim and from the balances they keep. The estimated structural parameters are used to predict the effectiveness of the RP as well as to provide insights into policies that can improve it (e.g., best time to offer a promotional redemption period, encouraging consumers to treat the accumulated loyalty points as a more or less special type of cash).

- Consumer Pseudo-Showrooming and Omni-Channel Product Placement Strategy

Jane Gu, Assistant Professor of Marketing, University of Connecticut, 2100 Hillside Road, Unit 1041, Storrs, CT, 06269, United States of America, jane.gu@business.uconn.edu, Gtyi Taryi

Modern consumers frequently switch between online and offline channels when they navigate through various stages of the purchase process, which motivates multi-channel sellers to develop omni-channel strategies that optimize their overall profit. Our study examines the important role of consumer "pseudo-showrooming," or the consumer behavior of inspecting one product at a seller's physical store before buying a related but different product at the same seller's online store, in driving a profitable omni-channel product placement strategy under which the multi-channel seller carries a larger product assortment at the online store than at the physical store. We develop a stylized model in which a multi-channel firm offers two horizontally differentiated but related products and consumers are uncertain about their fit with either product. A consumer's fit uncertainty with a particular product can be fully resolved after the consumer has inspected that product in person, or be partially resolved after the consumer has inspected the other related product. Our analysis shows that compared to selling both products through the dual channel, the firm obtains a greater profit by selling only one product through the dual channel and the other through the online channel exclusively, with the effect of inducing consumer pseudo-showrooming for the online exclusive product, if the fit probability of products and consumers' cost for returning a product are both in the intermediate range. Moreover, we find that over a large range of parameter values, consumers also enjoy a greater total surplus when the firm adopts the product placement strategy that induces consumer pseudo-showrooming, suggesting an interesting "win-win" situation. We further show that if the fit probability of products is low, the multi-channel seller's profit from facilitating consumer pseudo-showrooming is greater than the total profit of two independent single-channel sellers, one selling its product solely through the online channel and the other selling its product through the dual channel. Lastly, we show that when the firm offers two products of different vertical qualities, it garners the most benefit from consumer pseudo-showrooming by selling the higher-quality product through the online channel exclusively. Collectively, our study offers a compelling demand-side explanation to the community-wide shift in multi-channel sellers to offer products online exclusively even when offline selling is feasible.
1 - Framing the Future First: Neural Mechanisms of Increased Consumer Patience

Eric J. Johnson, Columbia University, Bernd Figner, Crystal Recek, Amy R. Krosch, Jason Steffener, Elke U. Weber, Tor D. Wagner

Consumers select rewarding short-term options that undermine long-term goals, yet framing choices as decisions to accelerate compared to delay consumption encourages patience. Query Theory, a model of preference construction, explains this asymmetric discounting, yet current neuroscientific models of intertemporal choice do not explain acceleration versus delay differences in choice. The present research studied the mechanisms underlying asymmetric discounting using process tracing methods and fMRI. Study 1 (N = 200) replicated standard asymmetric discounting effects,2.5-6 (p < .001). Using MouseLabWeb, analyses revealed several process differences. For example, when options were framed as acceleration decisions, participants were more likely to choose patiently when they engaged in attribute-based, rather than alternative-based, comparisons (p < .001). Query Theory posits that differences in memory queries during preference construction underlie differences in choices. We hypothesized that neural regions implicated in prospection (querying memory and simulating events) and control (managing impulses) would be differently engaged by decision frames. In Study 2, participants (N = 20) completed an adapted intertemporal choice paradigm,3 while undergoing fMRI. Delay-framing increased activation in regions implicated in prospection compared with acceleration-framing. Additionally, greater activation was observed in delay-framing in regions implicated in self-control, consistent with the notion that delay-framing is associated with greater temptation and exertion of control. Finally, the medial prefrontal cortex, an area implicated in simulating future events and processing rewards, not only predicted participants’ choices but also significantly mediated the effect of option framing on choice. Our results provide neural evidence that acceleration-framing increases patience without enhancing demand on control regions. Framing the future is a simple yet powerful intervention that can reduce consumer impulsiveness.

2 - An Efficient Neurobiological Representation of Utility Rationally Accounts for Inconsistency in Choice Behavior

Paul Glimcher, Professor, New York University, 4 Washington Place, New York, United States of America, pg3@nyu.edu

Biological studies of how human brains have revealed the neural correlate of utility: subjective value. But these studies have also revealed that precision in neural representation is costly. This raises a new an essential tension in understanding inconsistent choice behavior. To achieve perfect transitivity is costly; and may often cost more than it is worth. In this paper I show data indicating that the neural representation of subjective value is “efficient” in an information theoretic sense and that this efficiency can account for many well known “irrationalities.”

3 - Predicting Advertising Success: New Insights from Decision Neuroscience

Vinod Venkatraman, Temple University, Khoi Vo, Russ Winer, Angelika Dimoka

Organizations spend millions on advertisements and are always seeking the key drivers of advertising success. While traditional advertising research has focused on rational and conscious processes through consumer self-reports, recent advances in neuroscience methods emphasize the importance of understanding the role of emotions and non-conscious processes. Here, we seek to systematically evaluate the role of different methodologies in predicting the effectiveness of commercials (measured using market response models). Using a unique experimental protocol to assess subjects’ responses to 60-second TV ads, we capture many measures of advertising effectiveness across six commonly used methods (traditional self-reports, implicit, eye-tracking, biometrics, EEG, and fMRI). Using time-series data on sales and Gross Ratings Points for the same TV ads, we then attempt to relate individual-level response neurophysiological measures when participants viewed the ads to their aggregate, market-level elasticities. We show that fMRI measures explain the most variance in advertising effectiveness beyond the baseline traditional measures. Notably, activity in the ventral striatum is the strongest predictor of real-world, market-level response to advertising. Our findings clearly demonstrate the potential of neurophysiological measures to complement traditional measures in improving the predictive power of advertising success models. This study also demonstrates the potential of decision neuroscience applied to marketing research and practice, by extending existing measures, helping enrich marketing theories, and improving models of marketing success. Acknowledgements: This study was funded by the Advertising Research Foundation and its sponsors.

4 - An Empirical Test of Price Theories in the Market for Seasonal Goods

Gonca Soyisal, Assistant Professor, UT Dallas, 800 W Campbell Rd, SM 32, Richardson, TX, 75080, United States of America, ggonca.soyisal@utdallas.edu, Pradeep Chintagunta

Three theories have been proposed in the literature to describe the reason behind sharp price declines observed over a product’s short lifecycle in seasonal goods markets: (1) Prices decline as a result of firm’s uncertainty about the level of demand at the start of the season, (2) Prices decline as a result of firms’ price competition at price discrimination, (3) Prices decline as a result of decreasing opportunity costs due to product perishability. We examine and derive empirically testable implications of each theory and assess whether these theories have empirical support in the fashion apparel market using data from a US specialty apparel retailer. The results indicate that inter-temporal price discrimination and product perishability both contribute to the observed price declines. We do not find direct empirical support on the impact of retailer uncertainty about the level of demand on observed price declines.
**FB08**

**08-Third Floor, GB 10**

**Working Paper XV**

**Contributed Session**

Chair: Mark Ratchford, Assistant Professor Or Marketing, Vanderbilt University, 401 21st Avenue South, OGSN, Nashville, TN, 37203, United States of America, Mark.Ratchford@vanderbilt.edu

1 - The Emotional Pathways to Escalation of Commitment

Suniti H. Contractor, Johns Hopkins University, 100 International Drive, Baltimore, MD, 21202, United States of America, suniti.contractor@jhu.edu, Thomas W. Leigh, Piyush Kumar

In this paper, we propose a new emotions-based, explanation for the relationship between personal agency and escalation of commitment and show that disappointment and regret mediate the relationship. We also demonstrate that information about a superior foregone outcome can be used to design de-escalation strategies. However, we find that the effect of the interplay between these two antecedents of escalation is contingent on the attractiveness of a potential terminal outcome of the chosen option and the relative magnitude of the interim outcome of the foregone option. These findings complement the cognitions-based explanations for escalation of commitment and also help reconcile some of the seemingly-inconsistent findings regarding the role of personal agency across the escalation and emotions literatures. They also suggest that mechanisms to manage the intensity of the relevant emotions can be used to design de-escalation strategies in personal and organizational decisions.

2 - Partner Poaching in Managerial Decisions on Strategic Alliances

Mark Ratchford, Assistant Professor Or Marketing, Vanderbilt University, 401 21st Avenue South, OGSN, Nashville, TN, 37203, United States of America, Mark.Ratchford@vanderbilt.edu, Dipankar Chakravorti, Atanu Sinha

In this paper, we experimentally examine managerial behavior in forming strategic alliances given the presence of existing alliances among two or more firms. We employ a custom-designed computer game in which managers of firms in a hypothetical industry have an incentive to form resource-based coalitions that optimize profits. Across three studies, we show that managers often systematically avoid breaking or “poaching” an existing coalition that includes an attractive potential partner, even if doing so is economically advantageous. However, this tendency may be mitigated when the existing coalition is perceived as a powerful threat or when no other viable partnership options exist. The findings provide behavioral insights into managerial decisions on strategic alliances and endogenous coalition formation in cooperative games.

**FB09**

**09-Third Floor, Dover AB**

**Meet the Editors II**

Cluster: Special Session

**Invited Session**

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

Editors (or their representatives) from a number of major research journals in marketing will be available to answer questions about submitting papers and the review process

Marketing Science, Prayas Desai, Spencer R. Hassell Professor, Fuqua School of Business, 100 Fuqua Drive, Durham, NC, 27708, United States of America, desai@duke.edu

Journal of Marketing, V Kumar, Regents Professor; Richard and Susan Lenny Distinguished Chair Professor in Marketing; Executive Director, Center for Excellence in Brand and Customer Management, Georgia State University, 3348 Peachtree Road, Tower Place 200 Suite 204, Atlanta, GA, 30326, United States of America, vk@gsu.edu

Journal of Consumer Research, Praveen Kopalle, Professor, Dartmouth College, 100 Tuck Hall, Hanover, NH, 03755, United States of America, praveen.kopalle@dartmouth.edu

Journal of Retailing, Murali Mantra, Professor of Marketing, University of Missouri, Trulaske College of Business, 403 Cornell Hall, Columbia, MO, 65211, United States of America, mantralam@missouri.edu

Journal of Service Research, Katherine (Kay) Lemon, Boston College, Boston, MA, United States of America
The results indicate that influence strategies are effective in winning contracts only when used in combination with other strategies but not in isolation. For instance, a combination of “promises” and “assertiveness” increases the likelihood of a contract award. However when used in isolation, both “promises” and “assertiveness” remain ineffective. Implications for research and practice are discussed.

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FB11
11-Third Floor, Atlantic Choice Models IV
Contributed Session
Chair: Gary Russell, Professor of Marketing, University of Iowa, Tippie College of Business, Iowa City, IA, 52245, United States of America, gary.j-russell@uiowa.edu

1 - Capturing Cross-Product Category and Inter-Temporal Decision Patterns from Large Consumer Data
Feihong Xia, University of Pittsburgh, Mervis Hall, 249, Pittsburgh, PA, 15260, United States of America, lex8@pitt.edu, Rabab Chatterjee, Jerold May

A returning question facing firms and managers is how and why to react to competitive attacks. While prior research defined competitive attacks homogeneously, this article distinguishes between strategic and tactical actions independently. To study these differences between both action types, whose division of decision making between upper- and lower management is uniquely suited to identify these actions. By relating sales force activity to sales using time series methods, we find significant differences between strategic and tactical actions. In particular, we find that strategic actions lead to stronger short- and long-term reactions due to the higher firm commitment signaled by these actions.

Second, we find that while the decision to react to competing strategic actions is always sound, this is not the case for tactical actions. For the latter, in 41% of the cases of retaliation and 59% of the accommodation cases reactions are unwarranted. Improving lower management training and providing additional decision support could help improve this decision making process. Finally, we show that responses to strategic actions are mainly driven by firm performance and markets but effective drivers, while tactical actions are driven by the desire to achieve immediate sales goals. This leads to different reactions to the same situation depending on the firm level at which the decision to react is made. These findings show that firms should evaluate lower-level management less on immediate sales goals, and stimulate their long-term value orientation.

2 - Elimination-by-Aspects as a Generalization of Nested Logit and Cross-Nested Logit Models
Kamel Jedidi, Professor, Columbia Business School, Columbia Business School, Urs Hall, 5th floor, 3022 Broadway, New York, NY, 10027, United States of America, kj7@colubmia.edu, Rajev Kohli

Multinomial logit, nested logit, cross-nested logit and EBA are shown to be models of increasing generality obtained using the same error theory. The feature common to these models is the use of a common probabilistic method for obtaining a lexicographic ordering of attributes or aspects. We present an empirical application illustrating these relations.

3 - Measuring Substitution and Complementarity Among Offers in Menu Based Choice Experiments
Tetyana Kosyakova, Goethe University Frankfurt, Grueneburgplatz 1, Frankfurt, 60323, Germany, kosyakova@econ.uni-frankfurt.de, Thomas Otter, Christian Neugebauer
Choice experiments designed to extend beyond the classic application of choice among perfect substitutes have become popular in marketing research. In these experiments, often referred to as menu based choice, respondents face choice sets that may comprise substitutes, complements, and offers that provide utility independently, or any mixture of these three types. The inferential challenge posed by these experiments is to compare the utility functions that accommodate a mix of substitutes, complements, and “independent” offers. Moreover, while a prior understanding of the product categories under study may for example, suggest that offers in a set are essentially perfect substitutes, this may not be true for all respondents. To address these challenges, we combine Besag’s autologistic choice model (Besag 1972, 1974) with a flexible hierarchical prior structure. We explain from first principles how the autologistic choice model improves on the multivariate probit model, and on models that include cross-price effects in the utility function specification. We use a local Bayesian inference for the autologistic choice model, including its intractable normalizing constant. Finally, we find empirical support for our model in a menu based conjoint experiment investigating demand for game consoles and accessories and we illustrate implications for optimal pricing. Besag, J. E., 1972, Nearest-neighbour systems and the auto-logistic model for binary data. Journal of the Royal Statistical Society. Series B (Methodological), 34 (1), pp. 75–83. Besag, J. E., 1974, Spatial interaction and the statistical analysis of lattice systems. Journal of the Royal Statistical Society. Series B (Methodological), 36(2): pp. 192–236.

FB12
12-Third Floor, Bristol Marketing Strategy IV
Contributed Session
Chair: Sourindra Banerjee, Asst. Prof. of Marketing, Warwick Business School, University of Warwick, Coventry, CV4 7AL, United Kingdom, sourindra.banerjee@warwick.ac.uk, Gerard Tellis, Jaideep Prabhu

1 - Firm-Level Drivers of Cross-Functional Coopetition: The Effect of Shared Goals and Reward Systems
Niklas Thieme, RWTH Aachen University, Kackertstr. 7, Aachen, 52072, Germany, thieme@time.rwth-aachen.de

Cross-functional coopetition is the simultaneous occurrence of cooperation and competition in intra-firm relationships. As marketing departments are increasingly collaborating with other functions to continuously adapt to changing market demands, the concept has gained rising attention in marketing literature. Cross-functional coopetition has been shown to improve overall firm performance and knowledge sharing. This study analyzes the effect of different reward systems on cross-functional coopetition and how the relationships are moderated by superordinate goals between functions. Using survey data of 300 managers from 850 and marketing, the hypothesized effects are empirically tested using partial least squares path modeling. The study provides empirical evidence that performance-based rewards foster intra-firm coopetition. Analyses of effects of reward structures that are based on outcomes or processes show ambiguous results for different coopetitive interactions. Superordinate goals foster cooperation and simultaneously hamper competition, resulting in decreased levels of coopetition. The paper advances understanding of firm-level drivers of cross-functional coopetition and helps practitioners to manage coopetitive relationships in their cross-functional projects more effectively.

2 - The Impact of Corporate Ownership and Management on Innovation
Sourindra Banerjee, Asst. Prof. of Marketing, Warwick Business School, University of Warwick, Coventry, CV4 7AL, United Kingdom, sourindra.banerjee@wbs.ac.uk, Gerard Tellis, Jaideep Prabhu

A great deal of research in management and economics examines the adversarial relationship between ownership and control on firm outcomes. Far less research examines how ownership and control work together to improve firm outcomes. To overcome this gap, we study how the most common forms of ownership (family, state, foreign and widely-held) interact with professional versus non-professional management (i.e., controls) to drive two major outcomes for firms: how many innovations they generate and how much value they capture from these innovations. We develop a theory about how risks and resources drive firms with different types of ownership (family, state, foreign and widely-held) and management (professional or non-professional) to focus on different levels of innovation, and generate varying levels of value from them. We test our hypotheses using panel data from 2001 to 2011 on major Indian firms in the banking, oil and gas, power, metal and engineering sectors. We find that the amount of new product announcements and abnormal returns from new product announcements to measure innovations generated and the value captured from
innovation respectively. The results show that, on average, firms with greater state ownership capture less value from innovation; however, firms with greater state ownership that are led by professional CEOs capture more value from innovation. Our results also show that, on average, firms with greater widely held ownership generate less innovation and capture less value from innovation; however, firms with greater widely held ownership that are led by a professional CEO generate more innovation and capture more value from innovation. Some implications for policy and practice are: state owned and widely held firms should encourage professional management; the privatization of state owned firms will boost the innovation output of firms; and reducing widely held ownership will boost innovation output and increase the value captured from innovation.

3 - A Model of Cause-Related Marketing

Sreya Kolya, University of California, Irvine, Paul Merage School of Business, Irvine, CA, 92697, United States of America, sreya-kolya@uci.edu

Cause-related marketing (CRM) is the practice of linking purchases of a product to donations made to charitable causes. Popularized initially by American Express’ hugely successful Statue of Liberty Restoration program in 1983 where it offered to donate a cent to the renovation of the Statue of Liberty for each of its charge card and a dollar for each new card issued in the U.S. during the fourth quarter of 1983, this practice has become increasingly popular over time. More recent examples include the Buy Red Card (with Gap, Starbucks, Apple as participant brands), Yoplait’s Save Lids to Save Lives Campaign, TOMS Shoes’ “One for One Campaign”. An examination of the various cause-related marketing actions by firms reveals a wide range of practices. They include price-based CRM policies wherein a firm pledges to donate a certain percentage of revenues or profits for every purchase made, or quantity-based CRM policies wherein the firm pledges to donate a unit of its own product for each unit purchased. In this paper, we develop an analytical model to explore the following questions: (i) When, and for what kind of products is CRM profitable? (ii) Which type of CRM is most profitable under what market circumstances? (iii) How do the various types of CRM policies differ in terms of impact on society? In a market of consumers who have varying degrees of affinity for charitable activities, we show how the quality of the product determines when the firm may want to engage in CRM, and more specifically, whether in price-based CRM or unit-based CRM policies. Furthermore, we demonstrate cases where a particular profitable type of CRM policy may be associated with a lower amount of donations or lower amount of social welfare compared to other types suggesting a conflict of interest between the firm and recipients of the charitable donations as well as society as a whole.

1 - All You Need is “R”: Estimating the Pareto/NBD Model using Only Recency Data

Paramveer Dhillon, Massachusetts Institute of Technology, 77 Massachusetts Avenue, E62-489, Cambridge, MA, 02139, United States of America, dhillon@mit.edu

There is no doubt that the Pareto/NBD model and its variants such as the BG/NBD and BB/BG have proven to be very popular and powerful tools for capturing customer-base analysis tasks in noncontractual settings for academics and practitioners alike. Among the many benefits that these models offer is their use of simple summary statistics – namely recency and frequency – instead of requiring the full transaction history for each customer. In some settings it may be difficult to get reliable frequency data. One common example involves survey-based measurement of longitudinal behavior: it has been known for decades that customers can recall past transactions after buying or using a certain product or service, but frequency estimates are subject to a variety of biases, some quite strong. With such a setting in mind, we demonstrate how the parameters of the Pareto/NBD model are estimated using nothing more than recency data. Capitalizing on some backwards-recurrence relationships for the Pareto/NBD, we show that the frequency information can effectively be “integrated out” of the model specification, resulting in a specification that offers all of the conceptual and computational benefits of the original Pareto/NBD but using nothing more than customer-level recency data (as well as the time of each customer’s “birth”). We lay out the key mathematical details and demonstrate the effectiveness of this new method on simulated and real datasets.

2 - Counting your Nonstationary Customers

David Harman, Univ. of Iowa, Dept. of Marketing, S 2527, John Pappajohn Business Bldg., Iowa City, IA, 52242, United States of America, david-harman@uiowa.edu

Stochastic customer lifetime value (CLV) models like the Pareto/NBD often make the assumption that customer or household transactions follow a memoryless, stationary process. However, there are many categories of noncontractual consumer goods where the stationary transaction assumption is violated, particularly categories with seasonal purchasing patterns. Additionally, marketing interventions are often nonstationary either in execution or in the way a customer experiences them, e.g. periodic catalog mailings. One method to account for nonstationary incidence rates in a stochastic process model is to change the formulation of the underlying process itself, such as using an Erlang-k process where the Poisson case is included when k=1, another approach is to include time-varying covariates in the model. In this study, we propose hierarchical Bayes CLV model that incorporates both methods to model nonstationary transactions. Using donation data from a non-profit that exhibits a strong seasonal pattern, and through the use of periodic reevaluations of expected future transactions, we demonstrate how accounting for nonstationary transactions provides more consistent estimates of CLV compared to existing models.

3 - Sequential Allocation for Customer Acquisition

Eric Schwartz, University of Michigan, Ross School of Business, 701 Tappan Street Office R5468, Ann Arbor, MI, 48109, United States of America, ericscmich@umich.edu, Liangbin Katie Yang, Peter Fader

To acquire customers, firms allocate resources (e.g., dollars, sales calls) across a range of channels, segments, etc., but they are uncertain about which ones are best. Over time they learn about their customers and sequentially reallocate their resources to earn a better return on acquisition spent. The purpose of this study is to improve firms’ “earning while learning” process for acquisition to increase the overall (current and future) value of their customer base. To frame the sequential acquisition decisions as a multi-armed bandit problem, we set a set of acquisition policies to assess their ability to acquire from the “right” sources of customers. While typical acquisition policies assess segments in a “backward-looking” manner (e.g., value of customers previously acquired), we introduce several “forward-looking” ones such as a forecast of expected customer lifetime value (ECV) for each segment. We find that these forward-looking policies significantly improve profitability of the customer base, but a firm can be too forward-looking, i.e., ECLV is often not the best policy. Using synthetic data representing a wide range of settings, we identify two sensible database characteristics to decide when to use which policy, thus providing clear and specific advice to a manager’s decision about dynamic spending patterns for optimal customer acquisition.

4 - V(CLV): Examining Variance in Models of Customer Lifetime Value

Peter Fader, Professor of Marketing, University of Pennsylvania, Wharton School, 3730 Walnut Street, Philadelphia, PA, 19104, United States of America, laderp@wharton.upenn.edu, Daniel Zantedeschi, Shane Jensen, Daniel McCarthy

While accurate point estimation of customer lifetime value (‘CLV’) has been the target of a large body of academic research, few have focused on the variance of CLV (‘V(CLV)’), even though academics have long known that V(CLV) affects firms in many fundamental ways. Virtually no formal forward-looking statistical procedures have been derived to estimate or validate V(CLV). For the first time, we analyze V(CLV) for the Beta Geometric / Beta Binomial (‘BG/BB’) model, a well-validated stochastic model for buyer behavior in non-contractual settings. We calculate then test a number of variance measures, motivating the development of a new variant we call the BG/BBd. The BG/BBd extends the popular “recency-frequency-monetary value” (‘RFM’) framework to include “clumpiness” (‘RFM-C’), as advocated by Zhang, Bradford and Small (2013). Our new model provides much more accurate predictions of future purchases than the BG/BB. However, the importance of a nonparametric analyst may apply to our model to their model of customer behavior, and discuss behavioral implications, as well as broader implications for customer and firm valuation.
2 - An Investigation of Online and Offline Consumer Search Effectiveness in Automobile Industry

Aidin Namin, Marketing PhD Candidate, UT Dallas, 800 W Campbell Rd, SM 32, Richardson, TX, 75080, United States of America, aidin.namin@utdallas.edu, Brian Ratchford

While research for automobiles and the relationships between search source and ultimate car choice have been studied in the literature; there still is a gap in investigating how efficiently online and offline sources of search and the search channels within each category contribute to the consumer’s ultimate automobile choice. We employ a model of Stochastic Frontier to measure the efficiency of search sources in creating consumer’s gain from search for automobiles. Our model allows the outputs to be subjected to random shocks. Using survey data on consumer automobile search from both online and offline sources and the final choices of cars made by the consumers, we measure and compare the effectiveness of search sources from different consumer demographic groups. We measure consumer search outcomes through factors such as Consumer Reports (CR) Test Score of car bought, List price of purchased car, CR reliability score of purchased car, CR Reader satisfaction score of purchased car, and CR Test gas mileage of purchased car. The inputs are different channels of online and offline search for cars and the time spent by the consumer searching at each search channel. Our results provide useful information for both the consumers and also the car manufacturers and dealers. Consumers can use the findings in deciding on the automobile search source which would help them in the most in achieving the outputs given the demographics group they belong to. Car manufacturers and dealers can benefit from the findings in targeting and also in providing information to consumers from different demographic groups through the right search source to influence their choice for cars.

3 - Friend or Foe: How Does Social Network Activity Affect News Consumption?

Ammara Mahmood, Cass Business School, 106 Bunhill Row, London, United Kingdom, ammara.mahmood.1@city.ac.uk, Catarina S-Mart

Using clickstreams of users at a major news website, together with data on users’ Facebook activity and the actions of their friends online, we study if social networks complement or compete with content websites. In the case of the content website we study, our results suggest a positive net impact of social networks although a complex pattern seems to exist: though friends might attract traffic to the website (pilo-stimulatory effect), that traffic is directed and comprises fewer pages viewed (competition effect). On the other hand, being active on Facebook seems to hinder site visitation (competition effect), but once a site visit takes place users are associated with more intense subsequent consumption (promotional effect). These results are robust to possible endogeneity, homophily, temporal effects, and individual heterogeneity. We further conclude that more friends, and in particular more active friends, might not create value for content websites and present further results regarding users browsing patterns.

4 - Instructional Manipulation Checks for Assessing and Enhancing Respondent Attention in Online Panels

Leo Paas, Massey University, Private Bag 109204, North Shore Mail Cen, Auckland, 0745, New Zealand, L.J.Paas@massey.ac.nz, Meike Morren

Online panels, such as M-Turk, SmarSurvey, SurveyMonkey and QualTrics, are commonly used amongst academics and practitioners. Even though many results are obtained using these panels, accuracy is questionable. Respondents may not report their opinions, but skip through the survey without dedicating sufficient attention to the question content. Such a strategy often results in straight-lining; repeatedly selecting the same answer category. In our experiment, we included a quality check to detect and reduce such attention problems. Across three experiments we find that approximately 1/3 of the respondents fails to follow a quality check instruction. We present tools that reduce this failure rate to 1/5.

1 - The Effects of Publicity on Demand: The Case of Anti-Cholesterol Drugs

Andrew Ching, University of Toronto, Rotman School of Management, Toronto, ON, Canada, andrew.ching@rotman.utoronto.ca, Hyunwoo Lim

Over the past ten years there has been increased recognition of the importance of publicity as a means of generating product awareness. Despite this, previous research has seldom investigated the impact of publicity on demand. Works contribute to the literature by (i) proposing a new method for the interpretation of publicity data, one that maps the information in news articles (or broadcasts) to a multi-dimensional attribute space; (ii) investigating how different types of publicity affect demand; and (iii) investigating how different types of publicity interact with firms’ own marketing communication efforts. We study these issues for statins. We find that publicity plays an important role both for expanding the market for statins and for determining which statins patients/physicians choose. We also find evidence that publicity can serve as either a substitute or a complement for traditional marketing channels depending on the complexity of the information type. These results suggest that managers should be aware of the interactions between publicity and traditional marketing channels in order to determine how to allocate their marketing expenditures.

2 - Social Promotions and Mobile Networks

Yuchi Zhang, Temple University, Philadelphia, PA, United States of America, yuchizh@gmail.com, Jing Zhou, Hanson Wang, Xueying Luo

Mobiles are about people connected in the networks. This paper will report findings from three studies. In study 1, field data suggest that mobile network degree and entropy matter for customer retention rates. In study 2, field survey reveals the reasons why customers chose to not stay with the mobile company, and the network lapes. In study 3, field experiment indicate that with the right network degree and entropy, managers can leverage social promotions to boost mobile purchases.

3 - The Effectiveness of Sensor-Induced Instore Mobile Promotions: A Randomized Field Experiment

Dominik Molitor, LMU Munich, Germany, molitor@wlw.lmu.de, Philipp Reichhart, Martin Spann, Amindyia Ghose

The underlying nature of smartphones enables companies to serve location-based promotions to consumers by applying new ways of mobile targeting. For example, smartphone-embedded technologies such as Bluetooth Low Energy (BLE) allow targeting consumers in the vicinity of stores as well as in stores. Based on a randomized field experiment using the BLE technology, this study measures the causal impact of contextual store-level promotions on consumers’ store choice and as well their probability to engage in unplanned purchases. In addition, we examine when and why store-level promotions are effective in increasing store traffic and conversions. This study thus contributes to the understanding of how unplanned store visits and purchases can be triggered by spatially different forms of mobile targeting.

FB15

INFORMS Marketing Science Conference – 2015

FB16

Working Paper XIV

Contribute Session

Chair: Hyunwoo Lim, Assistant Professor, Ajou University, 4 Avellir Cresa, Toronto, ON, M2M2A9, Canada, hyunwoo.lim@06@ajou.ac.kr, Ko suke Ueta ke, Assistant Professor, Yale University, 165 Whi tney Ave. Rm. 5477, New Haven, CT, 06520, United States of America, kosuke. uetake@yale.edu, Kei Kawai, Ken O nishi

This paper studies how signaling can facilitate the functioning of a market with classical adverse selection problems. Using data from Prosper.com, an online credit market where loans are funded through auctions, we provide evidence that reserve interest rates that borrowers post can serve as a signaling device. We then develop and estimate a structural model of borrowers and lenders. Results show that lenders can credibly signal low default risk. Announcing high reserve interest rates increases the probability of receiving funding at the cost of higher expected interest payments conditional on obtaining a loan. Borrowers}

compare the credit supply and welfare under three alternative market designs: a market with signaling, a market without signaling, and a market with no information asymmetry. Compared to the scenario with no signaling, we find that allowing borrowers to signal can increase the credit supply by as much as 13.5% for the median borrower for one of the credit grades. We find that signaling increases total welfare in one of the four credit grades we examine, but decreases total welfare in the rest.

**FB17**
17-Fourth Floor, Falkland
New Trends in Structural Modeling in Marketing I
Cluster: Special Session
Invited Session
Chair: Przemyslaw Jezorski, University of California-Berkeley, 2220 Piedmont Ave, Berkeley, CA 94720, United States of America, przemekj@haas.berkeley.edu

1 - Mobile Money in Tanzania
Przemyslaw Jezorski, University of California-Berkeley, 2220 Piedmont Ave, 94720, United States of America, przemekj@haas.berkeley.edu, Nicholas Economides

In developing countries with sparse retail banking branches, mobile telecom networks are becoming major providers of financial services, bypassing traditional banks. Using individual-level mobile money transaction data in Tanzania, we find that the vast majority of these transactions can be classified as either (i) transfers that they make to others, (ii) transferring money for short distances, or (iii) storing money for short to medium periods of time. We find that the demand for long-distance transfers is less elastic than for short-distance transfers, suggesting that the mobile networks compete with traditional cash transportation by bus drivers, in addition to competing with each other. Using the revealed preferences for transportation and storage transactions, we monetize the economic damage caused by a 1% level of crime. We estimate the willingness to pay to avoid walking with cash an extra kilometer and to avoid storing money at home for an extra day to be 1.1% and 1% of an average transaction, respectively. We propose a Pareto superior price discrimination scheme where cash-out fees that follow a transfer are set to zero, while otherwise cash-out fees are set a bit below transfer fees.

2 - Informational Shocks and the Effects of Physician Detailing
Bradley Shapiro, Shaan University of Chicago, Chicago, IL, Bradley.Shapiro@chicago Booth .edu

The effects of pharmaceutical advertising to physicians, or detailing, is a major area of interest for both regulators and firms. As billions of dollars are spent on detailing, understanding its effect is crucial to profit maximization. Regulators worry that detailing is illegally focused on off-label prescribing or distorts spending to expensive drugs. Finding exogenous variation to estimate effects is difficult, as sales reps determine their own details to maximize incentive-based bonuses which should be correlated with the underlying responsiveness of the physicians to detailing. Further, data limitations have previously kept the content of detailing and its effects as a black box. I estimate the effect of detailing in the anti-competitive category using two studies that disseminated information that changed the nature of competition, providing good news for two products— one generic and one brand. These large information revelations led to large advertising responses of the branded firm of sales reps to physicians who had previously not been detailed before and left detailing to specialists and frequently visited physicians largely unchanged. I use this variation and physician level data to estimate the causal effect of detailing and how that effect varies based on the context. By linking detailing effects to the anti-competitive effect of advertising, we can better understand how advertising affects competition.

3 - Value of Search Aggregators
Anita Rao, University of Chicago, Chicago, IL, Anita.Rao@chicago Booth .edu, Selim Akca

Search aggregators like Kayak, Orbitz and Expedia add value to consumers by providing a comprehensive list of available options (e.g. all airline routes that serve a given origin-destination pair along with their schedules and price). Consumers often use aggregator websites to find their best match but then book directly on the individual website, for which the aggregator receives no payment. In the absence of an aggregator, a consumer would have to search multiple airline websites and a firm might not get as many transactions. We aim to quantify the value that search aggregators give consumers and individual websites by utilizing a unique feature of the airline industry – Southwest Airlines is not part of any aggregator. Consumers with Southwest in their consideration set have to make an extra search to get a comprehensive list; this feature enables us to quantify the value-add that aggregators give consumers as well as individual airline companies.

**FC01**
01-Third Floor, GB 1
Brands I
Contributed Session
Chair: Qi Sun, Assistant Professor, Shanghai University of Finance and Economics, 777 Guoding Road, Shanghai, 200433, China, sun.qi@mail.shufe.edu.cn

1 - The DNA of Healthy Brands in Education Industry: What is their Perceived Brand Image
Abas Mirzaei, Doctor, Macquarie University, Balaklava Road, 2109, Sydney, NS, 2109, Australia, abas.mirzaei@mq.edu.au, David Gray, Helen Elham Siuki

Savvy customers, intense competition, advances in technology, and so many other influences have been a result in a much more challenging and competitive marketplace. Regardless of being for profit or not for profit, companies must face the challenges and adapt their strategies accordingly in order to stay relevant and healthy. Branding as an effective strategy to communicate with customers and create competitive advantage has been applied over the years in a variety of different industries and in recent years in education sector. Education as a global business sector has gone beyond the local borders, and universities around the world are competing to recruit more international students, and to experience a sustained growth which guarantees their brand health. Despite the importance of brand building strategies, the question of how brand image and meaning is perceived in higher education still remains unclear. In this study we first apply a new objective measure of brand health to evaluate the extent to which brands are healthy or unhealthy. We then examine how healthy brands are perceived compared to unhealthy brands. Employing the content analysis technique, we use two university review websites that contain international students view about different universities, to examine the perceived brand image across healthy and unhealthy brands. Finally we develop effective strategies for healthy and unhealthy brands considering their perceived brand image.

4 - Intra-Firm Variation in Bargaining Outcomes
Pranav Jindal, Penn State University, 479 Business Building, University Park, PA, 16802, United States of America, pranav.jindal@psu.edu, Peter Newberry

Prices are often negotiated in B2B and B2C contexts. These negotiations crucially depend on the key account manager or the sales representative a downstream firm or consumer interacts with. This paper studies the effect of heterogeneity among sales representatives in determining bargaining outcomes. Using data on sales of home appliances at a large retailer, we find that heterogeneity in sales reps is more important than consumer heterogeneity in explaining negotiation outcomes. Further, after accounting for consumer heterogeneity, the relative bargaining power of the sales representatives varies between 0.2 and 0.8. Utilizing a demand model, we focus on how retailer profits change if the sales representatives are better trained, or strategically allocated to consumers.

5 - Robust New Product Pricing
Kanishka Misra, University of Michigan, 701 Tappan St, Ann Arbor, MI, 48109, United States of America, kanishka@umich.edu, Benjamin Handel

We study the pricing decision for a monopolist launching a new innovation. At the time of launch, we assume that the monopolist has incomplete information about the true demand curve. Despite the lack of objective information the firm must set a retail price to maximize total profits. To model this environment, we develop a novel two-period non-Bayesian framework, where the monopolist sets the price in each period based only on a non-parametric set of all feasible demand curves. Optimal prices are dynamic as prices in any period allow the firm to learn about demand and improve future pricing decisions. Our main results show that the direction of dynamic introductory prices (versus static) depends on the type of heterogeneity in the market. We find the following: (1) When consumers have heterogeneous preferences, introductory dynamic price is higher than the static price; (2) When consumers have heterogeneous preferences and the monopolist has no ex-ante information, the introductory dynamic price is the same as the static price; and (3) When consumers have heterogeneous preferences and the monopolist has ex-ante information, the introductory dynamic price is lower than the static price. Further, the degree of this initial reduction increases with the amount of heterogeneity in ex-ante information.

**Friday, 1:30pm - 3:00pm**
names). We also find that the influence of brand names on sales varies across country-of-origin, customer segments and consumer groups. Chinese consumers (1) have highest preference for semantic brand names among domestic models but lowest preference for semantic brand names among foreign brands; (2) have higher preference for semantic brand names among non-luxury vehicle models but lowest preference for semantic brand names among luxury vehicle models; and (3) have increased preference for phonetic and phonosemantic brand names as their influence increases.

Oracle, etc., are surprisingly active participants in OSS development and community, which could be particularly instrumental in helping their PS sales. Therefore, it remains largely unclear as to the net impact of OSS entry on the demand for PS. The resolution to these questions has immense theoretical implications for the research on competitive rivalry as well as managerial implications for PS vendors regarding their product and pricing strategies. To the best of our knowledge, this study provides a first empirical investigation to fill this lacuna in the current literature. We draw on the market cannibalization-expansion theory in the literature of competitive rivalry entry, and argue that the net impact of OSS entry on the demand of PS depends on the dynamic interaction of these two countervailing forces. We are particularly interested in (1) how the impact of OSS entry on the demand for PS varies across different software categories, and (2) how consumer heterogeneity across different software categories. In order to address our research questions, a unique and comprehensive dataset is gathered, consisting of the market level data of the entire software population from 1995 to 2010 with approximately 100,000 PS software and 130,000 OSS software. We follow Gowrisankaran and Rysman (2012) and propose a dynamic model of demand for differentiated products to quantity the effect. Our preliminary results reveal that the entry of OSS does hurt the demand of PS in some software categories, such as Multimedia, Security, but not others, such as Office Suite, Communication. We suggest several underlying mechanisms through which the growth-driving effect of OSS entry on PS could be realized, i.e., excessive switching costs, OSS entry captures consumer segments untargeted by PS, and OSS entry expands demand for PS through sampling effect.

- Generating Competitive Intelligence with Limited Information: A Case of Telecommunications Industry

Insys Park, Doctoral Student, Georgia State University, 3348 Peachtree Road, NE, Tower Place 200, Suite 204, Atlanta, GA, 30326, United States of America, ipark8@gsu.edu, V. Kumar, Irokh Saboo

Competitive intelligence is a critical component in developing and implementing organizational strategies. Whereas firms may easily obtain aggregate market level competitive information, resource allocation decisions need to be made at individual product-market level. Firms face significant challenges in acquiring detailed information about their competitors across various products and geographic markets. Literature on market orientation that views competitor orientation as a critical component fails to provide a systematic approach of generating competitive intelligence using limited information available to managers. To address this gap, we build on the literature on goal programming to develop and implement a systematic approach to generate competitive intelligence at product-market level that can be updated continuously as new information becomes available. We frame the problem of generating competitive insights as a matrix balancing problem, where the matrix represents the market structure with products, markets, and competitors as the dimensions of the matrix, and develop a decision support system for firms to generate and update the product-market matrix over time. We use data from variety of sources such as internal data, consumer surveys, industry reports, and annual reports to develop a set of linear restrictions and use a mathematical programming approach to update the product-market matrix. We demonstrate the proposed approach using data from a large telecommunication firm that operates across multiple products and geographic markets. The proposed approach can be easily extended to other industries or market situations.

- Competitive Reactions to Personal Selling: The Difference between Strategic and Tactical Actions

Niels Holtrop, University of Groningen, P.O. Box 800, Groningen, Netherlands, n.holtrop@rug.nl, Jaap Wieringa, Maarten Gijsenborg, Philip Stern

A returning question facing firms and managers is if and how to react to competitive attacks. While research defined competitive attacks as homogeneously, this article distinguishes between strategic and tactical actions initiated by competitors. We study these actions in the setting of personal selling, whose division of decision making between upper- and lower-management is uniquely suited to identify these actions. By relating sales force activity to sales using time series methods, we find significant differences between both action types. In particular, we find that strategic actions lead to stronger short- and long-term reactions due to the higher firm commitment signaled by these actions. Second, we find that while the decision to react to competing strategic actions is always sound, this is not the case for tactical actions. For the latter, in 43% of the cases of retaliation and 59% of the accommodation cases reactions are unwarranted. Improving lower management training and providing additional decision support could help improve this decision making process. Finally, we show that responses to strategic actions are mainly driven by firm performance and marketing effectiveness and drivers, while tactical actions are driven by a desire to achieve immediate sales goals. This leads to different reactions to the same situation depending on the firm level at which the decision to react is made. These findings show that firms should evaluate lower level stores less on immediate sales targets, and stimulate their long-term value orientation.
3 - Finding Political Network Bridges on Facebook

Nasir Messarra, PhD Student, Université de Montpellier, Rue Vénédémie, Bt. B CS 19519, Montpellier, 34960, France, nasir@messarra.com, Anne Moison

An impersive literature exists about political campaigns on online social networks (Bertin, 2012; Carpini & Williams, 2001; Finke & Harris, 2012). Huang, 2013; Mercanti-Guerrin, 2010; Rakiewicz, Conover, & Meis, 2011). This literature addresses questions related to the diffusion of information, the spreading of rumors, political marketing and political influence. Politicians, on online social networks, seem to focus on the number of fans, real or fake (Julian, 201a, 201b), and the diffusion of messages and rumors via WoM to the largest number of people. Yet, many scholars agree that WoM and influence is about the carrier of the message (Valente & Myers, 2010) as an influencer (Lin-Thompson, 2012) or as an easily influenced person, as well as his position in the network (Watts & Dodds, 2007). The role of bridges linking different groups in a network, their importance and their role as weak ties has been thoroughly discussed in network science. (Friedkin, 1980; Granovetter, 1983; Perry-Smith & Shalley, 2003). In this paper, we ask ourselves if it would be possible to determine a set of bridges between different antagonistic political networks using a set of Facebook profiles. We combine a set of real and fake Facebook profiles for the March 8 movement (pro-trans), the March 14 (pro-West) and an independent politician (15,344 fans and 341,345 edges) and show their role in the network structure and the weight and position in the larger network encompassing the three political groups.

4 - Conformity and Conflict Management as Drivers of Variety-Seeking in True Group Consumption

Jose Domingo Mora, Assistant Professor of Marketing, University of Massachusetts-Dartmouth, 285 Old Westport Rd., Charlton College of Business, North Dartmouth, MA 02747, United States of America, jmora@umassd.edu

Research on group variety seeking is sparse and limited to situations where the “group” is a social background against which consumers make individual decisions (Arile and Levav, 2000; Ratner and Kahn, 2002; Quester and Stayer, 2010). True group decisions involve products that are jointly consumed, or co-consumed, in which case choice and consumption become actual group tasks. Co-consumption is frequent in experiential products such as entertainment, theatrical movies, live performances and family vacations. We investigate solo and co-consumption of television programs on people meter data utilizing a random coefficients model that predicts unobserved utility of variety seeking (USV) measured as number of channels watched. As expected, we find that groups enjoy variety more than solo consumers, and that group size is a major driver of USV. Furthermore, groups of three and four co-consumers show identical contributions to USV which, at the same time, are remarkably invariant over households. In contrast, the heterogeneity of the USV estimates over households is substantial for both solo and groups of two and five co-consumers. This is consistent with a concave response of conformity to group size, which is supported by a drop in heterogeneity when the joint presence of moms and dads is accounted for. Based on the model, we show that family communication per day and find as well that socio-economic status affects USV, thus supporting the use of variety-seeking by co-consumers as a conflict management tool.
3 - Harbinger of Failure: Why do they Signal Product Failure?
Chuan Chen, Northwestern University, 2001 Sheridan Rd, Rm 494 Leverone Hall, Evanston, IL 60208, United States of America, c-chen@kellogg.northwestern.edu

We find that some customers consistently purchase new products that eventually fail. The purchase from these consumers strongly predicts product failure. We also explore why these customers, whom we call harbingers of failure, have predictive power. We distinguish passive and active roles that harbingers play in predicting product winners or losers. In the former case, harbingers purchase signals about the mass market, including their preference, search intensity, personal innovativeness, and variety-seeking tendency. In the latter, consumers play the active role of persuading others through word-of-mouth (WOM) or other social platform. Harbingers may not generate enough positive WOM that facilitates momentum of product success. We contribute to the literature on lead users and newtrend forecasting by disentangling the two roles. The insights from this research can be incorporated into new product development processes.

4 - How Inefficient are Markets for Technology?
Manuel Hermosilla, Assistant Professor, Johns Hopkins University, 100 International Dr, Baltimore, MD, 21201, United States of America, mh@jhu.edu, Yuefei Wu

A number of studies argue that transaction costs introduce inefficiencies in Markets for Technology by precluding valuable cooperation between firms. We argue that this evidence may overemphasize the importance of transaction costs by neglecting the possibility that failed cooperation could in large part be driven by small gains. This view is supported by our analysis of the impact of the Medicare part B program on the extent of licensing-based cooperation in the pharmaceutical industry. This program increased downstream consumer demand for selected treatments, causing a surge in the licensing of compounds targeting them. Theoretically, such response is only justified if transaction costs are large enough with respect to the value of cooperation. We show that the surge in licensing focused exclusively among the 25% of compounds for which cooperation was relatively less valuable, suggesting that transaction costs do not preclude cooperation for the 75% compounds for which cooperation is most valuable.
A Quasi-Experimental Analysis

Ranjit Christopher, Doctoral Candidate, Arizona State University, W. P. Carey School of Business Arizona State University, Tempe, AZ, 85281, United States of America, rmgendr@asu.edu, Rajiv Sinha

Pay-What-You-Want (PWYW), a participative pricing scheme where buyers are given complete control over how much to pay for a private good, has gained interest both in the real world and in the academic literature (Kim et al. 2009). Although a purely self-interested consumer can choose to pay nothing, PWYW pricing frequently results in profits as consumers often make payments owing to their social preferences (“prosocial premiums”). Fair minded consumers pay to avoid the disutility arising out of making a payment that they perceive as unfair.

As a result, PWYW payments are a function of the consumer perception of a fair price for the product, numerous factors such as product quality, memory of past prices, perceived intention of sellers, suggested prices, their reputation, etc. to compute a fair price. managers design the PWYW scheme so as to make prices to a wider audience. We use a series of laboratory-based models that estimates prosocial premiums as a function of contextual and managerially controllable variables accounting for both consumer heterogeneity and selectivity. We split the consumers into three groups: the free-riders, those who pay the suggested price, those who pay who pay the suggested price, and those who pay their own reservation price; and show that each group responds differently to managerially different decision variables (such as prosocial premium and PWYW validity). We validate our model using more than 50,000 payments to a music record label by taking advantage of a series of quasi-experimental events in the rms history.

2- Optimal Pricing using Business Rules from a Bayesian Perspective

Alan Montgomery, Associate Professor, Carnegie Mellon University, Tepper School of Business, 5000 Forbes Ave, Pittsburgh, PA, 15213, United States of America, calumgo@cmu.edu, Marcel Goic

Business rules play a crucial role in pricing decision making. These rules are meant to capture managerial knowledge about how to make good pricing decisions and often operationalized as constraints on pricing optimization problems. Business rules are similar to heuristics in operations research, marketing and psychology, rules of thumb in management, and inductive bias in computer science. In each of these cases past learning is brought to bear on the current decision making through a rule. The manager’s goal is to make a difficult problem more tractable and to improve the decision. The premise of this research is that these rules impact knowledge which can be properly understood as prior information from a Bayesian statistical viewpoint. We claim that current price optimization techniques can be improved through the consistent application of Bayesian decision theory. Specifically we argue for the application of business rules as prior information during model estimation and not after the fact during inference. This Bayesian approach results in better pricing decisions than current approaches, but also pricing decisions that are substantially different.

3- Delegating Pricing Power to Buyers: An Experimental Investigation

Lucas Stich, Ludwig-Maximilians-Universität München, Geschwister-Scholl-Platz 1, München, Germany, stich@lmu.de, Klaus M. Schmidt, Florentin Krämmer, Martin Spann

Pricing is a key challenge in service industries such as hotels, airlines or theaters, where firms face fluctuating demand and large fixed costs for capacity. In response, sophisticated techniques such as yield management have been developed that aim at maximizing revenue or profits by means of price discrimination. Customer-driven pricing mechanisms such as Name Your Own Price (NYOP) and Pay What You Want (PWYW) offer several benefits that can justify their application as an alternative to posted prices, especially in periods of low demand. Their participatory and innovative nature appeals to consumers and can initiate word-of-mouth as well as press coverage thus enabling firms to promote their pricing strategy. We conducted a series of laboratory experiments to investigate whether a firm should delegate pricing power to users and if so, to what extent (i.e., apply NYOP vs. PWYW). Our design enables us to identify the limits of pricing power and strength of the factors driving this result. We explicitly account for the possibility that the application of customer-driven pricing mechanisms can offer additional benefits (e.g., via word-of-mouth) for the seller by presenting the effects of buyer and seller characteristics and the competitive environment on important managerial outcome measures such as profits, market share, and endogenous price discrimination. In addition, we provide insights into the determinants of buyer and seller behavior under both pricing formats, showing that PWYW appeals to social preferences and NYOP to risk attitudes.

4- Sachet: Package Price-Size Decisions for the Bottom of the Pyramid

Suman Ann Thomas, Assistant Professor, Indian School of Business, AC2, 2126, Level 1, Gachibowli, AC2, Level 1, 2126, Hyderabad, 500032, India, sumanann@gmail.com, Trichy Krishnan

In this paper we look at sachet pricing decisions. In emerging markets, sachets are dosed as the instruments to reach out to the bottom of the pyramid consumers. And they are supposed to be high priced due to the cost of manufacturing as well as managing the same. But contrary to this popular belief, sachets are not always priced at a premium. Through an analytical model we show that in a market where consumers serve one another, they can optimally price and take advantage upon the difficulty in raising more funds as well as the competitive structure prevalent in the market. We find that the pricing will also depend upon the perceived quality of the product as well as for findings through an empirical model using data from an emerging market.

Behavior Game/IO

Chair: Sung Ham, Assistant Professor, George Washington University, 2201 G Street NW, School of Business, Washington, DC, 20052, United States of America, sungham@gwu.edu

1- Is it really “Dumb” to be Dumber? Competitive Analysis of Hierarchically Strategic Firms

Zuhui Xiao, University of Minnesota, 3-150 CSOM, University of Minnesota, 321 - 19th Avenue South, Minneapolis, MN, 55455, United States of America, xiaoz169@umn.edu, Tony Haitao Cui

Research has suggested that managers may have different levels of strategic reasoning capabilities. Some firms are able to make more strategic decisions and obtain higher profits while others make less strategic decisions and earn lower profits. Incorporating hierarchical strategic capabilities into a duopoly model, we find that a less strategic firm may benefit from its limited strategic capability when competing with a more strategic firm. We also find that a less strategic firm can benefit more from its decisions than a strategic firm can, although the strategic firm can respond specifically towards less strategic firm’s decisions but not vice versa. Interestingly, our analysis also shows that playing smart may not always be the equilibrium strategy for all firms. Lab experiments provide empirical supports for key theoretical predictions.

2- Conflict of Interest and Market Structure in Multiplayer Games

Sung Ham, Assistant Professor, George Washington University, 2201 G Street NW, School of Business, Washington, DC, 20052, United States of America, sungham@gwu.edu, Noah Lim, Jiabin Wu

When a firm serves customers who compete with one another, a conflict of interest may arise. We develop a multi-player setting where firms serve competing customers, and examine how the market structure faced by the firms impacts the extent to which conflicts of interest affect behavior. We test our theory using an incentive-aligned experiment and find that the decisions are consistent with the model predictions.

3- Understanding Sellers’ Marketing Tools Adoption in Online Marketplace

Bo Tao Yang, University of Southern California, 3660 Trousdale Parkway, ACC 306E, Los Angeles, CA, 90089, United States of America, botaoyang@marshall.usc.edu, Sha Yang, Shantantu Dutta

In this paper, we study online sellers’ adoption decisions on two major marketing tools provided by a large e-commerce platform. We study two important aspects of how sellers make decisions on which marketing tool(s) to use: strategic interaction among sellers, and spillover effect among marketing tools. To capture the competition among sellers, we adapt the cognitive hierarchy framework by modeling sellers’ different abilities in correctly predicting competitor actions. To capture any spillover among marketing tools, we specify the joint payoff from a bundle of marketing tools in a structural way to reflect their inherent relationship with the payoff associated with each marketing tool separately. Our panel data allows us to separately identify the competition effect and the level of strategic ability, and separately identify the spillover effect and the correlated idiosyncratic shocks. Our estimation results show that sellers in general tend to differentiate from each other in choosing which marketing tools to use. We also find that strategic thinking level has a positive correlation with seller rating and there is a negative spillover from adopting the two marketing tools. The counterfactual results suggest that an increase in strategic ability would slow the diffusion of marketing tools. The platform could make competition information less available to individual sellers and focus on attracting new novice sellers in order to increase adoption and profitability.
1 - The Monetization of Altruism on a Two-Sided Micro-Finance Platform: The Case of Kiva
Bryollinger, Duke University, bryollinger@duke.edu
We present a model of platform leader permitting incentives and demonstrate that, although the presence of Kiva opens up loans to a greater set of customers, field partners have the incentive to increase interest rates, sometimes by huge amounts. Especially because Kiva lenders are lending as an act of altruism, they are less concerned with the higher default rates that come with higher interest rates. Competition between field partners and easier access to capital through other channels can mitigate the incentive for field partners to substantially increase rates for loans that they can refinance through Kiva. However, an alternative repayment mechanism would eliminate this incentive entirely.

2 - Estimating Price Elasticities from Search Data
Stephan Seiler, Assistant Professor of Marketing, Stanford University, Stanford University, Stanford, CA, 94305, United States of America, sseller@stanford.edu
We propose a novel approach to estimate cross-price elasticities from data on consumer search behavior. To exploit the alignment between consumers' queries on a search engine and their choice data, our approach is easy to implement and has low data requirements. We do not require exogenous price variation, nor in fact any variation in (or data on) prices. We leverage consumer search data, we compute the frequency of co-occurrence of product pairs in consumers’ search-spells. We show that this joint-search-propensity can be used to rank products by their cross-price elasticities. Under certain conditions we are able to invert the search-data directly into price elasticities. We present empirical evidence from various markets to illustrate how the approach can be applied in practice.

3 - Retailer Benefits of Subcategory Expansion under Private Brand Entry Constraints
Mitchell Lovett, University of Rochester, 3-221 Carol Simon Hall, Rochester, NY, 14627, United States of America, mitch.lovett@simon.rochester.edu, Pampiong Kong, Paul Ellisson Private brands have become a force in U.S. grocery retailing, but the strategic benefits retailers take with these brands differ markedly. We study private brands in the coffee category examining over 60 different retailers and markets. We document heterogeneity in the merchandising strategies and brand strength. We find that merchandising strategies vary meaningfully and so do brand strengths. We also examine within a retailer’s line of private coffee brands the differences across subcategories of coffee - main, premium, and instant. We then consider how these private brands were influenced by a major change in the category - the large growth in a new subcategory, single-cup coffee. Single-cup coffee in grocery stores was heavily dominated by cups for the Keurig system. First, we examine how this system affected retailers broadly. Using counterfactual analyses, we examine how much the retailers lost (or gained) due to the expansion of the single-cup. We find substantial geographic patterns that relate to the roll-out of the Keurig system and that on average retailers gained due to the category expanding nature of this subcategory. However, the Keurig system was patented and retailers were denied from entering specific private brands because the patent holder restricted technology licensing. We examine how much potential is lost due to these constraints under various entry scenarios. We present how this varies by geography, retailer demographics, and existing private brand positions in the category.

4 - Dynamic Pricing and Versioning of Products in Durable Goods Markets
Vinod Kumar, Assistant Professor, Yale University, 165 Whitney Avenue, New Haven, CT, 06520, United States of America, vinod.kumar@yale.edu, Tim Derdenger
We study the dynamic pricing strategies of a durable goods monopolist with forward looking consumers. We model a monopolist who has multiple potential versions of the product introduced sequentially to determine the dynamic price trajectory for each product over time. In setting with indirect network externalities, there are additional incentives to both price lower to introduce consumers to the surplus and to extract surplus with a new product introduction. We use data from the handheld video game market to quantify and illustrate these effects, examining how the degree of network externality impacts the monopolist's optimal price trajectory. Counterfactually, we also consider how the monopolist would strategically decide the timing of new product introduction, accounting for the above effects.

5 - How do Tweets Enhance Sales
Song Yao, Northwestern University, 2001 Sheridan Road, Evanston, IL, 60208, United States of America, s-yao@kellogg.northwestern.edu, Stephan Seiler, Wenhao Wang
Tweet and its derivatives have become a standard advertising method for many firms nowadays. How, however, it remains unclear whether and how tweets affect product sales. Using a large-scale data set that involves demographically diversified market studies, we conduct whether and how tweets on Weibo, Chinese version of Twitter, impact sales. Taking advantage of a natural experiment in China, we are able to show that the effect of tweets on demand is significant across the diversified markets. We further link the findings to classical advertising literature to explore the underlying mechanisms through which tweets boost sales. The results are both theoretically and managerially crucial for enhancing our understanding of advertising in general and providing insights on the effectiveness of twitter as a new marketing tool.
we suggest a direct modeling approach which treats the stochastic variance as stochastic variance introduces upward or downward bias in probit models, and we derive closed-form expressions as to the size of the bias if the non-constant stochastic variance is not captured. A series of simulation studies confirm our findings. This study has important implications for firms interested in entering emerging markets.

■ FC11
11-Third Floor, Atlantic Choice Models V
Contributed Session
Chair: Daniel Zantedeschi, Assistant Professor, Murma College/Univ. of S. Florida, 4202 E Fowler Avenue CIS 1040, Tampa, FL, 33620, United States of America, daniez@usf.edu, Peter Fader

1 - Demand Estimation with Non-Constant Stochastic Variance: Theory and Empirical Evidence
Dai Yao, Assistant Professor, National University of Singapore, 15 Kent Ridge Drive, Singapore, 119245, Singapore, daiyao@nus.edu.sg

The stochastic variance of the errors is generally presumed to be constant and normalized as one to identify the utility parameters in demand estimation. When data used for estimation comes from multiple sources or at different times, there may be systematic temporal dynamics in the environment, which in prior literature are predominantly modeled by a shift in the deterministic component of the utility. We find that customer responses change significantly even after controlling for unobservable heterogeneity in ability. The authors also explore customers' propensity to cancel a policy and find that salespeople with a college degree have less customer attrition. This study has important implications for immediate consumption (i.e., made at the rental counter) and for future consumption (i.e., made during the reservation); and (3) change in stochastic variance is more prominent for hedonic goods (e.g., satellite radio) than for utilitarian goods (e.g., GPS device).

2 - How to Generalize from a Hierarchical Model?
Max Pachali, Doctoral Student, Goethe University Frankfurt, Chair of Service Marketing/ Professor Otter, Campus Westend, Gruneubergplatz 1, Frankfurt, 60325, Germany, Max.Pachali@hso.uni-frankfurt.de, Peter Kurz, Thomas Otter

Applications of hierarchical models have become ubiquitous in marketing for making inference from "large N, small T" data, e.g., household scanner panel data or data from discrete choice experiments. The goal of most of these Hierarchical Bayes (HB) studies is to generalize to a population of consumers in a market for e.g., determining optimal prices or product configurations. Current industry practice represents population preferences by the collection of posterior mean preferences of consumers in the calibration sample, i.e., bases the generalization to the population on point summaries of in-sample consumers' preferences. This representation is preferred to using the hierarchical prior in practice often a multivariate normal distribution directly, because the latter may be mis-specified. However, what has not been recognized in this context is that posterior mean preferences of consumers in the calibration sample are systematically biased towards the hierarchical prior mean in "large N, small T" applications. We demonstrate the consequences for product configuration and pricing decisions using simulated data and data from different commercial discrete choice experiments.

3 - Consumer Stockpiling and Demand Complementarity
Ludovic Siourm, Department, The Wharton School, 3730 Walnut Street, Suite 700, Philadelphia, PA 19102, United States of America, stoumlu@wharton.upenn.edu, Eric T. Bradlow, Raghuram Iyengar

Previous literature has shown that consumers take advantage of price promotions to buy and store goods in anticipation of a future consumption. While the implications of consumer stockpiling have been well-studied within one product category, little is known about its consequences for related categories. In this paper, we focus on the demand for complementary consumables. Building on evidence that people consume at a faster rate when they have a larger inventory, we suggest that stockpiling one good may lead them to consume more of a complementary good for some time after a promotion. To measure the long-run effect of promotions across complementary categories, we then build a dynamic structural model of individual demand in a way that takes into account stockpiling and flexible consumption. In our model, consumption is endogenous and complementarity arises because consumers enjoy consuming goods jointly. One challenge consists in specifying a consumption utility that yields flexible patterns of complementarity. We tackle this problem by assuming a household production function that allows consumers to take two complementary goods as inputs to produce a final good, from which a higher utility is derived. We show that the overall model yields flexible patterns, and that an alternative specification with interaction terms would be restrictive. We then run a simulation to investigate the implications of our model. We find that ignoring stockpiling may lead one to underestimate cross price elasticities.

■ FC12
12-Third Floor, Bristol Social Influence I
Contributed Session
Chair: Catherine Tucker, Professor, MIT, 28 Temple St, Belmont, MA, 02478, United States of America, ctucker@mit.edu

1 - Cheering the Underdog: Crowdsourcing and Backers' Need for Uniqueness
Girish Mallapragada, Indiana University, 1309 E Tenth Street, 2119 Hodge Hall, Bloomington, IN, 47405, United States of America, gmallap@indiana.edu, Vishal Narayan

Crowdsourcing has emerged as a dominant model for harnessing resources from internet users. Among various contexts in which crowdsourcing has been employed, mobilizing monetary funds for developing new ideas, referred to as crowdfunding is gaining momentum. However, very little remains known about what drives the giving behavior of participants on crowdfunding websites. We propose that connectivity among backers tends to benefit more. Our findings have important implications to how crowdfunding projects should develop their pitch to potential contributors. Also, we provide interesting insights on the behavior of the crowds and show that connectivity among participants may actually hurt the economic success of crowdsourced projects in some contexts.

2 - Peer Influence in the Adoption of Social Games
Joseph Davin, Harvard Business School, 178 Morgan Hall, Soldiers Field, Boston, MA, 02163, United States of America, josephgavitin@gmail.com, Sunil Gupta, Mikolaj Jan Piskorski

In this presentation, I present a study on peer influence in mobile game adoption. Although peer influence is the most direct way to influence consumer decisions, they are difficult to identify in observational studies due selection bias: Friends share common characteristics and behave in similar ways even without peer effects. I use a novel approach to estimate unobserved characteristics which endogenously drive tie formation and use the estimates to control for selection, without need for instruments. This is the first paper to use latent space to reduce bias in peer influence estimates. I find that peers account for 27% of mobile game adoptions and that ignoring latent homophily would bias the estimates by 40%, in line with previous studies. In some samples, ignoring latent homophily can result in overestimation of social effects by over 100%.

3 - Spillovers from Product Failure
Catherine Tucker, Professor, MIT, 28 Temple St, Belmont, MA, 02478, United States of America, cetucker@mit.edu, Amalia Miller

When a firm’s product fails to live up to expectations this is often rehashed by that firm’s rivals. We empirically study the own-brand and cross-brand spillovers of product failure. We study comprehensive data on the diffusion of IT systems in the healthcare sector in the US over the past 15 years. We show empirically that for many new technologies the failure of a product can have negative effects for the spread of its competitors products as potential customers make inferences about the attractiveness of the product category as a whole, not just that particular brand. This loss affects potential customers and small potential customers. This emphasizes and explains the importance of ‘co-optimization’ in the early stages of a technology’s life cycle.

4 - Company Accounts on Twitter, Facebook, and LinkedIn: Do They Impact Profitability?
Zhihao Wang, Undergraduate Student, College of Business, University of Central Oklahoma, 100 N University Drive, Edmond, OK, 73034, United States of America, twang10@uco.edu, Manoshi Samarakoon

In jumping into the social media bandwagon, many companies are creating “company accounts” on Twitter, Facebook, and LinkedIn. Subsequently, the number of Twitter Followers, Facebook Likes, and LinkedIn Followers are taken as partial measures of how well the company account is doing in the given social media platform. However, do the aforementioned metrics impact the profitability of the company? This study seeks to address this important, yet un answered question. To do so, we monitor the said social media measures for a sample of 100 large public companies (belonging to 68 industries) over several quarters. We then examine whether the number of Twitter Followers, Facebook Likes, and LinkedIn Followers for a given quarter, is related to the profitability (i.e. ROA and ROE) of that quarter. We control for the effects of market cap and number of employees on profitability metrics. Given that we have multiple observations per company (i.e. a nested structure in the data), we use Hierarchical Linear Modeling for our analysis. Thus, the study empirically ascertains whether the performance of a ‘company account’ on a social media platform impacts its profitability, and moreover, which social media account (Twitter vs. Facebook vs. LinkedIn) has/does not have and impact of profitability. Results will be available to be presented at the conference.

13 - Fourth Floor, Harborside A

Digital Marketing V

Contributed Session
Chair: Scott Dacko, Assoc. Prof. of Marketing and Strategic Mgmt., Warwick Business School, University of Warwick, Coventry, CV4 7AL, United Kingdom, S.G.Dacko@warwick.ac.uk

1 - “Real-Time Marketing”: Why (and How) Do Firms Adopt the Approach?
Scott Dacko, Assoc. Prof. of Marketing and Strategic Mgmt., Warwick Business School, University of Warwick, Coventry, CV4 7AL, United Kingdom, S.G.Dacko@warwick.ac.uk, Tianshu Sun, University of Maryland, 3330 Van Munching Hall, College Park, MD, 20740-2840, United States of America, tianshusun@rhsmith.umd.edu, Siva Viswanathan, Elena Zheleva

As the name suggests, real-time marketing is a strategic marketing approach used by a firm that involves flexibly adapting one or more elements of its marketing to current events. The firm might influence its customers in close to real time through some form of information technology (Oliver, Rust and Vark). 1998, Twitter. Facebook. LinkedIn. Google. YouTube and Instagram are just some of the channels used by firms engaging in real-time marketing. This research seeks to understand and explain: (1) why some firms have opted to use real-time marketing more than others, (2) adoption barriers, and (3) capabilities needed for its effective implementation. This research explores the potential and competitive advantage. Toward these aims, this paper establishes and evaluates practitioners views on real-time marketing relative to the academic literature. Specifically, by drawing upon a sample of 136 marketers from primarily UK-based firms spanning 22 industries, motivations for using real-time marketing are identified and the adoption barriers and critical capabilities needed are established and discussed. Findings suggest that firms across the manufacturing industries motivated by an interest in pursuing sustainable competitive advantage based on real-time marketing’s ability to deliver relevant and targeted marketing content, increase customer engagement, and strengthen brand sentiment. Among the barriers is a lack of skilled resources for managing the complexities of real-time marketing. Capabilities needed include that of high speed response and customer targeting. Further research can build on these findings to establish more detailed conclusions between motivations, capabilities, and actual performance outcomes.

2 - Twitter and Tweeters: A Network Analysis of Tweeter Influence on Virality –The Case of Kolaveri Di
Wei Yin Chan, Singapore Management University, 50 Stamford Road #05-01, Singapore 178999, Singapore, weiyin.chan.2011@sis.msu.edu.sg, Jaehyun Lee, Srinivas Reddy

The spread of content virality on the Internet has been of increasing interest for practitioners as well as academic researchers (Berger 2013, Teixeira 2012). The focus of this study is to examine how social media, specifically twitter, contributes to the viral propagation of content. We illustrate this in the context of a video on Youtube which went viral: the song ‘Kolaveri di’.

2011. The video that we examine is Why This Kolaveri Di (https://www.youtube.com/watch?v=Y1RZ2Z0DrH4) a music video that was uploaded on November 16, 2011 and amassed 16.5 million views by Dec 5, 2011. Within this time, it generated a total number of 96,323 tweets with the hashtag #kolaveridi, and the Twitter platform garnered over 8 million impressions. The video not only received 146,224 likes but was also awarded a gold medal for the most popular video and silver medal for trending. In this study, we focus on Twitter and some key tweeters may have contributed to the virality of this video.

We develop a network analysis where we model the interdependencies among the tweeters and identify the key influencers who have contributed to the explosive growth of this video. Preliminary results show that different players play a role at different times in the propagation of this video. This suggests that the content and less obviously it is often not those who have the largest follower base that may have contributed the largest influence. The framework developed can be applied to other types of videos and non-video content.

3 - How to Better Target and Incent Paid Endorsers in Social Advertising Campaigns: A Field Experiment
Jing Peng, University of Pennsylvania, 3730 Walnut Street Suite 500, Philadelphia, PA, 19104, United States of America, jingpeng@wharton.upenn.edu, Christophe Van den Bulte

We investigate paid endorsement as a crowd-sourcing social advertising mechanism that allows advertisers to bypass publishers (e.g., Facebook) and recruit individual endorsers of their own choice at affordable prices. Specifically, we investigate (i) how incentives affect endorsers’ participation and effectiveness and (ii) what types of endorsers are most effective in generating online engagements (likes, comments, and retweets). We conduct a large scale field experiment in which we manipulate experimentally incentives and eligibility to participate. Since likes, comments, and retweets are count variables, and since potential endorsers self-select to participate in paid endorsement tasks, we use a Poisson lognormal model with sample selection to analyze what affects endorsers’ willingness to participate and their effectiveness in generating engagements. We find that several variables have different effects on participation and effectiveness. Specifically, (1) monetary reward has a positive but even negative effects on potential engagements; (2) endorsers who participate in more tasks and who post more on microblogs have a higher probability to participate, but a lower potential to generate engagements, and (3) the same endorser may be different in different engagements that require different level of efforts from her fan base. Our findings based on observed engagements may be misleading in assessing the attractiveness of potential endorsers and in designing which potential endorsers to target. Our findings provide new insights on how marketers can improve the cost-effectiveness of paid endorsement by identifying and incentivizing high potential endorsers.

4 - Monetizing Sharing Traffic through Incentive Design: A Randomized Field Experiment
Tianshu Sun, University of Maryland, 3330 Van Munching Hall, College Park, MD, 20740-2840, United States of America, tianshusun@rhsmith.umd.edu, Siva Viswanathan, Elena Zheleva

Customers share product information with each other every day. While the share of a product indicates clear purchase intent and is also an indicator of both, most of such ‘sharing traffic’ does not lead to successful conversions. With increasing availability of data on sharing traffic, as well as the ability to process such data in real time, firms can now monetize sharing traffic by targeting customers in the share. In this study, we examine whether and how firms can engage customers in the sharing traffic, by providing novel incentives to the senders. In collaboration with an online daily deal platform, we design and implement a large randomized field experiment to identify the effect of incentive design on sender’s purchase and referral decision. Specifically, we draw senders who shared deals with the previous day’s beneficiary deal. We identify these senders and the shared deals themselves, then randomly assign them into one of the five test groups with different incentives (we create different incentives by varying the number of Promo code for sender and her friend, as well as whether the code is shareable or not). The randomization allows us to identify the impact of incentive design on sender’s purchase as well as referral behavior. We find evidence that Incentive structure has a significant impact on both paths. In the case of the former, we further examine the underlying mechanisms, by exploring rich heterogeneity in our data (product type, tie strength, channel/recipient in sender’s share). Overall, our study contributes to the literature on social advertising and referral program design.
subsequent DVD release in the same market, after adjusting for factors that would account for correlation in sales across the two distribution channels. Our finding disputes the conventional wisdom that the theatrical channel and home entertainment channels are substitutes.

2 - The Impact of Age on Preferences: Relevant Roles of Memory and Emotions

Gilles Laurent, Professor, INSEEC Business School, 27, Avenue Claude Vellefaux, Paris, 75010, France, glaurent@insee.com, Raphaëlle Lambert-Pandraud, Bernard Gournvenue, Lydie Belaud

Previous research has shown an impact of age on consumer preferences. Older persons are more likely to choose older options (e.g., for cars, perfume, radio stations). This paper analyzes, in a within-subject approach, the memory of and emotional reactions to movie stars belonging to different generations, as a function of consumers' current age (from 19 to 76) as well as on the age the consumer had when the star became famous. We collect multiple measures of memory (spontaneous citations, recognition of star names, recognition of star photographs, etc.), and we relate them to a Wais-R score of speed of processing. Emotional reactions are assessed by psycho-physiological measures (pupil dilation, heart rate, skin conductivity, decoding of facial expressions) as well by more classical attitude measures.

After controlling for a high impact of a consumer's age on the birth year of her or his preferred movie stars), we investigate the correlations among the different measures of emotional reactions to the photographs of the stars born in different periods, as well as the correlations among the different measures of star memory. We analyze the interactions between memory and emotional reactions, and compare their mediating roles in the impact of age on preferences.

3 - Impact of Promotional Mobile Application on Target Product: Empirical Evidence from the U.S. Motion

Youseok Lee, Doctoral Student, Seoul National University, #317 Bldg, 58, Seoul National University, Seoul, Korea, Republic of, youseok.lee@gmail.com, Jisu Yi, Sang-Hoon KIm

Smartphones becoming an indispensable part of our lives, major studios in Hollywood frequently introduce promotional applications of the movies at some point before release. Movie applications evolved to full-fledged games utilizing the characters and stories in the movies. In addition, the movies whose game applications diffused successfully tend to hit the jackpot as well. Even though it is evident that the promotional mobile games have positive effects on the success of movies, it is hard to find studies attempting to empirically verify them. The current research proposes that the performance of mobile game applications increase the box office revenue of the original movies. Furthermore, application attributes that may affect consumer's application adoption are found to provide practical implications for designing the promotional tools. This research shows that mobile applications developed with promotional purpose have positive effects on the performance of target movies. Both time series panel analysis and cross-section analysis confirm this relationship. In spite of the widespread belief that the higher download price and requiring in-app purchases work as hurdles keeping users from downloading the application, the results suggest that those attributes can work inversely among the game applications that are related to the movies. Combining the results of cross-section analyses, the application performance can be interpreted to have a mediating role between application attributes and the movie sales. In other words, developing an application with certain attributes (e.g. price structure, quality) can be helpful to increase the application.
In an online retail context, consumers are bombarded with the wealth of information about options. One type of information involving choice options that differentiates online versus offline retail environments is the presence of customer reviews. The authors propose that consumers may be overweighing in their decisions the volume (or total number of) product ratings over the actual content of such ratings. Over the course of six studies, they provide evidence that due to this asymmetrical weighting of the volume of reviews consumers would forego a better option in a choice set (a higher rated option) when the other option features a higher volume of reviews but significantly lower rating. This effect is particularly pronounced, when consumers are choosing among lower rated products, leading consumers to choose the worst possible option. Finally, the authors show that by displaying a low number of ratings (e.g. withholding this information), retailers are running a risk of consumers postponing the purchase decision due to a decrease in consumer confidence. Based on the study of current online retail practices, this is a potential detriment that a majority of online retailers self-impose. While the disclosure of product attributes is commonly thought to aid online retailers, the paper shows that managers may do better by foregoing displaying the number of raters on their products, as consumers overweight this attribute in their decision relative to other equally or more important attributes.

**FC17**

17-Fourth Floor, Falkland

**ISMS Doctoral Dissertation Proposal Competition Winners I**

Cluster: Special Session

Invited Session

Chair: K Sudhir, Yale School of Management, 165 Whitney Avenue, New Haven, CT, 06511, United States of America, k.sudhir@yale.edu

1 - Which Curve Are You On?
A Latent Relationship Trajectory Model of Customer Behavior
Arun Gopalanrishnan, University of Pennsylvania, The Wharton School, Philadelphia, PA, United States of America, agop@wharton.upenn.edu, Eric T. Bradlow, Peter Fader

We introduce a new methodology - a latent relationship trajectory model (LRTM) - that can capture and forecast dynamics in multi-dimensional customer behaviors using a flexible parametric family of latent trajectories that drive these behaviors as a common dynamic factor. The LRTM provides a new twist on the popular Hidden Markov Model (HMM) approach by allowing for a significantly more flexible set of latent trajectories and improved computational efficiency, while maintaining the parsimony of the HMM approach. We compare the empirical performance of the LRTM and HMM in the context of jointly modeling customer behaviors based on micro-level panel data from an online banking firm. We find that (1) the LRTM out-performs the HMM in predicting individual-level balances, (2) the LRTM and HMM both predict aggregate churn accurately, and (3) the LRTM out-performs the HMM in predicting which customers are most likely to churn, with the HMM performing about the same as a random-chance model in which all customers are given the same probability of churn. Our work offers boundary conditions for the use of HMMs in forecasting within-customer dynamics and suggests that the LRTM framework can be a more general alternative in a broad range of data settings.

2 - Visualizing Asymmetric Competition among More Than 1,000 Products using Big Search Data
Daniel Ringel, Goethe-University Frankfurt, Grueneburgplatz 1, Frankfurt, 60323, Germany, dringel@wiwi.uni-frankfurt.de, Bernd Skiera

While markets of past decades consisted of relatively few products, markets of the 21st century are much larger, e.g., over 900 digital cameras and over 1,500 vacuum cleaners. The comprehensive visualization of competitive market structures in large markets can be cumbersome and complex. Yet, as we show empirically, reduction of the analysis to smaller representative product sets can obscure important information. Herein we use search data from a product- and price-comparison site to derive consideration sets of thousands of consumers that reflect competition between hundreds of products. We integrate these data into a newly developed two-dimensional mapping model called DRMABS (Decomposition and Re-assembly of Markets by Segmentation) that enables the user to visualize asymmetric competition in large markets (>1,000 products) and to identify distinct submarkets. An empirical application to the LED-TV market, comprising 1,124 products and 56 brands, leads to valid and useful insights and shows that our model outperforms traditional models such as multidimensional scaling. Likewise, we demonstrate that search data from product- and price-comparison sites provide higher external validity than search data from Google and Amazon.

**Friday, 3:30pm - 5:00pm**

**FD01**

01 - Third Floor, GB 1

**Brands II**

Contribution Session

Chair: Elea Feit, Assistant Professor, Drexel University, 222 South Union Street, Kennett Square, PA, 19348, United States of America, efeit@drexel.edu

1 - Testing Brand Value Measurement Methods in a Random Coefficient and Limited Consumer Information Modeling Framework
Atilia Soos, SapientNitro University, Faculty of Economic and Human Sciences, Libertiari 1, Miercurea Ciuc, H, 330104, Romania, attata27@gmail.com, Zsolt Sandor

We propose a random coefficient logit model with BLUP-type structural errors that enables testing the structural effect of brand equity (demand side effects) on brand value (supply side effects). Brand value measurement is usually conducted in a full consumer information context; however, it has been argued that ignoring choice set formation may lead to understating the effects of marketing mix variables on decision making. As the marketing mix is considered the antecedent of brand equity, estimating more accurately marketing mix effects is crucial for measuring brand equity. In addition, modeling choice set formation is also expected to lead to better estimation of the effectiveness of price as competitive instrument. This is also important because price is the central variable from the point of view of
brand value measurement. In this context our main research question is which of the three main brand value measurement methods (price premium, revenue premium and profit premium) can better reflect the structural link between brand equity and brand value. Although we also derive some formal results on how the price premium, revenue premium and profit premium depend on brand equity in a simple version of the model, in the general version of the model the main methodology we use to answer the research question is Monte Carlo simulation. We study this question under various scenarios of the model. Our most interesting finding is that in most cases the price premium has the highest correlation with brand equity.

2 - Why do People Search for Brands? Brand Attitudes and Search Engine Queries

Elea Feit, Assistant Professor, Drexel University, 222 South Union Street, Kennett Square, PA, 19348, United States of America, efeit@drexel.edu, Vithala Ravindra Rao, Assistant Professor, Virginia Commonwealth University, Richmond, VA 23284, United States of America, vithala@vcu.edu

Search engines have become an everyday part of how people find information, including information about brands. In turn, the data collected by search engines describing which brands consumers are searching for is emerging as an appealing potential source of data to gauge brand health, to project future sales or to measure response to advertising. However, before adopting brand search volume as a standard diagnostic measure of brand health, it is important to understand why people search for brands and how brand search relates to traditional measures of brand health. We explore this question using both macro-level time-series data and micro-level panel data. The macro-level data consists of weekly time-series data on brand search volume and several common brand attitude measures, allowing us to identify temporal correlations between brand attitudes and brand search volume. The micro-level data was collected from a panel of Google users, who agreed to allow us to track their individual brand search over 7 months and link their individual search history to a survey on brand attitudes. At the micro level, we find that users who hold positive lower-funnel brand attitudes, specifically familiarity, consideration and purchase intent are more likely to search for the brand. However, we also find that owners of a brand, particularly those who are having problems, are also more likely to search for the brand. Our findings suggest that increases in brand search volume cannot be interpreted as a positive indicator of brand health without additional context.

3 - Does Comparative Advertising Locate Rival Brands more Distant or Closer?

Jun Bin Kim, Marketing PhD Student, Rotman School of Management, University of Toronto, 105 St. George Street, Toronto, ON, M5S 3E6, Canada, jbin.kim@utoronto.ca, Avi Golfdarb, Assistant Professor, University of Pennsylvania, 3730 Market Street, Philadelphia, PA 19104, United States of America, golfdarb@upenn.edu

Using comparative advertising, a advertiser (often low-share brands) emphasizes its superiority relative to a target brand (often market leader) in order to differentiate itself from its competitor. However, the general effect of comparative advertising is associative (Minyard, Rose, Bareone, & Manning, 1993) due to cognitive reason. Much evidence has been documented mainly from laboratory experiments. In this study, we attempt to measure the impact of comparative advertising on brand position in a text-mining market-structure (perceptual brand position) map.

FD02

02-Third Floor, GB 2

Competition II

Contribution Session

Chair: Yuichiro Kanazawa, Professor, University of Tsukuba, 1-1-1 Ten-noh-dai, Tsukuba, 305-8573, Japan, kanazawa@sk.tsukuba.ac.jp

1 - The Impact of Product Concept Demonstration on Product Line Design

Taewan Kim, Assistant Professor, Lehigh University, 621 Taylor St., Bethlehem, PA, 18015, United States of America, taewhan@lehigh.edu

Trade shows have become a popular venue for firms to demonstrate new products or new product concepts to their industry cohorts and to the public in general. In particular, trade shows provide an opportunity for a firm to communicate differentiating features of its new products on the horizontal and vertical dimensions. However, little research has been done regarding how the product concept demonstration activities interact with the firm’s product line design strategy in competitive markets. I study a game-theoretic model of duopoly where two firms competing in the market, each offering two products with two product attributes that capture both vertical and horizontal differentiation (e.g., quality and design). The equilibrium results indicate that product concept demonstration in trade shows may have the effect of preempting competition, as well as expanding the market size for both high and low-quality products under certain market conditions.

2 - Are Manufacturers’ Efforts to Innovate Really Rewarded? The Case of Japanese Yogurt

Yuichiro Kanazawa, Professor, University of Tsukuba, 1-1-1 Ten-noh-dai, Tsukuba, 305-8573, Japan, kanazawa@sk.tsukuba.ac.jp, Tomohito Kamai

More than 65 years have passed since yogurt was first introduced in Japan, and the yogurt market is still growing there. The recent market growth is said to be stimulated by a group of products with newly found lactic-acid bacteria which are claimed to have features including protection from virus-infection, allergies and so forth. However, it is empirically unknown if manufacturers are really rewarded with higher margins from brands with these features as the average retail price of yogurt kept decreasing over the last decade. To uncover factors responsible for such a phenomenon, we employ Che et al. (2007) because they incorporate important facets of enterprises such as the strategic interaction among manufacturers and retailers, consumer state dependence, and forward-looking behavior of firms. With Japanese yogurt panel data from January 2007 to December 2008, we find that (1) manufacturers producing brands with special features successfully charge more margins as expected; (2) a retailer also charges higher margins for these brands; and (3) a retailer has slightly higher amount of margins than manufacturers, reflecting Bertrand competition among manufacturers and vertical Nash game between manufacturers and a retailer.

3 - Money-Back Guarantees and Service Quality:

The Marketing of In-Vitro Fertilization

Shan Yu, University of Arizona, 1130 E Helen St, McClelland Hall, R320, Tucson, AZ, 85721-0108, United States of America, shyu@email.arizona.edu, Madhu Viswanathan, Minhal Ghosh

Theoretical models have argued that Money-Back Guarantees (MBGs) could act as signals of quality, especially under conditions of asymmetric information. However, empirical evidence on this role of MBGs is scant. Indeed, in the context of in-vitro fertilization (IVF) – a medical procedure to assist infertile couples have children – it is argued that MBGs offered by some fertility clinics are nothing more than marketing gimmicks involving unethical behaviors (such as screening patients or adopting more aggressive and risky treatment protocols); hence, such marketing practices have been increasingly scrutinized and debated in the health-care and public policy circles. This research empirically sheds light on these issues by investigating the relationship between MBG offers and patient outcomes at a clinic level. This analysis is conducted on large dataset that includes clinic-level treatment and outcome statistics of all IVF clinics in the U.S., fertility clinic characteristics including whether they offer MBG or not as well as physician information, state-level insurance mandates, and demographic data. Our results suggest that MBGs can be considered as signals of quality because compared to clinics not offering MBGs, clinics offering MBGs secured better treatment outcomes (i.e., higher live birth rate) using less aggressive treatment (i.e., transferring fewer embryos) after controlling for patient quality. In addition, we find no difference between MBG and non-MBG clinics on the long-run risks posed by the procedures used (e.g., multiple births).}

4 - Pre-Launch Analysis of Competitive Dynamics

Natascha Foutz, Assistant Professor of Marketing, University of Virginia, 340 Rouss and Robertson Hall, Charlottesville, VA, 22904, United States of America, n foutz@virginia.edu, Fang Wu, Vithala Rao

Analysis of market structure has focused on mature product categories and post-launch competition. But, in many industries with frequent product introductions and increasingly short product lifecycle, such as technology and entertainment, it is imperative to identify dynamic market structure pre-launch to guide marketing mix decisions that are largely made pre-launch. However, such identification is almost impossible because of lack of sales data and dynamic shifts in the competitive landscape arising due to advertising, entry, exit, and changes in unannounced release timing. The authors thus propose a novel dynamic market structure model to capture the dynamic evolution of competitive sets and brand positioning. This modeling framework can be applied to aggregate data and is thus well-suited for pre-launch contexts when disaggregate-level sales data is not readily available. It further accommodates the above dynamic pre-launch forces, including the contextual effects induced by competitive entry and exit. Calibrating the model on a prediction market of new entertainment products, we exhibit the entire evolutionary path of each new product's competitive position, clout, and vulnerability prior to its launch. We also reveal several key forces driving the competitive dynamics, such as a significant exit effect. A series of simulation exercises further shed light on critical pre-launch competitive strategies such as advertising, pre-announcement timing, and entry/exit decisions.
Consumer Behavior VII
Contributed Session
Chair: Faryal Salman, Assistant Professor, SZABIST, 90 Clifton, Karachi, Pakistan, faryal.salmansz@szabist.edu.pk

1 - Feeding Hot, Hot, Hot: Activation of Hot and Cool Mental States through Briefly Applied Sensory Experience
Tanuka Ghoshal, Assistant Professor, Indian School of Business, Indian School of Business, Gachibowli, Hyderabad, TS, 500032, India, tanuka_ghoshal@isb.cb, Rishita Baru
Research in the domain of grounded cognitions has shown that mental processes are shaped by sensory-motor experiences, such as body movements and perceptions of warmth. Our work adds to the more limited research on grounded effects emanating from gustatory experiences by demonstrating a novel relationship between the experience of hot-and-spicy tastes and subsequent mental representations of hot-headedness. Unlike most prior literature, we illustrate the interactive impact of two contrasting sensory experiences, hot and cool, and additionally show that sensory-motor experiences can activate metaphor-based perceptions not only of unknown others but also of self. In experiment 1, participants were exposed to spicy (hot) and mini (cool) candy and then rated the description of an ambiguously aggressive fictitious character along traits related to aggression. Participants who ate the hot-and-spicy candy judged the character as being more hot-headed (M= 5.55, Min=4.57, F(1,81)=14.84, p<.05), showing that the experience of hot tastes exacerbated participants’ perceptions of hot-headedness of others. Experiment 2 examined the impact of embodied sensory experiences on actual actions and perceptions. Participants who ate the hot-and-spicy candy reported behaving in a more hot-headed manner in a fictitious service failure scenario than those in a control condition (candy only) and the cool-motor condition (Mcool=1.72, Mcontrol=2.96, Min=1.23, F(1,81)=10.52, p<.05). In experiment 3, we found that individuals who naturally prefer higher levels of spice in foods, perceive the experience of being more hot-headed, and make the novel suggestion that this metaphorical association with hot-and-spicy foods may be influential in predicting aggressive behavior in the real world.

2 - Religion, Cultural Distance, and Academic Performance of Marketing Students
Ning Li, Johns Hopkins Carey Business School, 100 International Drive, Baltimore, MD, 21202, United States of America, ningli@jhu.edu, William Murphy
Students from a large number of countries have been flowing into the US to gain higher education. Building upon literatures on the effect of religion and cultural distance on academic performance, we study the academic performance of one American university’s 905 marketing students representing 55 nationalities. We found that students’ academic performance are closely related with (i) the interaction between the student’s religion (specifically, Christianity) and religiosity; and (ii) the cultural distance between the student’s country of citizenship and the US. Across our studies, we revealed the evidence of the effect of religion on college student academic performance is equivocal. Interestingly, we find that student’s academic performance depends not only on a specific religion or religiosity alone, but on the interaction between the two factors. Based on our findings, we offer insights regarding advancing the internationalization of US education and improving national competitiveness.

3 - Influence of Cultural Orientations on Online Purchase Behavior of Aromatics in Pakistan
Faryal Salman, Assistant Professor, SZABIST, 90 Clifton, Karachi, Pakistan, faryal.salmansz@szabist.edu.pk, Muhammad Yahia Yana
Consumer Behavior is an important field of study which has evaluated behavior of individuals towards their selection and purchase of different items. Many scholars have related this field of study with various other fields of sciences & prevailing theories to establish marketing implications for marketers of different products. One important and important phenomena in the field of consumer behavior emerge in the shape of Hofstede’s Cultural Dimensions, which presents cultural distinctions in the shape of five distinct dimensions. Many scholars from around the world has established relationship with the some of the dimensions presented to us by Hofstede such as Uncertainty Avoidance in the e-commerce world, and Power Distance in luxury brands shopping, however none of these attempts have been made in Pakistan. Therefore, these cultural dimensions were taken to study the influence on the online shopping of aromatics in Pakistan, a segment which has recently shown to have a lot of potential for growth. Almost 100 University students of Karachi were selected and administered a comprehensive survey questionnaire determining their orientation along Hofstede’s cultural dimensions as well as, their perceptions and behaviors for the pre purchase stages, Need Recognition and Information Search were inquired. The data was collected and analyzed for results using SPSS, with descriptive statistics, correlation, and linear regression. The results obtained showed that there exists relationship or influence of Power Distance, Uncertainty Avoidance, Pragmatism and Individualism with the consumer behavior of the online purchase of aromatics. The results of the linear regression showed values of adjusted R-square indicating the predicting power of cultural dimensions on online purchase of aromatics in Pakistan.

4 - Joint Effects of Sweepstakes Results and Promotion Messages on Consumer Purchase
Yunjia Chi, Wuhan University, Economics and Management School, Wuhan University, Wuhan, China, chiyunjia@gmail.com, Fuzeng Xin, Xinzheng
Sweepstakes is widely employed in sales promotions for it is conducive to arousing consumers’ brand awareness as well as increasing their engagement and consumption. Compared to traditional advertisements, sweepstakes is much more appealing and entertaining since everyone has an opportunity to win prizes. Just because of this, extant literature has focused on sweepstakes designs attracting consumers to participate and maximizing their value. Meanwhile, some researchers have explored consumer responses to sweepstakes based on their demographic and socioeconomic characteristics. However, since everyone has an opportunity to win in the sweepstakes, they also stand a chance to lose. Winning or losing sweepstakes definitely has distinctive effects on the mood and subsequent behaviors of consumers. But so far, few literatures shed light on the impact of sweepstakes results on them. In addition, text message is one of the commonly used ways to disseminate the sweepstakes promotions. Researchers devote little attention to the content of promotion messages (social influence vs. non-social influence) stimulating consumers to purchase as well as the joint effect of text message and sweepstakes results on them. Using a randomized field experiment, this paper explicates that different sweepstakes results (win vs. lose) have different impacts on consumers receiving social influence messages (vs. non-social influence messages). As to winners, those who receive social influence messages purchase more. On the contrary, losers receiving non-social influence message consume more. This paper implies that managers running sweepstakes promotions should take both the results and the content of the promotion messages into account and better arrange the winning probabilities and promotion messages to avoid unfavorable sales impact.

FD03
03-Third Floor, GB 3

300 University students of Karachi were selected and administered a comprehensive survey questionnaire determining their orientation along Hofstede’s cultural dimensions as well as, their perceptions and behaviors for the pre purchase stages, Need Recognition and Information Search were inquired. The data was collected and analyzed for results using SPSS, with descriptive statistics, correlation, and linear regression. The results obtained showed that there exists relationship or influence of Power Distance, Uncertainty Avoidance, Pragmatism and Individualism with the consumer behavior of the online purchase of aromatics. The results of the linear regression showed values of adjusted R-square indicating the predicting power of cultural dimensions on online purchase of aromatics in Pakistan.
3 - From Preannouncement to New Product Success: The Role of Online Customer Engagement

Malika Chaudhuri, PhD Candidate, Michigan State University, 632 Bogue Street, East Lansing, MI, 48824, United States of America, chaudhuri@bs.msu.edu, Hang Nguyen, Roger Calantine

Firms are increasingly utilizing social media as a key channel of communication with customers to improve awareness of new product launch and related firm policies. In a similar vein, consumers increasingly use social media platforms to share their product evaluations, brand reviews and recommendations with their social networks. However, we have limited information on whether and how firms can evoke online customer engagement (OCE) through marketing signals such as new product launch pre-announcements to increase the odds of new product launch success. Our research proposes a two-stage model to examine the impact of new product preannouncements vs. announcements via social media on OCE, and how OCE consequently influences new product sales and improves firms’ financial performance. In the first stage we examine whether and how these pre/announcements generate online customer conversations and sentiment about the new product. We consider factors that drive the effects, including (i) announcement characteristics (content, timing, use of channels) and (ii) new product characteristics (product types, levels of innovation and commitment, and brand equity). In the second stage, we investigate how OCE drives new sales and firm stock returns, and the differential role of influencers vs. followers in this process. Our research has significant implications for marketing theory and practice. It untangles the critical mechanism and demonstrates the important role of OCE within the process from new product prelaunch to adoption; using advanced econometric techniques that have stronger power in predicting the effect and avoid estimation bias. We provide useful guidelines for marketing managers to employ social media to improve new product launch success.

4 - Strategic Design Management for Vertically Differentiated Firms via Design Quantification

Minki Kim, Assistant Professor, KAIST Business School, SUPEX Hall 304, KAIST College of Business, 85 Hoegiro, Dongsanmun-gu, Seoul, Korea, Republic of, minki.kim@kaist.ac.kr, Sulah Cho, Inseong Song, Ji-Hyun Lee, Kyoung Hoon Hyun

Product design is known to influence customers’ beliefs on other product traits such as durability, and technical sophistication. In the technology driven industry, thus, firms’ competitive advantages in technology can be undermined by the low quality of similar-looking brands. Despite a need for firm’s design management, strategic decisions have been made limitlessly in the absence of a commonly accepted definition of product design and design quantification method. Also in marketing and economics literature, the product strategy has typically been studied for theoretical context in the abstract dimension of quality or in the abstract definition of product type. In contrast, this study proposes an integrated empirical approach for high-tech firms’ strategic design management building on state-of-art design quantification and design-similarity-based network analysis. By providing measurable definitions of design for positioning, we extend the research scope of the strategic issue of positioning to the product design domain. Utilizing a unique dataset on the automotive industry, we draw managerial implications on design imitation and innovation for vertically differentiated brands when designing new products or altering existing ones.

FD06

06-Third Floor, GB 8

Decision Neuroscience IV

(Applied Consumer Neuroscience)

Contributed Session

Chair: David Brandt, EVP A/D Effectiveness Strategy, Nielsen, Cincinnati, OH, United States of America

1 - The Role Of Emotion In Viewer Choice Of Media: Three Consumer Neuroscience Studies

Carl D. Marci, Chief Science Officer, Innerscope Research, Boston, MA, United States of America

The media landscape is changing quickly and many companies are embracing consumer neuroscience and its tools in order to understand the opportunities and risks for marketers and media companies. Innerscope Research has been at the forefront of understanding using modern tools to measure the emotional responses to media content. Using best in class biometrics, eye tracking and behavioral coding, often combined with self-report, Dr. Carl Marci will present three relevant case studies in how viewers choose which screen to consume content on and how marketers can get ahead. The case studies will showcase work from Time Warner, Turner Broadcasting and FOX Sports.

2 - Bringing Consumer Neuroscience to Marketing: Challenges and Opportunities

David Brandt, EVP A/D Effectiveness Strategy, Nielsen, Cincinnati, OH, United States of America, Michael Smith

Marketing applications of neuroscience methods have been commercially available for over a decade. At an early stage, Nielsen became intrigued by the potential of neuroscience to improve measurement of consumer reactions, including those that may be implicit or otherwise beyond reach of other approaches. They made early investments in, and the first (and still only) acquisition of a neuroscience company focused on market research. This presentation will provide a retrospective on what we have learned about the use of neuroscience in marketing research, and a perspective on how it may change the practice of marketing. The paper will first focus on where neuroscience fits within Nielsen and what was necessary to successfully bring the application of EEG and eye tracking to make it broadly available to clients. It will then focus on the challenges faced as we commercialized the service. In particular, two such concerns were common. First, since studies of brain activity typically employ consumer samples much smaller than those evaluated with survey methodologies, questions arise as to whether the results from such studies are reliable. And, second, even if they were reliable, did they matter? That is, do they have real-world importance? This portion of the presentation will outline our early findings on these questions. The final section will present a case history to show how these results are being used to improve advertising.
1 - Mixed Bundling Strategies for Complementary Products under Uncertain Supply
Liiwen Chen, City University of Hong Kong, Department of Marketing, City University of Hong Kong, Hong Kong, Liiwen PRC, chenliwen2008@gmail.com, Xiaomeng Luo
On 1 May 1990, a new policy aims to control vehicle population growth was implemented in Singapore. Since then, potential vehicle owners have to have a vehicle license, which is known as Certificate of Entitlement (COE), via an open bid auction before purchasing a new vehicle. With this mechanism, the vehicle and the COE become completely complementary products, and also the vehicle market of Singapore faces uncertain supply thereafter. In most cases, the demand of COE is much higher than its supply and therefore, the premium of COE may even exceed the value of the vehicle itself, which undoubtedly hurts vehicle retailers and consumers at the same time. However, even though the limited supply of COE may lead to a higher price immediately, the vehicle retailer may provide some premium services related to COE as profitable choices. For instance, bundling service to sell a vehicle together with a COE as a bundle product may make it more attractive for consumers who are uncertain about releasing the COE. In this paper, we try to answer the following question: with the mechanism of COE, how to improve the vehicle retailer's profit by adopting different sales strategies, namely separate sales and bundling sales? We use a game-theoretic model to capture the strategic interactions between a monopoly vehicle retailer and its consumers in Singapore’s vehicle market and find the uncertainty of COE. The retailer may provide pure strategy to only sell vehicles to consumers, or bundling strategy to sell the COE and the vehicle as a bundle to consumers, or combine pure strategy with bundling strategy to target different kinds of consumers. We try to identify the optimal strategies for the retailer to achieve maximum profit under different conditions.

2 - Product Bundling: A Synthesis of Problem Contexts, Frameworks and Normative Guidelines
R. Venkatesh, Professor of Marketing, University of Pittsburgh/ Joseph M. Katz Graduate School of Business, 332 Mervis Hall, Pittsburgh, PA, 15260, United States of America, renvenkat@katz.pitt.edu, Ashutosh Prasad, Vijay Mahajan
Research on bundling, the strategy of marketing products in combination, has gone through multiple phases of rediscovery. These changes can be seen in the evolving nature of the real world contexts for bundling, the underlying rationales for bundling or unbundling, theoretical bases that go beyond traditional economics, and the development of nuanced methodologies for bundle design and pricing. Against this backdrop, we attempt to make three contributions. First, we provide a series of categorizations that highlight the evolution in bundling problems and approaches. Second, we provide a set of key strategic guidelines for bundling and pricing that are rooted in economics, marketing and consumer psychology. Third, we identify promising avenues as well as challenges for future research. Our illustrative conclusions: It is no longer sufficient to define the bundling strategy space in terms of pure components, pure bundling, and mixed bundling. No one of these strategies is always the best. The increasing importance of brand alliances and technology platforms points to significant opportunity for new models of cooperation. Research in consumer behavior underscores the need to modify current guidelines based on the strictly rational consumer. Our final conclusion is that the best is yet to come for bundling research.

3 - Consumer Advertising and Price Leadership in Prescription Drug Markets
Abhik Roy, Professor, Quinnipiac University, School of Business, Marketing department, Quinnipiac Univ., 275 Mt. Carmel Ave., Hamden, CT, 06518, United States of America, abhik.roy@quinnipiac.edu, Mary Schramm
The study examines the interaction between price and elements of promotional strategy within a pricing interdependence among pharmaceutical firms. Specifically, it examines the relationship between direct-to-consumer advertising (DTCA), and patterns of price competition among the firms marketing competing products in the same therapeutic area. A theoretical model is proposed that DTCA might be used as a coordinating mechanism, whereby a firm signals its willingness to be a Stackelberg price leader by spending large amounts on advertising and using advertising messages, which promote the drug formulation, not just its own brand within the category. A set of propositions are developed, about the impact of demand factors such as advertising effectiveness, demand price sensitivity on how this sunk cost effect influences the SP's choice of pricing scheme. We first provide an analysis on how the sunk cost effect influences a monopolistic SP's choice of pricing scheme. We also examine the impact of sunk-cost effects on pricing scheme choices in a competitive setting. Further, we also consider a scenario with a pool of customers with differing levels of sophistication (being naive or sophisticated) and investigate how a mixture of customer types further impacts the choice of pricing scheme.

4 - Sunk Cost Effect in Pricing of Service with Uncertain Completion Time
Guangwen Kong, University of Minnesota, 111 Church Street SE, Minneapolis, MN, 55414, United States of America, gkong@umn.edu, Sampath Rajagopalan, Chuyunong Tong
In this paper, we build a model to show that how this sunk cost effect influences the SP's choice of pricing scheme. We first provide an analysis on how this sunk cost effect influences a monopolistic SP's choice of pricing scheme. We also examine the impact of sunk-cost effects on pricing scheme choices in a competitive setting. Further, we also consider a scenario with a pool of customers with differing levels of sophistication (being naive or sophisticated) and investigate how a mixture of customer types further impacts the choice of pricing scheme.
An intriguing development in the marketing landscape of recent years is the substantial increase in the quantity of free digital products or “freeware.” Herein we provide evidence that freeware’s growth pattern departs from the linear cascade pattern observed for conventional new products. Using a large-scale dataset that documents the growth of tens of thousands of free digital products we find that freeware products begin with a decline in demand, and move to the following archetype patterns of growth: bell-shaped pattern (“Diffuse”), exponential-type decline (“Die”), and a combination of the two (“Slide & Diffuse”). In particular, we show how the growth pattern ubiquity is directly related to the freeware’s popularity: Less popular products tend to exhibit more Slide and Slide & Diffuse patterns, while more successful products tend to have a higher share of Diffuse patterns. These findings highlight the limitation of classic diffusion research that focused almost exclusively for successful products, and did not take into account the heterogeneity due to the new product’s popularity.

FD10

09-Third Floor, Dover AB

Recent Development in Dynamic Structural Models

Invited Session

Chair: Andrew Ching, University of Toronto, Rotman School of Management, Toronto, ON, Canada, andrew.ching@rotman.utoronto.ca
Co-Chair: Matthew Osborne, University of Toronto, Rotman School of Management, Toronto, ON, Canada, matthew.osborne@gmail.com

1 - Dynamic Airline Pricing and Seat Availability

Kevin Williams, Yale University, kevin.williams@yale.edu
Airfares are determined by both inter-temporal price discrimination and dynamic adjustment to stochastic demand given limited capacity. In this paper, I estimate a model of dynamic airline pricing taking both forces into account. I use an original data set of daily fares and seat availabilities at the flight level. With model estimates, I disentangle key interactions between the arrival pattern of consumer types and remaining capacity under stochastic demand. I find dynamic adjustment to stockouts is particularly important as a means to secure seats for high-valuing consumers who arrive close to the departure date. It leads to substantial revenue gains compared to pricing policies which depend on date of purchase, but not remaining capacity. In aggregate consumers benefit, despite facing higher fares on average, as a result of more efficient capacity allocation. Finally, I show that failing to account for stochastic demand leads to a systematic bias in estimating demand elasticities.

2 - Invest in Information or Wing It? A Model of Dynamic Pricing with Seller Learning

Guoliang Huang, Carnegie Mellon University, Pittsburgh, PA, ghuangandrew.cmu.edu, Hong Luo, Jing Xia
This paper tackles the managerial problem of dynamic pricing in the secondary durable-goods market, where sellers typically have limited information about item-specific heterogeneity. It develops a structural model of dynamic pricing that features the seller learning about item-specific demand through initial industrial and active learning in the sale process. The model is estimated using novel panel data of a leading used-car dealership. Policy experiments are conducted to quantify the value of the dealer’s initial inferential item-specific demand and of lowering the price-adjustment cost. With the dealer’s average net profit per car in the estimation sample being around $740, the initial information about item-specific demand worth roughly $243, and cutting the dealer’s price-adjustment cost by half would increase its profit by about $103.

3 - Stockpiling, Learning, and the Success of New Products

Christoph Bauner, Counterpoint Research, cbauer@gmail.com, Emily Wang
In a dynamic and competitive environment, factors such as the market maturity and market concentration may have significant impacts on the success of a new entrant. This paper sheds some light on how market structure influences that success in the presence of both learning and stockpiling. Using the market for sugar substitutes from 2001 to 2005, I develop and structurally estimate a dynamic demand model that incorporates both aspects of learning and stockpiling. Households in the model learn their reactions to brand characteristics over time; they also engage in stockpiling in order to benefit from non-linear pricing as well as inter-temporal price variations. I overcome the complexity of combining learning and stockpiling identified by previous authors by employing a new estimation technique. Parameters of the consumer utility function are then used to calculate the differential in market shares for a new entrant, comparing several counterfactual scenarios. I find that the timing of entry has a large effect on the entrant’s market share in its first year in the market. Entering in a less mature market can increase an entrant’s sales volume by much as a factor of three when compared to entering the same market with more established firms four years later. Most of this effect comes from competition with the youngest incumbent brand in the market.

4 - Identification and Estimation of Forward-Looking Behavior: The Case of Consumer Stockpiling

Matthew Osborne, University of Toronto, Rotman School of Management, Toronto, ON, Canada, matthew.osborne@gmail.com, Andrew Ching
We develop a new empirical strategy for identifying discount factors in markets for storable goods. The identification strategy rests on an exclusion restriction generated by discontinuities in package sizes: In storable goods product categories where consumption rates are exogenous and package sizes are discrete, current utility does not depend on inventory unless a package gets used up. Most of the time, inventory only enters a consumer’s value function. We demonstrate using artificial data experiments that discount factors can be identified in these circumstances. We also demonstrate the feasibility of our identification strategy with an empirical exercise, where we estimate a stockpiling model using scanner data on laundry detergents. Preliminary estimates suggest that consumers are not as forward-looking as many papers in the literature assume, with discount factors around 0.3.

Sustainability

Contributed Session

Chair: Omar Rodriguez, Georgia Tech, 508 Princeton Way, Atlanta, GA, 30307, United States of America, omar.rodriguez@scheller.gatech.edu

1 - Doing Well vs. Doing Good: Understanding the Impact of Advertising Messages

Hossein Eslami, Assistant Professor of Marketing, Lebanese American University, LAU School of Business, BB1203, P.O.Box 13-5053 Chouram, Beirut, 11022801, Lebanon, hossein.eslami@lau.edu.lb, Trichy Krishnan
Today lots of money is spent on promoting the adoption of renewable energy sources in different parts of the world and there is no consensus on the most efficient policy instrument(s). In this paper I propose a framework to capture the adoption decision by consumers and to help choosing between the incentive policy instruments. Built on a parsimonious demand model, the framework allows comparing the efficiency of different instruments including subsidy, feed-in tariff, and seedling. The model is estimated on the data from solar photovoltaic market and the results are discussed. The insights can have implications for policy makers in the renewable energy field.
3 - When and How a Sustainable Strategy Benefits or Hurts Firms: The Impact of Refurbished Products
Yilong (Eric) Zheng, State University of New York, Binghamton University, AA-271, 4400 Vestal Parkway East, Binghamton, NY 13902, United States of America, yzheng45@binghamton.edu
There is a development of remanufacturing of new products (i.e. refurbished products) in recent years. While it is a sustainable strategy which helps reducing E-waste, selling refurbished products may create a negative perception on the quality of new products. This raises important questions about when and how such a sustainable strategy can benefit or hurt the manufacturers. In this paper, we examine the impact of refurbished products in markets with network effects and standard competition. We argue that introducing refurbished products could create a benefit of increasing consumers’ valuation of new products while the overall impact varies depending on the compatibility and the developmental stage of the new products. Using both experimental and empirical data, our results demonstrate the evidence of using refurbished products to enhance the success of a new technological standard. Specifically, we find that introducing refurbished products increases consumers’ valuation of a new product at its introduction stage when the new product adopts a technology incompatible with extant standards. In contrast, if a new product adopts a technology compatible with existing standards, introducing refurbished products decreases consumers’ valuation of the new products. These and other findings of this study provide managerial implications to manufacturers about when and how a sustainable strategy with refurbished products can benefit them in enhancing the success of new technological standards.

FD11
11-Third Floor, Atlantic
Dynamic Models I
Contributed Session
Chair: Nicola Padilla, PhD Marketing Student, Columbia Business School, 3022 Broadway, Uris Hall, 5th Floor, Office 5 West, New York, NY, 10027, United States of America, npadilla19@gsb.columbia.edu
1 - Change Detection using Sequential Likelihood Ratio Test
Nuo Xu, PhD student, Emory University, 1893 Ridgemont Ln, Decatur, GA, 30033, United States of America, nuo.xu@emory.edu, Y. Zhao
Today’s market is dynamic. Customers’ preferences of product features and their reactions to marketing stimuli can change over time. The changes in the market environment can be caused by events such as new brand entry and new product introduction. In this paper, we propose to describe consumer behaviors and market reactions over time through probabilistic models. We then monitor the shift in the model parameters. When cumulative evidence over time supports the hypothesis that a change occurs, we pull an alarm to alert the company. Drawing from stochastic process control literature, we construct the detection rule based on sequential likelihood ratio test, which is a sequential hypothesis test developed by Wald originally for the purpose of quality control. This test is proved to be one of the most efficient tools for quick detection of consistent systematic error over time and is widely adopted in the field of engineering, biostatistics, epidemiology and computer science for ceaseless detection of region change. Our results show that our model brings considerable improvement in change detection compared to baseline models.
2 - Hot-hand and Social Effects in Sales
Seshadi Tirunillal, University of Houston, 334 Melcher Hall, Houston, TX, 77027, United States of America, seshadri@baur.uh.edu, Nick Lee, Michael Ahearn
Hot hand (cold hand) refers to the belief that an individual’s current success (failure) is influenced by the past successes (failures). In this study we examine this phenomenon in sales context. First, we assess if there is any evidence of temporal persistence of performance and the (latent) “confidence” for a given sales agent. Then, we examine if the persistence of the “hot” (or “cold”) latent state is influenced by social interactions among the sales agents leading to a performance contagion. To study these questions we use a natural experiment setting involving two sales call centers, both operated by a single firm but differing distinctly in their environment for inter-personal interaction. We analyze the rich disaggregated data of individual sales behaviors and outcomes using a hidden Markov Modeling framework. We find evidence of temporal persistence of the latent state at the sales-agent level and across the sales agents in the same center.
We find that the persistence is asymmetric with respect to the successes and failures of sales calls. Further, we find that the temporal dependency among the sales agent is higher in the center where salespeople have the potential for richer social interactions. Our findings imply that managers should account for the impact of social interactions among sales agents. Managers also have to consider if the significant negative effects of bad performance contagion offsets the potential benefits of social interaction between agents.

FD12
12-Third Floor, Bristol
Social Influence II
Contributed Session
Chair: Raji Srinivasan, University of Texas at Austin, 2803 Barton Point Drive, Austin, TX, 78737, United States of America, raji.srinivasan@mccombs.utexas.edu
1 - Understanding Social Effects in Crowdfunding
Yiwei Li, The Chinese University of Hong Kong, Room 1101, 11/F, Cheung Yu Tung Building, 12 Chau Cheong Street, Shatin, N.T., CUHK, Shatin, 999077, Hong Kong, P.R.C., VictorLi@baf.cuhk.edu.hk, Yuhu Chang, Jian-min Jia
This paper aims to understand the social effects of crowdfunding on project support. Using big data from crowdfunding projects (more than sixty thousand contributions) and social network (more than three million people), we find that friends can have a social influence in project contribution. People are more likely to support a project if their friends support it as well. The social effect on project contribution emerges instantly and vanishes quickly (usually in a couple of days). Also, peer influences impact not only on which project to contribute, but also how much amount of money to support in the project contribution. These findings suggest that friends can act as a promoter that facilitates the success of a crowdfunding project, which provides new insights into the understanding of the underlying mechanisms of social effects and can have substantial managerial implications.
2 - The Effect of Social Contagion on Users’ Purchase Behavior in an Online Community
Eunho Park, PhD Student, Texas A&M University, Wehrner Building 4112 TAMU, College Station, TX, 77843-4112, United States of America, epark@eecs.tamu.edu, Rishika Rishika, Ramkumar Janakiraman, Ram Bezwada, Byungwoon Yoo
In this study, the authors investigate the role of social contagion in an online social community on users’ purchase behavior. More specifically, we examine the role of users’ characteristics and the users’ network structure on how a focal user’s level of expertise, thrill-seeking behavior and network stability make the users more or less...
susceptible to social contagion from other users of the online community. We focus on users’ actual purchase of two different types of products, namely conspicuous and inconspicuous products. We estimate our proposed model using Tobit model. We find that social contagion has a positive and significant effect on users’ purchase of both conspicuous and inconspicuous products. In addition, the “pros”, i.e., the users with greater expertise and the “thrift-seekers”, i.e., users who engage in high risk and high reward activities exhibit less susceptibility to social contagion. Interestingly, we find that whereas users with greater network stability are more susceptible to social contagion in the purchase of conspicuous products, network stability does not moderate the social contagion effect in the purchase of conspicuous products. Based on our results, we discuss the role of behavioral motivations that drive social contagion. We offer implications for managers and identify target users for greater engagement with the social media platforms.

3 - The Sound of Twitter: Effect of Sound Structure of Brand Tweets on Consumer Engagement

Raji Shirivasan, University of Texas at Austin, 2803 Barton Point Drive, Austin, TX, 78733, United States of America, rajis@mcms-utexas.edu, Francesco Balocco, Gaia Rubera

Twitter is an online social networking service that enables users to send and read short 140-character messages called “tweets”. By late 2014, there were over 264 million active users and 500 million messages were sent each day through Twitter. Not surprisingly, brands are using Twitter to tweet to their consumers. As Twitter uses text messages, it is reasonable to expect that the sound structure of brand tweets may influence the effect of the tweets on consumers’ responses. In this paper, we examine the effects of the sound structure of brands’ tweets on online consumer engagement with the brand tweets. We apply two measures of consumer engagement, retweeting (i.e., whether the consumer forwards the tweet to her followers) and favoriting (i.e., whether consumer identifies the tweet as a favorite). Applying sound stress theory, we relate four sound structure characteristics, rhyme, rhythm, “rhythm” (“repetition of syllables at the ends of words”), “vowel” (“key words in a phrase begin with identical sounds or letters”), alliteration and assonance (“three or more repetitions of a vowel or consonant”), to consumer engagement. Using data on 700,000 tweets of 631 brands, we find that the sound structure of tweets affects the two metrics – retweeting and favoriting – of consumer engagement. The findings have implications for designing brand communications on Twitter to increase online consumer engagement.

4 - Positively Aware

Shaiza Qayyum, Graduate Student, Johns Hopkins University, 3400 N. Charles Street 440 Mergenthaler Hall, Baltimore, MD, 21218, United States of America, sqayyum2@jhu.edu, Nicholas Papageorge, Jorge Balart

While there is substantial evidence of word of mouth or user and expert reviews having an impact on market share, not much work has been done in contexts where the costs of choosing the wrong action can be considerably high. Such a context is choice of pharmaceutical drugs for a life-threatening disease. We study the impact of HIV drug reviews by doctors and HIV/ AIDS activists on the demand for these drugs. To identify a causal relationship, we employ a difference-in-differences approach and exploit the difference in the market share of drugs with good and bad reviews at different stages of a drug's lifecycle. Our results show that a positive rating in the first year of a drug's lifecycle significantly impacts drug demand while the impact of a positive rating on the drug gets older and insignificant. We argue that additional information on HIV drugs in the form of reviews is more informative when there is more uncertainty about drug quality. We also show that the reviews are also more likely to be wrong when they are significantly impacting demand.

FD14

14-Fourth Floor, HarborSide B

Entertainment II Contributed Session

Chair: Moon Young Kang, KAIST Business School, 85 Hoegiro Dongdaemun-gu, Seoul, Korea, Republic of, mkang@business.kaist.ac.kr

1 - How On-Demand Streaming Services Influence Music Expenditures and Music Industry Revenue

Nils Woicner, Assistant Professor, Vienna University of Economics and Business, Welshandelsplatz 1, Vienna, 1200, Austria, nils.woicner@wu.ac.at, Dominik Papies

The latest phase of the music industry’s ongoing struggle against plummeting revenues saw the introduction of on-demand streaming services that generate revenues through subscription fees or advertising (e.g., Spotify). The questions whether (and to what extent) streaming services cannibalize demand from existing distribution channels, and how these services affect overall music industry revenues have stirred considerable controversy recently. Previous research on cannibalization of channel effects is inconclusive and it is therefore unclear whether this channel addition is beneficial. We address this research gap and investigate the impact of free and paid streaming services on music expenditures and total music industry revenue. To this end, we repeatedly interviewed a panel of more than 2,500 music consumers over more than one year. For our analyses, we rely on a difference-in-difference estimator, which controls for unobserved individual effects that may otherwise confound the identification of a cannibalization effect. Our results suggest a cannibalistic relationship between on-demand streaming services and expenditures in other channels, and these cannibalization effects increase with the usage intensity of the services. With respect to the effect of streaming services on total industry revenue, our study reveals an intriguing insight: despite the cannibalistic effect of streaming services on existing channels, their services have the potential to increase the overall revenue for the industry. While the net effect of paid streaming services is clearly positive, the net-effect of free services depends on the assumptions regarding the payout rate that music labels receive from the streaming services.

FD13

13- Fourth Floor, HarborSide A

Digital Marketing VI Contributed Session

Chair: Christine Balague, Chair Social Networks, Telecom School of Management, LITEM, Institute Mines Télécom, 9 rue Charles Fourier, Evry, 91011, France, christine.balague@sudparis.eu

1 - What are the Social Networks Metrics Impacting Sales?

Christine Balague, Chair Social Networks, Telecom School of Management, LITEM, Institute Mines Télécom, 9 rue Charles Fourier, Evry, 91011, France, christine.balague@sudparis.eu

Social networks are mainly considered by marketers as valuable earned media on account of their potential viral audience. These social networks also collect massive data on consumers or potential ones. In this research, we aim at analyzing the contribution and value of these new data types on marketing strategies and more specifically CRM. Matching social networks and transactional data, we propose new different settings of social networks users based on the analysis of interactions graphs, networks structures, content analysis and show the relationship between these scores and consumer purchases. Finally we propose a new model of prediction in terms of social media metrics and their visualization in a big data platform we specifically developed so that can be easily implemented by companies.

2 - More Likes, Less Buys? Correlating Social Media Popularity to Marketing Effectiveness

Wenjun Zhou, Assistant Professor, University of Tennessee, 916 Volunteer Blvd, SMC 247, UT BAS, Knoxville, TN, 37934, United States of America, wzhou4@utk.edu, Xiaolun Li, Robert Meier

TV commercials have been effectively used as marketing vehicles for decades. With the advent of new media, various new tools have been adopted by businesses in the hope of reaching out to a wider audience and bringing marketing effectiveness to a new level. Like other businesses, TV stations are starting to promote the viewership of their programs by utilizing social media. As TV commercials are incorporated into TV programs, pricing of ads are tied to the program’s viewing rate. As both social media popularity metrics (e.g., counts of likes, shares, and comments) and viewing rates are collected, we had the opportunity of studying the correlation between social media popularity and marketing effectiveness in terms of viewership. The study is based on a popular Chinese TV program on matchmaking-for-dating show. Common social media metrics, such as number of shares, number of comments, and number of likes, are collected for each piece of social media post that promotes an episode of the TV program, and the viewership data is collected every minute during the show. We find that although sharing and comments are not significantly correlated with the peak viewing rate, the number of likes is surprisingly negatively correlated with viewing rate. In other words, the more likes of a social media post, the lower viewing rate of the episode that such media promotions attempt to promote. This might indicate a competition in attention between different media. This discovery has important implications on the use and interpretation of social media performance metrics.

3 - Measuring the Value of Customer Engagement in Mobile Social Networking Services

Hikaru Yamamoto, Keio University, 4-1-1 Hiyoshi, Kohoku-ku, Yokohama, Japan, hikaru@kbx.keio.ac.jp, Naohiro Matsumura

In this paper, we propose a new method to measure the engagement value of a customer and his or her network by using a unique data set from a mobile social networking service(SNS)in Japan. Customer engagement behavior is defined as ‘customers’ behavioral manifestations that have a brand or firm focus, beyond purchase, resulting from functional drivers’ (van Doorn et al., 2010), and includes behavioral expressions such as uploading texts, photos, and videos, participating in online games, checking in to places and events, commenting on other users’ articles, etc. We calculated engagement value (EV), which is a breakdown of the customer’s activity by item or action, and the value of her network by incorporating the social factor to individual activity data. The quantitative value of a customer in networks is often examined by the well-studied notion of degree centrality. The qualitative value of a customer is usually examined at the level of a single customer, not the network. The contribution of this research is that our approach captures both quantitative and qualitative aspects of the customer and his or her network. The results of empirical analyses show that our approach is useful in finding valuable customers for marketing activities such as better targeting for promotion, discount, and reward.
2 - How Music Attributes Lead to Choice: An Empirical Investigation into Physiological Variables
Moon Young Kang, KAIST Business School, 85 Hoegiro Dongdaemun-gu, Seoul, Korea, Republic of, mkyang@business.kaist.ac.kr, Jaehwan Kim, Yang Seok Cho These days, saving the production cost while generating the most positive responses for music configuration is extremely important to music producers and marketers. However, the parameter estimates obtained from single choice equation cannot address the information required by music specialists and marketers. The information loaded on “in-process” metric for demand (e.g., attention, arousal, and positive valence) is essential. This gives rise to challenges. First, the goal of choice, the modeling framework where those in-process latent metrics work with choice. Second, more importantly, those in-process metric construct cannot be obtained from a traditional paper-and-pencil survey. To address these major issues, i) we propose a multivariate systems of equations allowing for dependence between choice utility and the intermediate demand variables, and ii) we use the data obtained via physiological responses (EEG, GSR, and facial EMG) as mediating variables.

FD15
15- Fourth Floor, Essex AB Mobile Marketing and Quantitative Models Cluster; Special Session Invited Session Chair: Xueying Luo, Charles Gilliland Distinguished Professor of Marketing, Temple University, Department of Marketing, United States of America, xluo@temple.edu, Michelle Andrews, Temple University, Philadelphia, PA, United States of America, michelle.andrews@temple.edu 1 - How-Related Mobile Ad Andrew Reinaker, PhD Student, Temple University, Department of Marketing, United States of America, reinaker@temple.edu, Michelle Andrews, Xueying Luo, Zheng Fang Mobile ads, despite their appealing potential, face the challenge of overall ineffectiveness. The authors conduct two randomized field experiments to test the notion of consumer-conscious mobile ads, i.e., mobile ads must coordinate the ad message content with the consumer geographic location context and mindset focus. Findings show that messages are effective when the market segments have a specific mindset within the location contexts (home and work). In addition to being driven by message congruence with the current location, mobile ad messages are more persuasive when framed with the correct regulatory focus (promotion and prevention-focus) given the reference to primary or secondary social goal reminders. The findings have important implications for managers who are conscious of receiving a return on their use of mobile ads and provide key insights into how to capitalize on the work/life balance for higher mobile ad effectiveness. 2 - Self-Signaling and Pro-Social Behavior: Mobile Field Experiments Xueming Luo, Charles Gilliland Distinguished Professor of Marketing, Temple University, Department of Marketing, Philadelphia, PA, United States of America, xluo@temple.edu, JP Dube, Zheng Fang We test a self-signaling theory using two large-scale, randomized controlled field experiments. Mobile phone users are randomly sampled to receive promotional offers for movie tickets via SMS technology. Test groups are exposed to different pre-determined levels of price discounts and charitable donations tied to the ticket purchase. The main effects of price discounts and charitable donations increase ticket demand. However, the combination of both discounts and donations can decrease ticket demand. In a post-purchase survey, the same subjects report lower ratings of “feeling good about themselves” as the motivation for buying a ticket when discounts and donations are both large. These findings are consistent with a self-signaling theory, whereby the discount crowds out the consumer’s “warm-glow” feeling from the charitable donation. Alternative behavioral explanations are ruled out. A structural model of demand with self-signaling is fit to the data using a constrained optimization algorithm to handle the potential multiplicity of equilibria. The estimated preferences reveal that consumers do not derive consumption utility from donations bundled with the ticket. However, they derive significant diagnostic utility: the warm-glow feeling of the perception of valuing charitable donations.

FD16
16- Fourth Floor, Essex C Working Paper XIX Contributed Session Chair: Jose Fernandez, University of Louisville, College of Business, Louisville, United States of America, jose.fernandez@louisville.edu 1 - Pass-Through along the Supply Chain Germain Gaudin, DICE, Heinrich Heine University, Universitätsstrasse 1, Düsseldorf, 40225, Germany, gaudin@dice.hhu.de This paper analyzes the determinants of channel pass-through specific to vertical relations between manufacturers, intermediaries, and retailers. Pass-through de- pends on the firms’ relative bargaining power and on the type of agreement they contract upon. Pass through rates at the upstream and downstream levels generally differ, although common modelling assumptions imply a constant pass-through between the different levels of the supply chain. Manufacturers may alleviate the problem of incomplete pass-through of trade promotions by giving more bargaining power to retailers. 2 - Pay-What-You-Want Pricing and Competition: Breaking the Bertrand Trap Jose Fernandez, University of Louisville, College of Business, Louisville, United States of America, jose.fernandez@louisville.edu, Yong Chao, Babu Nahata Pay-what-you-want pricing is unusual in that firms actively relinquish their control over price and allow consumers to choose any non-negative price for the good. In this paper we demonstrate that PWW pricing can serve as a method to soften competition in a duopoly setting. In the typical duopoly setting with identical firms where both firms choose price the well-established solution is both firms setting price equal to marginal cost and receiving profits equal to zero, the Bertrand Trap. However, pay-what-you-want pricing can exploit behavioral motivations to induce voluntary payments from some consumers. In a competitive setting, the presence of social preferences (gift, altruism, fairness, self-image, etc) has two effects: (1) it induces payments for the PWW firm and (2) dissuades some consumers from shopping at the pay-what-you-want firm to avoid guilt by shopping at a price setting firm. Additionally, firms must weigh the benefits and cost of adopting pay-what-you-want pricing over using a set price while facing a constant marginal cost of production. Under some reasonable ranges of guilt and marginal cost, we show that pay-what-you-want pricing can survive as a sub-game perfect equilibrium resulting in positive profits for both firms; thus breaking the Bertrand Trap.
Behavioral targeting, displaying personalized advertisements based on consumers' past online behaviors, has become a popular practice in the Internet advertising industry. One unique challenge faced by the advertising host in serving behaviorally targeted ads is to determine the targeting level, which is an inverse scale of the number of a consumer's recent interests used in the user-ad match. For instance, a high level of targeting implies a more accurate inference on a user's current preference, leading to the use of a smaller set of recently activated interests from the user, and consequently a smaller set of candidate advertisements to serve to the user. Intuitively, a high targeting level can increase the relevance of the served ads and consequently the users' click-through rate, but it might also evoke users' negative reactions by triggering privacy concerns and/or information satiation, lowering the click-through rate. Besides the mixed reaction from users, advertisers may also respond to a high targeting level by either raising bids in an anticipation of a higher value-per-click, or lowering bids due to the reduced competition. This paper examines the impact of the targeting level on the online display advertising industry. We develop a model to simultaneously capture users' reactions to behaviorally targeted ads, the advertising host's decision on ad serving, and advertisers' bid decisions. We apply the model to a novel dataset obtained from a leading Internet advertising platform. Our estimation results suggest that although the advertisers' profits increase with the targeting level, both the consumers' clicks and the advertising host's revenue have an inverted-U relationship with the targeting level.

2 - Overhaul Overdraft Fees: Creating Pricing and Product Design Strategies with Big Data
Shijie Lu, Univers. of Southern California, 3660 Trousdale Parkway, ACC 306E, Los Angeles, CA, United States of America, shijieLu@usc.edu, Sha Yang

In 2012, consumers paid an enormous $32 billion overdraft fees. Consumer attrition and potential government regulations to shut down the overdraft service urge banks to come up with financial innovations to overhaul the overdraft fees. However, no empirical research has been done to explain consumers' overdraft incentives and evaluate alternative pricing and product strategies. In this paper, we build a dynamic structural model with consumer monitoring cost and dissatisfaction. We find that on one hand, consumers heavily discount the future and overdraw because of impulsive spending. On the other hand, a high monitoring cost makes it hard for consumers to track their finances therefore they overdraw because of rational inattention. In addition, consumers are dissatisfied by the overly high overdraft fee and close their accounts. We apply the model to a big dataset of more than 500,000 accounts for a span of 450 days. Our policy simulations show that alternative pricing strategies may increase the bank's revenue. Sending targeted and dynamic alerts to consumers can not only help consumers avoid overdraft fees but improve bank profits from higher interchange fees and less consumer attrition. To alleviate the computational burden of solving dynamic programming problems on a large scale, we combine parallel computing techniques with a Bayesian Markov Chain Monte Carlo algorithm. The Big Data allows us to detect the rare event of overdraft and reduce the sampling error with minimal computational costs.

Saturday, 8:30am - 10:00am

2 - Vertical Differentiation: Brand Extend or Brand Expand? 
Jeff Cai, The Wharton School, University of Pennsylvania, 3730 Walnut St JMMH Suite 700, Philadelphia, PA, 19104, United States of America, caicexun@wharton.upenn.edu, David Reibstein, Ashish Sood

When Toyota vertically extended their product line upward, they chose to do so with a new brand – the Lexus. Years later, Hyundai also extended their product line upward, but chose to do so within their existing brand – the Hyundai Genesis. Two different strategies in the same industry! Was one of the companies wrong in their approach? When is either strategy optimal? There are many tradeoffs involved in this decision – the price a firm can command for the extension, the costs of creating a new brand, the impact or spillover on the rest of the portfolio via the impact on the brand, just to name a few. The product line extension decision – within brand versus new brand – is a common problem found in many industries. Using an analytical model, we examine the effects of spillovers across the product lines under each strategy, and implications for pricing and profits. We then provide evidence for our propositions using historical data from Hyundai and Toyota as empirical illustrations. We ultimately show the conditions under which each strategy is optimal.

3 - Dynamics and Peer Effects of Brand Value in College Sports 
Zhuping Liu, The University of Texas at Austin, 2110 Speedway, B6700, Austin, TX, 78712, United States of America, zhuping.liu@phil.mccombs.utexas.edu, Frenkel ter Hofstede, Jason Duan, Vijay Mahajan

Brand value plays a key role in attracting corporate sponsorship for the multi-million dollar business of college sports. In this paper, we study peer effects in the dynamic brand value evolution of major college sports teams that play in the same National Collegiate Athletic Association conferences. To examine the peer effects in each conference, we propose a novel methodology that can identify conference-specific peer effects while capturing the dynamic evolution of brand value. Our model estimation results reveal strong positive peer effects in four major conferences-Big 12, Big Ten, Southeast Conference, and Pac-12, indicating that teams benefit from playing in a conference with strong teams. Our approach also sheds light on the effect of conference switches on a team's brand value. By constructing the counterfactual brand value trajectory of not switching conferences for a switched team, we show the difference between the counterfactual trajectory and the actual brand value evolution, which scientifically quantifies the effect of a conference switch.
1 - Market Returns to Innovation Sourcing Decisions:

Nihat Kharancioglu, Assistant Professor of Marketing, Koc University, College of Administrative Sciences and E, Istanbul, 34450, Turkey, niharancioglu@ku.edu.tr; David Giblin, Tuba Yilmaz

The marketing literature is replete with work assessing firm market value of marketing actions via the analysis of short-term stock returns. However, researchers are increasingly questioning the validity of this approach assessment, most notably related to strategic decisions which have long-term effects. In this work, we examine the short- and long-term market value impacts of innovation outsourcing decisions in high-technology markets. Specifically, the following research questions are addressed. First, what are the effects of innovation outsourcing on short and long-term stock market performance and are firms better off outsourcing innovation domestically or offshoring? Second, can we find within a resource dependence framework what sources of dependence and uncertainty impact short versus long-term stock market performance? The findings come from event-study analyses of 449 innovation outsourcing decisions in high technology markets between January 1982 and December 2004. The results show that: (1) short term performance was positive overall and for the U.S. sample, while long term Fama-French adjusted performance was negative; (2) investors view supplier involvement and buyer resources as negatively impacting performance in the short run; and (3) in the long run, investors view specificity and supplier involvement positively, but supplier concentration negatively, while the strategic importance of the project is positively related to long term returns in domestic contexts only.

2 - Digital Education: A Knowledge Sharing Platform for Massively Open Online Courses

Andreas Heusler, Ludwig-Maximilians Universität München, Geschwister-Scholl-Platz 1, Munich, 80539, Germany, heusler@bwl.lmu.de, Martin Spann

Education between those users that only attended the MOOC and those that additionally and voluntarily participated in the Knowledge Stock Exchange.

3 - The Role of Slack on Innovation in Household Enterprises

Thomas Zhang, London Business School, Sussex Place, London, United Kingdom, szhang@london.edu

Emerging markets such as India are dominated by household enterprises – small businesses run by family units. These enterprises tend to stay small. One of the reasons for this is that family enterprises tend not to adopt innovative practices that would increase productivity high enough to warrant expansion. Why not? We postulate that these household enterprises function with too little day-to-day slack to allow for productivity innovation. Using a unique dataset of innovation adoptions by family farmers in India, we demonstrate that day-to-day slack encourages innovation in household enterprises.

38106, Germany, k.glass@tu-braunschweig.de, Isabelle Kes, David Woswetschläger

This year’s consumer electronics show in Las Vegas featured rapid advances in vehicle autonomy, such as a self-driving car completing a five-hour trip from Silicon Valley to Las Vegas (Cunningham 2015). Vehicle autonomy is expected to contribute positively to road safety (van der Pas et al. 2014), to reduce traffic jams, and increase travel comfort. However, these benefits can only be reached if consumers are willing to use such automated systems (Ruth, Gelau, 2013), from a managerial perspective a high level of acceptance is a prerequisite for a higher level of purchase intention. Although existing literature provides some evidence that consumers are generally open towards automated driving (Payre, Williamson 2014) this study delivers further insights which conditions consumers are willing to hand over control to an automated car. Studies from other contexts show that impairing or influencing people in their autonomy might lead to a sense of reactance (Homburg, Prigge 2014; Brehm 1966). Against this background the present study manipulates two different levels of automated driving, optional and obligatory car automation on highways, in a laboratory experiment. The first scenario describes an optional automated driving system which is activated automatically as soon as the driver enters the highway but control over the car can be retracted at any point of time. The second scenario describes an obligatory automated driving system which is activated automatically but without the possibility to switch it off. In total, 392 participants participated in an online laboratory experiment, in which respondents were randomly assigned to one of the two scenarios. The results show that a higher level of autonomy leads to a higher reactance. Furthermore perceived behavioral control is significantly negatively influenced by the amount of autonomy impairment.
3 - The Risk of Advertising on Non-Premium Websites

Nadia Abouaboub, Prof., Vienna University of Economics and Business, Wohlwendplatz 1, Vienna, 1020, Austria, nadia.abouabou@wu.ac.at, Michel Clement, Edila Shehu

Marketers have long struggled over the question of whether advertising in non-premium environments is a good strategy. While advertising in non-premium environments is less expensive, it also bears the risk of potential damages to the advertised brand. With the rise of real-time bidding and programmatic buying, this question has become even more relevant as millions of websites and their ad inventory have become easily accessible to advertisers via ad exchanges such as Google DoubleClick or the Yahoo! ad exchange. This study aims at answering the question of whether advertising in non-premium environments really pays brands at risk. To answer this question, we analyze a large-scale data set from several field experiments conducted for different brands on a global video-sharing platform (n=64,027) and compare brand recall, ad and brand likeability, and the likelihood of skipping the ad across premium and non-premium ad inventory. Our results show that the negative effects of advertising in non-premium environments are lower than assumed by advertisers. It does not affect brand recall or skipping behavior and influences ad and brand likeability only in case of high-involvement brands. Thus, this study shows that advertising in non-premium environments may be a promising strategy for advertisers of low-involvement products, because no negative effects occur and the related costs are lower. For managers of high-involvement products, the optimal strategy may indeed be to focus on premium advertising environments despite the higher related costs.

4 - The Consideration Process: Insights from Modeling Clickstream Data

Yilan Zhang, Pennsylvania State University, 408A Business Building, University Park, State College, PA, United States of America, yxz192@psu.edu, Arvind Rangaswamy, Daniel Ringel, Bernd Skiera

Although the concept of consideration sets has been around in Marketing since the 1970’s, it has been difficult to explicitly model consideration sets because they are unobserved by researchers, and consumers may also be unable to articulate their process. Much of the extant research on consideration sets has been done in settings where researchers observe different choices and then try to infer consumers’ consideration sets based on those choices. In this research, we use extensive data from a price comparison search engine to observe the processes by which consumers decide to explore different brands and models before making choices. We propose a non-homogenous discrete-time model in which different degrees of consideration are specified as ordered hidden states, and consumers transit from one state to another by maximizing utility (unobserved by the researcher). We also allow for heterogeneity in the consideration process, and use a Bayesian model to estimate the parameters. The observed data includes information about the products viewed during the decision process (which may occur over multiple sessions), and whether the same products have been viewed by the same consumer at multiple times during the search process. We also have a rich set of covariates to explain the evolution of consideration, and to articulate the process by which consumers expand their consideration sets, or converge to their current set. We will discuss the theoretical insights and implications of our study and articulate managerial interventions that could enhance (i.e., speed up or simplify) the consideration process.

2 - A Stochastic Diffusion Model of Adoption Behavior

Pativsa Rajasabhin, University of Mannheim, A5.6 Room B115, Mannheim, 68161, Germany, pattara.r@gmail.com, Martin Schlather, Yasemin Boztug

Diffusion processes attract large interest in economics and marketing community as a tool for modelling the spreading of adoption subject (e.g., product, technology, innovation, policy). They are often based on equation-based models, notably the Bass model and its extensions, whose merits lie in simplicity and intuitive interpretation of economic variables. An alternative approach is agent-based modelling which is able to capture interaction among individuals. We propose a hybrid agent-based stochastic differential equation model which unifies the advantages of both approaches to study the diffusion of trials (first-time adoption incidents), taking into account the elects from society at both microscopic and macroscopic levels. The model incorporates social learning as characterized by social communication (information exchange among decision makers) and social pressure (collective pressure from the economic system). It is derived under a utility framework to render an intuitive interpretation from a socio-interaction perspective. Important findings and confirmations are: 1) social pressure induces trials 2) social pressure decreases takes period, increases peakload and temporal autocorrelation, as well as governs the distribution of trials 3) social learning can delay takes period. Simulation results suggest a marketing strategy that: 1) suppresses social learning when the adoption subject is first introduced to the economy 2) induces early trials as soon as possible 3) prioritizes the number of appreciators rather than lowering the number of non-appreciators during the early stage of marketing 4) promotes contagion and visibility of trial incidents when the public perception is positive.

3 - The Application of Case-Based Decision Theory to the Adoption of a "Really" New Product

Kanoko Go, PhD student, Keio University, Graduate School of Business and Commerce, 2-15-45 Mita, Minato-ku, Tokyo, 108-8345, Japan, go.kanoko@gmail.com, Mai Kikumori, Yutaka Hamaoka

The adoption of a new product is uncertain decision for consumers. Especially when the product is complicated or really new, or consumers do not have enough knowledge of it, they cannot decompose the product into attributes. To model consumer decision-making under uncertain situations, Gilboa and Schmeidler (1995, 2001) proposed Case-Based Decision Theory (CBDT), a decision rule that chooses a best act based on its past performance in similar cases. Our first study, reported last year, confirmed that CBT can explain adoption of a new product in beer category. This study applies CBT to describe consumer's decision making on "really new" product adoption. We developed hypotheses on comparison between the CBT model and the multi-attribute model. We also extended the CBT model to incorporate how consumer utilizes information from advertising. They were tested through a Web-based questionnaire survey on adoption of ‘Google Glass’ for undergraduate student (n=101). We confirmed that the CBT model fitted better than the multi-attribute decision model for consumer's adoption decision of really new product, especially when the consumer has less knowledge on the product category. We found that when the new product was positioned as "innovative": a new product in head mount display category, consumer takes into account both past experience in his/her memory and information from advertising. On the contrary, when the new product was positioned as "less innovative": a new product in smart phone category, consumer does not take into account information from advertising.

4 - A Formalization of the Role of Uncertainty in Services

D. Sudharsan, Professor, University of Kentucky, 119 B Mandrell Hall, Lexington, KY, 40506, United States of America, sudharsan@uky.edu

The primary objective of this paper is to formalize an understanding of the role of uncertainty reduction in services and the embodiment of the uncertainty reduction into hardware, software or firmware to develop goods. Our formalization draws on information theory and in particular the use of entropy as a measure of information, i.e., uncertainty reduction. We take as axiomatic that the performance of a service requires action(s) by human being(s). When the knowledge that is required to perform that service is embodied into durable or consumable hardware/software it becomes a good. Each transition point from a service to a good marks the creation of an innovation that embodies uncertainty reduction performed by humans into goods. The paper's main contributions, are the conceptualization of the primary role of uncertainty reduction in service design and delivery; proposal of a formal formulation of the objective function for the design of services that includes co-creation; and discussion of the implications of the uncertainty based conceptualization including how its ideas generalize to SERVQUAL, and the principal-agent problem in services.
1 - Payment Evasion
Daniel Halbheer, HEC Paris, 1 rue de la Libération, Jouy-en-Josas, France, halbheer@hec.fr, Stefan Bucherl, Michael Lechner
This paper models payment evasion as a source of profit by letting the firm choose the price charged to paying consumers and the fine collected from detected payment evaders. The consumers choose whether to purchase, evade payment, or refrain from consumption. We show that payment evasion allows the firm to charge a higher price to paying consumers and to generate a higher profit. We also show that higher fines do not necessarily reduce payment evasion. Finally, we provide empirical evidence which is consistent with our theoretical analysis, using comprehensive micro data on fare dodging on the Zurich Transport Network.

2 - Optimal Three-Part Tariff Plans
Gadi Fibich, Professor, Tel Aviv University, Levanon Street, Tel Aviv, Israel, fibich@tau.ac.il, Oded Koingsberg, Elitan Muller, Roy Klein
Service providers, such as cell phone carriers, often offer three-part tariff plans that consist of three levers: A fixed fee, an allowance of free units, and a price per unit above the allowance. In previous studies the optimal three-part tariff contract was characterized using the standard first-order conditions approach. Because this optimization problem is non-smooth, however, it could only be solved in a few simple cases. In this study we employ a different methodology which is based on obtaining a global bound for the firm profit, and then showing that this bound is attained by the optimal plan. This approach allows us to explicitly calculate the optimal three-part tariff plan under quite general conditions, where consumers are strategic, they have a general utility function, they experience psychological costs when they exceed the number of free units, they have deterministic or stochastic consumption rates, they are homogeneous or heterogeneous, and the firm costs are fixed or depend on the usage level.

1 - Consumer Deliberation and Transaction-Based Discrimination
Shan-Yu Chou, National Taiwan University, 1 Section 4 Roosevelt Road, Taipei, Taiwan - ROC, choussy@ntu.edu.tw, Chyi-Mei Chen
This paper examines how consumer deliberation may affect a marketer’s transaction-based discrimination scheme in a two-period model with repeat purchase, where it is assumed that the marketer cannot credibly set his period-2 price in period 1. Unlike in a static model without repeat purchase, where the marketer may sometimes induce deliberation, the authors show that inducing deliberation is never optimal in a two-period model with repeat purchase. Consumer deliberation is shown to occur in different patterns in equilibrium product price and sales volume. More precisely, compared to the case where the buyer is fully rational, when the buyer is actually facing costs of deliberation, (i) the period-1 sales volume tends to be higher and less volatile; and (ii) the marketer tends to price higher (respectively, lower) in period 1 when the buyer is very likely to have low (respectively, high) valuation. Finally, with repeat purchase, in many marketing environments even if the marketer could cooly educate the buyer and remove the buyer's costs of deliberation, the marketer would be better off not doing so.

2 - The Persistence of Anchoring Effects on Consumer Valuations
Sangsoo Yoon, Temple University, 1801 Liacouras Walk, Philadelphia, PA, United States of America, syyoon@temple.edu, Angelika Dimoka, Nathan Fong
The anchoring effect refers to the tendency for people's willingness-to-pay (WTP) for common market goods to be influenced by numbers that should have no bearing on their valuations (Atney et al., 2005). Despite of its robustness in a short-term, its long-term influence on following choice behavior is still unclear. In two experimental studies, we investigated whether anchoring effects persist over time and influence subsequent choice to further examine the effectiveness of anchoring-related marketing tactics (e.g., price/quantity promotions). In Study 1, we manipulated the time between willingness-to-buy (WTB, anchor) and WTP in the classic anchoring procedure, inserting a one-week gap between the two parts. We found that anchoring effects persisted, regardless of the memory of the original anchor. The effect also persisted when the WTP elicitation was performed in the first week, and repeated after a week and longer (2-5 months). In Study 2, participants were asked to choose one of the two pricedmatched items associated with either high or low anchor after classic anchoring procedure. We found that these findings show that the effect of anchors on preferences persists, can have lasting influence, and influences subsequent consumer choice. This implies that anchoring tactics can be a meaningful strategy in forming long-term preferences and eliciting choices.

3 - Add-On Pricing with Cost Shocks in a Vertically Differentiated Competitive Marketplace
Steven Shugan, Professor, University of Florida, 2030 NW 24th Avenue, Gainesville, FL, 32605, United States of America, sms@ufl.edu, Jihwan Moon
We investigate transitions from providing free ancillary services to charging add-on fees after asymmetric (in quality) firms experience an adverse cost shock in a competitive duopoly market. The new market equilibrium is dependent upon the magnitude of the cost shock and consumer uncertainty about future add-on valuations. Given the cost shock, the high-quality firm can employ two types of market power: (1) against the low-quality firm to increase market share and (2) against its customers to extract consumer surplus. For small cost shocks, only the low-quality firm charges a fee to decrease add-on costs by serving fewer customers (only those with high add-on valuations). The high-quality firm exerts market power to both gain market share and exploit consumer surplus. For moderate cost-shocks, the high-quality firm also charges ancillary fees using market power to increase market share but not necessarily decrease consumer surplus. For large cost shocks, the high-quality firm uses market power solely to extract consumer surplus because buyers become less valuable given smaller profit margins and thus the high-quality firm raises its base price to optimally lose some customers to the low-quality firm. Finally, we provide empirical support for our theory using data from three different industries.

4 - Can Information Products Be Complements?
Hyunwoo Lim, Assistant Professor, Ajou University, 4 Averill Cres, Toronto, ON, M2M2A9, Canada, hyunwoo.lim@rotman.utoronto.ca
In “Marketing Information: A Competitive Analysis,” Sarvary and Parker (1997) (S&P) argue that “while traditional products and services compete either as substitutes or as complements in the relevant product-attribute space, information may be one or the other, depending on its position within the same product-attribute space.” This result is very surprising and interesting in light of the fact that information is a very large, e.g., investment banks estimate values of new start-ups, economics consulting firms providing forecasts of the economy, real estate market, and different sectors of economy, weather forecast, etc. In this paper, we show that S&P obtain the results by implicitly making the following internally inconsistent assumptions: (i) after purchasing information products, consumers update their beliefs using Bayesian updating rule and act as if they have diffuse initial prior (i.e., their initial perceived variance is infinity before receiving any information); (ii) but if consumers choose not to purchase any information product, it is assumed that their initial prior variance is 1 (implied by the utility function specification and that utility of no purchase is “normalized” to zero). This internal inconsistency leads to the possibility that when information sources are noisy (i.e., “unreliable” in SBPs language), the gain of buying an information product from ONE source is very small, and the gain of buying information products from TWO sources is much larger. This implies increasing marginal utility in consuming an additional information product. We show that if we remove this internal inconsistency by assuming that consumers always use the Bayesian rule to update their beliefs, the marginal utility (i.e., the marginal reduction in the posterior variance) of consuming an additional product will always be diminishing. This implies that information signals from different sources are always substitutes, regardless of their nosiness/reliabilities.

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Working Papers XXI
Contributed Session
Chair: Daniel Halbheer, HEC Paris, 1 rue de la Libération, Jouy-en-Josas, France, halbheer@hec.fr
1 - Payment Evasion
Daniel Halbheer, HEC Paris, 1 rue de la Libération, Jouy-en-Josas, France, halbheer@hec.fr, Stefan Bucherl, Michael Lechner
This paper models payment evasion as a source of profit by letting the firm choose the price charged to paying consumers and the fine collected from detected payment evaders. The consumers choose whether to purchase, evade payment, or refrain from consumption. We show that payment evasion allows the firm to charge a higher price to paying consumers and to generate a higher profit. We also show that higher fines do not necessarily reduce payment evasion. Finally, we provide empirical evidence which is consistent with our theoretical analysis, using comprehensive micro data on fare dodging on the Zurich Transport Network.

2 - Optimal Three-Part Tariff Plans
Gadi Fibich, Professor, Tel Aviv University, Levanon Street, Tel Aviv, Israel, fibich@tau.ac.il, Oded Koingsberg, Elitan Muller, Roy Klein
Service providers, such as cell phone carriers, often offer three-part tariff plans that consist of three levers: A fixed fee, an allowance of free units, and a price per unit above the allowance. In previous studies the optimal three-part tariff contract was characterized using the standard first-order conditions approach. Because this optimization problem is non-smooth, however, it could only be solved in a few simple cases. In this study we employ a different methodology which is based on obtaining a global bound for the firm profit, and then showing that this bound is attained by the optimal plan. This approach allows us to explicitly calculate the optimal three-part tariff plan under quite general conditions, where consumers are strategic, they have a general utility function, they experience psychological costs when they exceed the number of free units, they have deterministic or stochastic consumption rates, they are homogeneous or heterogeneous, and the firm costs are fixed or depend on the usage level.

SA07
07-Third Floor, GB 9
Pricing IV
Contributed Session
Chair: Hyunwoo Lim, Assistant Professor, Ajou University, 4 Averill Cres, Toronto, ON, M2M2A9, Canada, hyunwoo.lim@rotman.utoronto.ca
1 - Consumer Deliberation and Transaction-Based Discrimination
Shan-Yu Chou, National Taiwan University, 1 Section 4 Roosevelt Road, Taipei, Taiwan - ROC, choussy@ntu.edu.tw, Chyi-Mei Chen
This paper examines how consumer deliberation may affect a marketer’s transaction-based discrimination scheme in a two-period model with repeat purchase, where it is assumed that the marketer cannot credibly set his period-2 price in period 1. Unlike in a static model without repeat purchase, where the marketer may sometimes induce deliberation, the authors show that inducing deliberation is never optimal in a two-period model with repeat purchase. Consumer deliberation is shown to occur in different patterns in equilibrium product price and sales volume. More precisely, compared to the case where the buyer is fully rational, when the buyer is actually facing costs of deliberation, (i) the period-1 sales volume tends to be higher and less volatile; and (ii) the marketer tends to price higher (respectively, lower) in period 1 when the buyer is very likely to have low (respectively, high) valuation. Finally, with repeat purchase, in many marketing environments even if the marketer could cooly educate the buyer and remove the buyer's costs of deliberation, the marketer would be better off not doing so.
levels of the theatrical revenues (approximately US$50 million) in China. Once Hollywood movies are shown in China and that release dates vary, we then investigate movie and other characteristics that are associated with box office attendance. In addition to finding that movie attendance is countercyclical, an expected but not previously documented result, we also show, contrary to popular belief, that critics’ ratings have larger impact during economic downturns than during periods of economic expansion.

2 - Which Hollywood Movies are Shown in Movie Theaters in China and How Large is Their Audience?

Charles Weinberg, University of British Columbia, 2329 West Mall, Vancouver, BC, V6T 2Z4, Canada, charles.weinberg@sauder.ubc.ca, Jason Ho, Chunjua Wu

China is the second largest theatrical movie market, yet only about 10% of all movies released by Hollywood studios each year are shown in China due to government restrictions. Using a specially constructed extensive data base of movies having a theatrical release in China over recent years, supplemented by a broader data base of movies released elsewhere, we develop and estimate a model to help understand the characteristics of movies that are likely to be approved by the Chinese government for theatrical release in China. Understanding the approval process is particularly challenging, as the objective function concerning acceptance of movies for theatrical release in China has not been fully revealed. Moreover, movie contracts can either be on a revenue-sharing (the current quota is 34 movies each year) or on a flat-fee basis (no pre-set quota). For example, “Thor: The Dark World” was shown under a revenue sharing contract and “Despicable Me 2” was shown under a flat fee contract, although both had similar levels of theatrical revenues (approximately US$50 million) in China. Once accepted for showing in China, a movie’s release date can be close to that of the US release or much delayed. Recognizing that only a limited number of Hollywood movies are shown in China and that release dates vary, we then investigate movie and other characteristics that are associated with box office performance in China.

3 - Assessing the Quality of User-Generated Content

Gu Liberati, Rotterdam School of Management - Erasmus University, liberati@rsrn.nl, Jehoshua Elishabberg

Firms routinely use data from blogs and product review sites to monitor consumer buzz and sentiment. Such data have also received increased attention by researchers. An assessment of the quality of the information spontaneously provided by users is fundamental prerequisite to make decisions or draw scientific conclusions based on this data. However, to our knowledge, there is no formal approach to assess the quality of UGC. In this paper we develop a paradigm to assess the reliability and validity of user-generated content datasets, in particular for product reviews, e.g., movies. We develop and implement a procedure based on textual analysis of content and sentiment that assesses the UGC quality with tools widely used in marketing, information theory and machine learning literature. We extend the empirical analysis of psychological and machine learning methods to propose a generalized version of Cronbach’s Alpha that can be applied to textual data. Our analysis in the movie industry shows that a UGC dataset that is purified according to our procedure has greater reliability and predictive validity.

4 - Role of Sequels in Brand Extension and Expansion

Vinay Kanetkar, College of Business and Economics, University of Guelph, Canada, vkanetka@uoguelph.ca, Khalil Rohani, Chauhua Chen

The literature about movie sequels suggests that original movies generate lower revenue compared to sequels. In this paper, we propose an alternative model to account for this phenomenon. The model explicitly account for audience size for original brand (movie) and brand extension. Daily box office data is used to estimate models for several sequels. For example, estimated models for “Iron Man” (3), “Twilight” (5) and Harry Potter (8) indicate that sequel movies expand audience size and reduce half-life movies substantially. This research contributes to markets where product life cycles are short.
Consumer perceptions of brands along specific dimensions such as eco-friendlyness, novelty, and luxuryness are important components of brand equity and therefore marketing strategy. Traditional approaches towards modeling such perceptions (e.g., survey methods, content analysis) are costly and time-consuming, and their results may quickly become outdated. Exact machine learning methods generally require extensive hand-annotated training data, which leads to many of the same limitations. Here, we investigate a novel, general, and fully automated method for inferring dimension-specific brand perceptions through mining the brand's social connections on Twitter. Our approach leverages to self-organization of the Twitter platform to train a model to rate brands according to the strength of their perceived association with a keyword, using only that single keyword as input. We compare the method's automatic ratings for over 200 brands along three example dimensions with survey data, and find a consistently high degree of correlation. The fully automatic nature of this method allows great flexibility, the ability to keep the model current with evolving trends or breaking news, and offers a foundation for future advances in mining marketing insights from social data.

4 - Mining Brand Perceptions through Twitter Follower Networks
Jennifer Cutler, Illinois Institute of Technology, 10 W 35th St, 18th Floor, Chicago, IL 60616, United States of America, jcutler2@stuart.iit.edu, Aron Culotta

Consumer segments and their distinct paths-to-purchase. Three of them stand out: loyal and deliberate shoppers, email-driven offline shoppers, and holiday-driven shoppers. Using out-of-sample predictions, we demonstrate that our approach offers improved predictions of future purchases compared to extant approaches. Then we perform policy simulations to show that managers can use the path-to-purchase segments to improve marketing mix.

3 - The Impact of Taxation Stimulus on China’s Automobile Industry and Environment
Yanlin Chu, NUS Business School, Department of Marketing, National University of Singapore, Singapore, 117592, Singapore, chyuyanli@nus.edu.sg, Junhong Chu, Julia Bao

Traffic emissions are one of the main sources for air pollution and have caused severe health problems and even deaths. During 2008-2009, the Chinese government modified its taxation scheme for the automobile industry three times in the hope to encourage purchases of small displacement cars and discourage purchases of large displacement ones and thus to reduce vehicle emissions. We propose a dynamic structural model which can capture consumer's forward looking behavior when considering buying cars to assess the environmental impact of the tax stimulus plans. Our model enables us to more accurately evaluate the impact of tax stimulus on consumer's purchase decision - the proportion of consumers who switch to buying smaller cars instead of larger ones, and the proportion of consumers who postpone their purchases. Our paper contributes to the literature in the following ways: it enriches the scarce empirical evidence on the pass through of taxes to wholesale and retail prices, and it will provide valuable lessons for other countries on how tax policies influence car adoption and their environmental impact.

4 - The Effects of Source Credibility and Source Salience on Sales: Evidence from Corporate Art Collectors
Monika Kackovic, University of Amsterdam Business School, Plantage Muidergracht 12, 1018 TV, Amsterdam, Netherlands, m.kackovic@uva.nl

In this paper, we focus on how certain types of quality signals originating from third party sources affect producers’ sales performance. We distinguish between different signals (i.e., reviews, awards and affiliations), as well as different dimensions of third party sources emitting these signals (i.e., source credibility and source salience) and study these effects on sales performance, in conjunction with the career age of the producer. This allows us to see whether signals are more important for new producers who are subject to the liability of newness. In the empirical setting of the contemporary visual art market, we find that reviews and affiliations from third party sources with high source credibility and high source salience have positive effects on sales only during the early stages of an artist’s career, however, has a negative effect. Finally, we find that career age moderates these effects. Contrary to expectations, we provide evidence for a liability of oldness – instead of newness – that we explain by the particular preferences of the customer studied.
2 - Unveiling the True Face of Market Potential
Keren Eldad-Leibovich, Thaleiad-Elder University, Mt Scopus 1, Jerusalem, Israel, Kerenya@mail.huji.ac.il, Danny Shapira, Jacob Goldenberg

Forecasting models generally predict the number of individuals who are expected to purchase a product. However, these models do not account for those individuals who are ‘still in the market’, considering buying the product and have not reached a final decision to adopt or reject. According to our data, at the point of 35% of sales, 7% of individuals are adopters and as many as 53% are rejecters, among those who have considered buying the product. We developed an interactive Markov model that enables us to unveil the amount of individuals who are usually unidentified, thus revealing the true face of the market potential. We provide estimations of efficiency of future sales (i.e., which part of the market potential a firm will realize using the current marketing execution). We also measure the consumer decision time window within which a product is still under consideration. Our findings suggest this window to be approximately one month, in which the consumer may still be influenced to make a positive purchase choice.

3 - An Investigation of the Impact of Characteristic Attributes and the Adoption Process on OWOM
Omer Topaloglu, Eastern Illinois University, 600 Lincoln Ave, Charleston, IL, 61920, United States of America, otpaloglu@eiu.edu, Mayuiksh Dixs, Piyush Kumar

With the increasing accessibility of the Internet and the consumer adoption of social media platforms, online word-of-mouth (online WOM) has gained attention from both practitioners and researchers (Godes et al. 2005). While such word-of-mouth is useful for marketers on an ongoing basis, it is especially valuable following a new product introduction as firms try to gauge early customer interest in order to use the information to tune their launch strategy (Mahajan, Muller, and Keinz 1984; Van den Bulte and Josh 2007). In this research, we attempt to examine how idiosyncratic threshold levels are determined by cognitive processes and social networks, and how they affect online WOM valence following a new product introduction, a process during which companies would like to constantly monitor and interpret consumer feedback and set appropriate marketing tactics. Specifically, we examine how varying threshold levels of attitude intensity affect the timing of the online WOM generation. Third, we test the proposed set of relationships using microblogging data, an increasingly popular and influential form of online WOM. The results from our analysis provide new insights into the relationships among individual characteristics, the timing of online WOM following a new product introduction, and online WOM content.

4 - How Reviews are Reviewed: The Impact of Social Factors on Review Usefulness
Hams Risselada, Assistant professor, University of Groningen, P.O. Box 800, Groningen, 9700 AV, Netherlands, h.risselada@rug.nl, Lisette De Vries

Online reviews are important for consumers’ decision making. With millions of reviews available, consumers need to distinguish reviews from one another, for example by review usefulness. Research on review usefulness identified content and source factors as important drivers. Surprisingly little research exists on the impact of social influence on perceived review usefulness. For evaluating online reviews, social influence is reflected in the usefulness values other consumers provide. Usefulness values might affect consumers’ perceived usefulness of that review. Observational learning theory suggests that consumers’ own judgments are less important in the presence of observed actions of others. So, others’ usefulness votes might diminish the effects of content and source factors. We use a choice-based conjoint experiment to examine the relative impact of and interactions between social influence (review usefulness votes of others), content (spelling errors, structure), and source (status). The results show that social influence affects perceived review usefulness: negative votes diminish and positive votes enhance review usefulness. Social factors also moderate the impact of content and source factors. Our contribution is twofold: first, we assess the impact of social influence relative to well-researched factors as content and source on perceived review usefulness, merging the marketing literature on online reviews and social influence. Second, we examine interactions among social influence and content and source factors. The results also have value for marketing practice as the studied factors can be easily adapted by managers, thereby providing hands-on recommendations.

3 - How User-Driven and Brand-Driven Conversations Shape Brand Equity and Influence Firm Value
Ashwin Malshbe, Assistant Professor, ESSEC Business School, 100 Victoria Street, Singapore, Singapore, malshbe@essec.edu, Peter O’Connor, Aniruddha Coley

Extant research argues that the link between social media and firm performance is mediated by various intangibles such as brand awareness (Fisher, 2009; Hoffman & Fodor, 2010). Social media lead to a higher brand engagement and word of mouth, thereby increasing the likelihood of purchase because of increased visibility of the brand (Hoffman & Fodor, 2010). First, we argue that not all social media conversations contribute equally. Indeed, conversations driven by users and by brands are distinct and can lead to significant differences in the way they affect brand equity and therefore firm value. Second, we investigate the role of social media engagement in determining brand visibility and value. Although prior literature has argued that social media may affect firm value, the mechanism through which such effect can be achieved has not been explicitly identified. Using a rich dataset comprising daily observations on social media conversations, brand characteristics, and stock returns, we find that user-driven conversations lead to higher perceived value for the brand and increased buzz surrounding the brand. This in turn leads to increased firm value. On the other hand, brand-driven conversations harm the firm value by reducing perceived quality and the buzz surrounding the brand, thereby making the brand less interesting to the consumers. Both these findings are novel and very relevant for the academicians as well as practitioners.
Does alcohol consumption increase during recessions? On the one hand, financial stress and increased leisure time due to under-employment could boost alcohol consumption, as people use alcohol as a form of self-medication. On the other hand, recession reduces people's disposable income, which should decrease people's spending on alcohol. In this paper, we study the relationship between economic downturn and alcohol consumption in the context of beer consumption in the US during the Great Recession. We use a large US retail database which contains weekly beer sales data from a representative set of retail outlets in 32 major US metropolitan areas. We observe detailed product, price and promotion information. We account for both the demand and supply side factors that influence beer sales and study the effects of macro-economic and employment factors on beer consumption. We report the main effect of economic downturn on alcohol consumption and discuss the implications of our findings on public health.
understand the costs and benefits of alternative policy designs.

structural model of the television market. The measure of these forces helps key economic forces, ratcchin and raising rivals’ costs, by estimating a short-run and long-run outcomes. Additionally, by understanding the impact of strategic levers at the new entrant’s disposal (e.g., marketing, store roll-out), we can further address questions about how the firm should behave upon entry.

SA16
16- Fourth Floor, Essex C
Working Papers XXII
Contribution Section
Chair: Davide Proserpio, PhD Candidate, Boston University, 111 Cummington Mall, Boston, MA, 02215, United States of America, dproserpi@bu.edu

1 - The Impact of Privacy Policy on the Auction Market for Online Display Advertising
Garrett Johnson, Assistant Professor, Simon Business School, University of Rochester, Simon Business School University of Rochester, Simon School & CS3-206, Rochester, NY, 14627, United States of America, Garrett.Johnson@Simon.Rochester.edu

States of America, Garrett.Johnson@Simon.Rochester.edu

Saturday, 10:30am - 12:00pm

SB01
01-Third Floor, GB 1

Brands IV
Contribution Section
Chair: Harsh Dadich, Doctoral Student, Indian Institute of Management, Ahmedabad, Room 19, Dorm 14, IIM Main Campus, Ahmedabad, GU, 380015, India, harshd@iimahd.ernet.in

1 - Line Extensions and Consumer Attitudes: Consumer Attitudes as Existing Knowledge
Naoki Akamatsu, Chiba University of Commerce, Megurohoncho Meguro-ku 2-27-8, 2-27-8, Tokyo, Japan, akamatsu@chiba-u.ac.jp

To launch new products, marketers frequently execute on line extensions (cf. Keller1998). The situation is same in Japan. Therefore, understanding how consumers evaluate new extension products is an important matter. This study assumes that consumers may evaluate new extension product by using attitudes toward core brands and also assumes that consumer attitudes is existing knowledge. That is, this study consider show to evaluate new extension products by focusing on consumer attitudes toward core brands. The data was gathered by using internet survey about the consumer attitudes toward both the core brand, the best sales beer brand in Japan, and the new extension product of that brand. Then we examined a regression analysis to find the relationship between the attitude toward the core brand and the attitude toward the extension product. The results indicate that consumer attitude toward the core brand is based on two elements, knowledge attributed to core brand and knowledge attributed to the relationship of consumers to core brand. These two elements have different effects on evaluating new extension products. For consumers who regularly purchase the core brand, they use only the knowledge attributed to the relationship of consumers to core brand. On the other hand, for consumers who do not regularly purchase, they use both those knowledge. This finding important to understand how to evaluate the extension product. We should distinguish knowledge and also we should distinguish the consumers who regularly purchase core brand or not.

2 - A Flexible Bayesian Nonparametric Model for Ordinal Responses
Lan Liang, The University of Texas at Austin, 1 University Station B6700 Marketing, Marketing Dept, McCombs School, Austin, TX,

SB01

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When does Cooperation Help the Firm in Their Innovation Efforts?
Sungkyu Lee, Doctoral Student, Korea University
Sungbuk-gu Anam-dong, Korea University LG-Posco, Seoul, Korea, Republic of, andres252@korea.ac.kr, Tony Garrett, Jong-Ho Lee

Increasingly firms work with external partners to enhance the effectiveness of their innovation efforts. Although the benefits of customer, supplier and other value chain members are extensively examined, the role of the competitor as an innovation partner (cooperation) is only just emerging as a research area. Cooperation can influence product innovativeness, although few have either considered cooperation’s effect on other innovation performance measures or the potential moderating effects. We contribute to this stream by developing and testing a conceptual model using a large sample of manufacturing firms. We argue that the importance of the competitor as an information source will influence the contribution of the cooperation (level of the competitor innovation involvement) to the exploratory (the development of new products and long-term knowledge) and exploitative (the development of new processes and practices; capabilities) innovation performance. We also argue the moderating effects of firm size and competition intensity. The overall model results show cooperators importance as an information source has a significant influence on cooperation’s contribution which then has a significant influence on innovation exploratory performance. There are however moderating effects. Firm size moderates the role and contribution of the competitor and their impacts on innovation performance in low and high competitive intensity environments. Specifically we find that small firms in both high and low competition intensity benefit from cooperation against large firms, who benefit mainly only on innovation exploratory performance (low but not high competitive intensity). Discussion of the academic and managerial implications will be given.

3 - Do Brands have Nationalities? Investigation of Consumers’ Categorization of Foreign Brand Origins
Harsh Dadich, Doctoral Student, Indian Institute of Management, Ahmedabad, Room 19, Dorm 14, IIM Main Campus, Ahmedabad, GU, 380015, India, harshd@iimah.ernet.in, Abraham Kothy

Research finds that consumers have limited brand origin recognition accuracy (Balabanis & Diamantopoulos, 2008; Samiec, Shimp & Sharma, 2005). However, the current theory and brand origin literatures fail to predict how consumers form similarity-based clusters of countries to better assimilate origin related cues. These clusters will be used for inferences and predictions regarding the country-of-origin of a brand. Based on two independent studies, this paper examines whether consumers classify brand origins of foreign brands to a cluster of countries or to individual countries, and these categories influence consumers’ perceptions towards brands.

SB03
International Marketing II
Contributed Session
Chair: Xin (Shane) Wang, Assistant Professor of Marketing, Ivey Business School, Western University, 1255 Western Road, London, ON, N6G0N1, Canada, xwang@ivey.uwo.ca

1 - From Bitcoin to Big Coin: The Impacts of Social Media on Bitcoin Performance
Xin (Shane) Wang, Assistant Professor of Marketing, Ivey Business School, Western University, 1255 Western Road, London, ON, N6G0N1, Canada, xwang@ivey.uwo.ca, Roger H. L. Chiang, Qing Bai, Zhe Shan, Feng Ma

As the world’s first completely decentralized digital payment system, Bitcoin represents a revolutionary phenomenon in financial markets. This study examines predictive relationships between social media and bitcoin returns by considering the relative effect of different social media platforms (Internet forum vs. microblogging) and the dynamics of the resulting relationships using vector autoregressive and vector error correction models. The results suggest that more bullish forums have a positive, statistically significant relationship with future bitcoin returns at a daily level. Internet forum predictive metrics outperform microblogging ones at a daily frequency, but their effects are opposite at an hourly frequency. The user-generated content contributed by the vocal minority and the silent majority exhibit distinct relationships with bitcoin performance, in terms of both transaction volume and returns. The implications of these results for research and practice are notable with regard to the transformative power of social media analytics in networked business environments subject to the dynamics of bitcoin performance.
Wenche Wang, Ph.D Candidate, University of Florida, 224 MAT, PO Box 117140, Warrington College of Business, Gainesville, FL 32605-2276, United States of America, wangwc121@ufl.edu
Online market has received extensive investigation. The existing literature focuses on two streams of research, market structure and consumer search behavior. The market structure analyses discuss the degree of competition compared to physical markets and firms’ pricing strategies. The search literature emphasize on estimating search costs and exploiting firms’ behavior to strategically increase search cost, such as product differentiation and obfuscation. In this paper, we test both theories to determine the cause behind online price dispersion. We collected book-store listing data and consumer transaction record from Small.com, the largest online bookstore in China. We observe date, time, price, and quantity for each transaction over a one-month period and aggregate consumer review in both book level and store level for each book-store pair. We show that rather than price, consumers put more weight on store attributes when evaluating a listing. The high costs associated with return and exchange and the consumers’ risk aversion utility characterize this search behavior. We also find that large firms generally have stickier prices while small firms have more frequent price adjustments. Even though search cost is significantly reduced in an online market, stores face different demands due to their reputation from past purchases and word-of-mouth. In order to survive and expand market, new entrants have to conduct price promotions to raise awareness and build up reputation. Therefore we suggest that online price dispersion is largely due to small firms’ sales strategies rather than differential consumer search costs.

3 - Product Concept Demonstrations in Trade Shows and Firm Value
Tirthi Mazumdar, Professor, Syracuse University, The Whitman School of Management, 721 University Avenue, Syracuse, NY 13244, United States of America, tmazumdar@syr.edu, Taevan Kim
Trade shows have become a popular venue for firms to demonstrate their new products and new product concepts that are months or years away from a commercial launch. Utilizing auto shows as a context, we employ event study methodology to investigate the effects of auto concept demonstrations on abnormal stock return and idiosyncratic risk of the demonstrating firms. We formulate the study as a two-stage problem, where the firm decides which of the several concepts in its new product pipeline to demonstrate and which venue to use for demonstrations; in the second stage, investors react to the demonstrated concepts as well as other information available at the time of demonstration to assess the firm value and risk. The two stages are estimated jointly. We find that concept demonstrations increase abnormal returns for the firm stocks, but the effect comes primarily from concepts that are demonstrated for the first time and incorporate an entirely new technology or incorporate significant design changes. However, concepts based on proven technology increases the firm risks but those based on significant design changes do not have adverse effects on risk. We also find firms’ propensity to select an auto show venue that matches with the firm’s country of origin. The U.S. automakers tends to exhibit the matching behavior more than the Japanese automakers who tend to cross national boundaries to show case their innovations. Also, the positive effect of technology-focused concepts on firm value is present in trade show venues that match the demonstrating firm’s country of origin, but not otherwise.

4 - An Investigation of International Joint Venture Dissolutions in a Developed-emerging Market Context
Kirian Pedada, PhD Student, Texas Tech University, 3002 4th St, C155, Lubbock, TX, 79415, United States of America, kirian.pedada@ttu.edu, Xinchun Wang, Mayukh Dass
Multinational corporations from developed markets are rapidly expanding into emerging markets such as India and China to break into the immense potential of these fast growing markets. International joint venture (JV) is one of the market entry modes that market firms the opportunity to establish footholds in emerging markets. Prior studies have shown that JVs partnerships confront high chances of dissolution with estimated rates in the range of 30-70 percent, leading to effects such as involuntary loss of potential revenues, uncompensated transfer of technology, and operational difficulties among the involved firms. Using a uniquely compiled database from IJ Emerging Markets and Capitaline databases and other secondary resources, this study complements the JV literature and takes an initial look at the post dissolution effects on the long-term market performance of the involved firm from the emerging market, particularly in a developed-emerging JV context. The study aims at offering important managerial insights to both developed and emerging market firms entering into JV partnerships.

1 - Design of Referral Reward Programs
Heike Wolters, University of Hamburg, Esplanade 36, Hamburg, 20354, Germany, Heike.Wolters@uni-hamburg.de, Christian Schulze, Karent Gedenk
Referral reward programs are a hugely popular instrument for the acquisition of new customers. In referral reward programs, current customers receive a reward when they successfully recommend a product to a new customer. But which referral reward should companies offer to which customers in order to increase referral program effectiveness? In our study, we analyze how the size of monetary referral rewards and the value of existing customers influence the quantity (number) and the quality (profitability) of referred new customers. Further, we analyze whether referral size has the same effect for encouraging referrals from existing customers with high vs. low profitability. We use data on more than 400,000 existing customers and more than 150,000 new customers over a period of 152 weeks of a large European telecommunication service provider. We estimate a multi-level Poisson model to analyze the effect of referral reward size and existing customer profitability on the number of new referred customers, and a linear multi-level model to analyze the effect of referral reward size and referrer profitability on the profitability of newly referred customers. Our study contributes to the referral literature by (1) analyzing the impact of referral reward size on the profitability of new referred customers. (2) studying the effect of the profitability of existing customers on number and profitability of new referred customers separately, (3) comparing effect strength of referral reward size and existing customer profitability, and (4) analyzing the interaction effect between referral reward size and existing customer profitability.

2 - Towards More Accurate and Profitable Customer Churn Prediction
Stanislav Stakhovsky, Dr, Monash University, P.O. Box 197, Caulfield East, VIC, 3145, Australia, stanislav.stakhovsky@monash.edu, Ali Tamaddoni Jahromi, Mike Ewing
Customer churn is a salient concept in both marketing theory and practice. Consequently, the ability to accurately predict churn is highly prized by both managers and scholars. Previous research has focused more on identifying profitable customers rather than on customers more likely to defect. Hence, this study considers likely defectors and whether pro-active retention campaigns can create value for both customers and firms. Findings confirm that the selective targeting of likely churners can generate positive return in the short term. Moreover, by directly comparing different predictive techniques we are able to not only assess their ability to accurately predict churn, but also to guide managers to develop more profitable retention campaigns. Specifically, we utilize transactional data from a major FMCG retailer to construct churn prediction models using Boosting and Support Vector Machine (SVM) techniques from data mining and Pareto/NBD from probability modeling. We then benchmark these models against Logistic Regression, a popular and well-established churn prediction approach, as well as the RBF model, a simple managerial metric. Results suggest that the boosting technique is as one of the best-known ensemble learners, outperforms all other tested models based on both cumulative lift and profitability measures. We also find that as the number of covariates increases, SVM and logistic regression unexplained gain ground on the boosting model.

3 - Habit Disruption and Consumer Attrition
Yuping Liu-Thompkins, Professor and Chair of Marketing, Old Dominion University, Strrome College of Business, 2123 Constant Hall, Norfolk, VA, 23529, United States of America, ping@yupinglu.com, Nuo Xu, Leona Tan
While customer attrition can often be traced to dissatisfaction, competitive enticement, or variety seeking, another relatively neglected cause of attrition is the disruption of consumption habits. As habit represents a well-rehearsed behavioral routine automatically triggered by contextual cues (e.g., time or location), disruption in habit can alter consumers’ purchase process and expose consumers to previously overlooked stored product options. Built on recent developments in individual-level habit measurement, we examine the relationship between habit change and customer attrition in both contractual and non-contractual settings. Using two data sets, one from a leading US satellite radio service provider and the other from a European credit card issuer, we find that continued deteriorations in habit strength indeed increase consumers’ attrition risk in both settings, the pattern of effects however, was different between the two contexts. In a separate field study, we explore a promotional tactic that can be used to counter the threat of habit disruption. By building habit-inducing repetition into the promotion, previously habit-dependent customers are able to develop a new behavioral routine and exhibited even more positive post-promotion behavior than previously non-habit-dependent customers. Taken together, the current research demonstrates the value of factoring habit dynamics into consumers’ attraction decisions and suggests new marketing strategies that can be used to stem defection.
Although Frequent Flyer Programs (FFP) are offered by almost every airline worldwide, little has been done to measure the influence of these programs on consumer behavior. This project studies the impact of the FFP’s tier-qualification requirement on members’ trip purchase decisions. I analyze the database of entry-level members from a major US airline and find that prices these members pay are higher than the prices they would have paid as they get close to achieving the requirement, after the trip differences, time trends and individual heterogeneity are controlled for. Intriguingly, the extent of such an effect is bigger in markets where the target airline has smaller shares, implying that the payment increases as the result of members sacrificing potential cheaper alternatives to switch to the target airline. Meanwhile, as members get close to the requirement, the average distance per trip decreases, implying that they substitute short-distance transportation, such as driving, with flying. A close investigation into members’ purchase behavior suggests that a bending deadline for tier upgrade acts as the major incentive. We also find that there are simultaneous shifts in members’ choice for discount tickets, time of advanced booking, and channel of booking these observations by running a logit analysis to estimate the tier-qualification requirement, FFP effectively changes the trip purchase decisions of its members.

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**SB05**

**05-Third Floor, GB 7**

**Working Papers XXIV**

**Contributed Session**

**Chair:** Kwok Way Leung, Lecturer, The Hong Kong Polytechnic University

**1 - Emotional Content Mining from Online Reviews and its Impact on Box Office Revenue**

Rahat Ullah, PhD Student, KAIST, CMP Lab, GSC, KAIST, South Korea, Deajon Kim, Korea, Republic of, rahatkaist@kaist.ac.kr, Wonjoon Kim, Naveen Aminbele, Atya Zeb

Online word-of-mouth, most commonly encountered in the form of online customer reviews, has received considerable attention recently by both academics and practitioners alike. Previous studies have linked the impact of product reviews on sales by measuring the volume and numerical ratings of reviews. We argue that product reviews are multifaceted, and hence the textual contents of product reviews are critical to consumers’ choices over and above the valence and volume of the reviews. An important antecedent for the generation of word-of-mouth is a strong emotional response, which triggers the consumer to post. In this paper, we examine the emotional contents in the movie reviews’ distribution and its impact on economic outcomes such as movie sales. Our results suggest that the overall fraction of positive emotions is greater than negative emotions. We also find that there is more positive emotional content toward positive extreme ratings than negative emotional content toward negative extreme ratings. More importantly, we find that there is more emotional content as well positive emotional content in movie reviews in the opening weeks compared to the pre-release week. Furthermore, there is negative emotional content in movie reviews in the later weeks compared to pre-release and release week. Finally, we find a significant impact of emotional content on movie sales.

**2 - Ladies or Gentlemen: Effects of Death Anxiety on Product Gendering**

Kwok Way Leung, Lecturer, The Hong Kong Polytechnic University, PolyU West Kowloon Campus, 9 Hoi Ting Road, Yau Ma Tei, Hong Kong, Hong Kong - PRC, ccwleung@hkcc-polyu.edu.hk, Yu Wei Jiang

The current working paper investigates the impact of death anxiety on perception, evaluation, and purchase intention of gender-stereotyped products. Three experiments were conducted to test various predictions derived from the terror management theory. The first experiment supported the hypothesis that consumers primed with death anxiety prefer a product perceived as masculine over the one perceived as feminine. Subsequent experiments revealed the underlying mechanism of this effect. Once consumers’ anxiety was made salient, they believed that products perceived to be feminine were less competent and thus liked them less (Experiment 2). This effect of death anxiety on consumers’ attitude toward feminine products disappeared when an external locus of control was primed (Experiment 3), presumably because self-competence is less important in coping with the threat of death when people believe that their fate is not in their hands. Theoretical as well as practical implications are discussed.

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**SB06**

**06-Third Floor, GB 8**

**Decision Neuroscience V**

**Contributed Session**

**Chair:** Ryan Webb, Assistant Professor, University of Toronto, 105 St George, Toronto, On, M5D3E6, Canada, ryan.webb@utoronto.ca

**1 - Differential Gaze Processing in Attractive and Anomalous Faces: A Social Affordance Approach**

Yi Zhang, University of Virginia, Darden School of Business, VA, United States of America, ZhangY@darden virginia.edu

According to the Gibsonian perceptual theory, all behaviors, social behaviors in particular, are driven by the perceptual system, as it help people detect unique interaction opportunities, also known as affordances. The current paper explores how gaze and facial attractiveness influence the perception of social affordances differently engaging neural regions that process social stimuli. Participants were scanned by fMRI while viewing dynamic images of faces with variations in gaze and attractiveness. Activations in the reward regions (lateral and medial orbitofrontal cortex), show that direct eye gaze creates positive affordance in attractive faces, but negative affordance in anomalous faces. More interestingly, averted gaze creates negative affordance in attractive faces, but positive affordance in anomalous faces. In addition, regions in the pain network (anterior and posterior insula, thalamus) do not show differential response to gaze cues in anomalous faces but differentially respond to averted gaze in attractive faces. Part of the social cognition network (left posterior STS, bilateral TPJ) responded differentially to gaze cues in attractive faces, while other parts (right posterior STS) responded to gaze regardless of attractiveness. Finally, the medial prefrontal cortex shows greater activation to averted gaze than direct gaze in anomalous faces, reflecting the greater likelihood of mentalizing. Together these findings supported the ecological theory of social perception, and show that neuroimaging findings bring a richer understanding of how people navigate their social surroundings.

**2 - Rationalizing Context-Dependent Preferences**

Ryan Webb, Assistant Professor, University of Toronto, 105 St George, Toronto, On, M5D3E6, Canada, ryan.webb@utoronto.ca, Paul Glimcher, Kenway Lu, Tong Guo

In this article, we examine novel forms of IA violations that are necessarily predicted by a resource constraint known to be imposed on neurobiological systems. The observation that biology influences choice behavior and should explain economic characteristics (is not novel in the economic literature (Robson, 2001; Robson and Samuelson, 2010; Netzer, 2009). This includes the observation that a constrained decision process implies behaviour we might strictly term irrational ex-ante, but is in fact an optimal response to some biological constraint (Simon, 1979). The recent literature on rational inattention, for example, examines how constraints on information-processing (Shannon, 1948) can explain observed departures from rational expectations, expected utility, and the traditional random utility model (Sim, 2003; Woodford, 2012; Caplin and Dean, 2014). Similarly, Rayo and Becker (2007) demonstrate that the utility representation must be adaptive and depend on the distribution of the domain of utility, given constraints on the representation similar to those we identify. Our contribution is to provide a neural mechanism for how such choice-set dependence arises from neurobiological constraints, explore its predictions for substitution patterns between choice alternatives, provide behavioural evidence for its existence, and demonstrate that it implements a solution to the neurobiological choice problem.
months from a large national bank: 1. Does conditional promotion impact customers’ transaction pattern? 2. If so, how does it influence customers’ transaction pattern? 3. How does it vary across customers’ lifecycle or among different segments? We found that most conditional promotional strategies would significantly decrease customers’ dropout rates and increase customers’ consumption amount and frequency. However, when the condition involves customers’ social relationship, the effect is just the opposite. These effects do vary in the different stages of customers’ lifecycle and are much larger for those customers who are more likely to dropout. Our findings have strong managerial implications in terms of whether and how firms should implement conditional promotion to manage customer lifetime value.

2 - Managing the Interplay between Promotion and Product Portfolio

Feng Wang, Michigan State University, North Business Complex, 632 Bogue S., East Lansing, MI, 48824, United States of America, wangf@msu.edu, Roger C. Calantone, Roger Calantone

Marketing literature on promotion effectiveness and consumer responses mainly focused on the monetary and nonmonetary value of promotion. However, such parsimonious economic perspective fails to explain a number of interesting consumer behaviors. In this study, we propose an alternative classification – high communicated promotion (feature, display, feature and display) and low communicated promotion (mainly temporary price reduction), and examine the impacts of promotion on both new and current products. Our empirically results indicate that communicated promotion is desired for premium new products while TPR is ideal for new products with less relative price. Also, we found that communicated promotion generally has positive impact on sales performance and such relationship is attenuated as relative price increases. In addition to the interplay between promotion and product portfolio, we include firms’ NPD policy and competitive NPD intensity. Cannibalization occurs more frequently than product switching when introduce new products. Communicated promotion on current products can potentially relax cannibalization.

3 - Marketing Star or Marketing Myth? The Promotion Effectiveness of Group Buying and Its Drivers

Peter T. L. Popkowski Leszczyc, Professor of Marketing, University of Alberta, 4-20 F School of Business, Edmonton, AB, T6G 2R6, Canada, ppopkowsk@ualberta.ca, Jun Pang

This research investigates the advantage of group buying in promoting product sales and explores its drivers from a consumer’s perspective. We propose that compared with regular coupons, group buying is superior in promoting sales and this advantage is driven by two unique features of group buying, namely sales signal and upfront payment. Building on Acquisition-Transaction Utility theory, we develop a conceptual framework to explain the underlying mechanisms. Results from a field experiment find that a group buying promotion results in higher sales than a comparable coupon promotion. This difference is largely driven by sales signal and upfront payment. Results of a lab study provide further evidence for the consumer-driven mechanisms that underlie these effects. Sales signal has a positive effect on deal value, and this effect is positively moderate by prior attitude toward the brand. Upfront payment has a positive effect on deal proneness, and this effect is negatively moderated by consumer procrastination. Furthermore, the latter effects are mediated by impulsiveness.
SB10  INFORMS Marketing Science Conference – 2015

4 - The Rise of the Sharing Economy: Estimating the Impact of Airbnb on the Hotel Industry

Georgios Zervas, Boston University, School of Management, Boston, MA, United States of America, zg8@bu.edu, John Byers, Davide Proserpio

Airbnb is an online community marketplace facilitating short-term rentals, ranging from shared accommodations to entire homes that has now contributed more than ten million worldwide bookings to the so-called sharing economy. Our work addresses a critical question facing the hospitality industry: to what extent are Airbnb stays serving as substitutes for hotel stays, and what is the impact on the bottom line of affected hotels? Our focus is the state of Texas, where we identify Airbnb's impact by exploiting significant spatiotemporal variation in the patterns of adoption across city-level markets. Using a dataset we collected spanning all Airbnb listings in Texas and a decade-long panel of quarterly tax revenue for all Texas hotels, we develop a nuanced estimate of Airbnb's material impact on hotel revenues. Our baseline estimate is that a 1% increase in Airbnb listings in Texas results in a 0.05% decrease in quarterly hotel revenues, an estimate compounded by Airbnb's rapid growth. To further isolate the Airbnb impact, we employ hotel segments that consumers are less likely to substitute for Airbnb stays as additional control groups. We find that the impacts are distributed unevenly across the industry, with lower-end hotels and hotels not catering to business travelers being the most affected. Finally, by simulating various regulatory interventions informed by current events, such as limiting Airbnb hosts to single listing, we find only a moderate mitigating impact on hotel revenues.

SB10  10-Third Floor, Dover C
Analytics

Contributed Session
Chair: Huanhuan Shi, Doctoral Student, Penn State University, Smeal Business Building, University Park, PA, 16802, United States of America, huanhuanshi@psu.edu

1 - Temporal Clustering of Customers Based on Customer Relationship Dynamics using Unsupervised Learning

Anita Luo, Assistant Professor, Georgia State University, 35 Broad Street NW, Atlanta, GA, 30303, United States of America, aluo@gsu.edu, V Kumar, Xi Zhang

The central theme of CRM is to identify distinct phases of customer relationships and manage these relationships strategically. There is an extant stream of research that uses HMMs to capture the dynamics of customer relationships by examining the effect of relationship marketing actions on customer-brand relationships and customer choice behavior. However, these models only fit the data perfectly, allowing the user to separate the various clusters of customers by examining the sequences of their purchase history. The cluster-forming process perfectly assigns a customer to one of the cluster model parameters or intercepts. In reality, some customers are fundamentally different from other customers, and may not display too many dynamics in their relationships with firms. Therefore, it is strategically important to identify these customers and cluster them based on their dynamic relationship stages. This study introduces a heuristic algorithm to determine the optimal number of clusters for various Hidden Markov model structures with different parameters and optimal allocations of various customers to different clusters with the best model fit based on each customer's purchase history. The cluster-forming process gives researchers the liberty of assigning individual customers into the best fitting model. This study extends previous marketing literature by applying models based on unsupervised learning to distinguish different groups of customers by observing the sequences of their purchasing history. Companies can therefore segment customers based on state dependence, marketing elasticity, and dynamics in customer relationships using this temporal clustering technique. With the proposed method, companies can better cluster their existing customers and reallocate resources for profit maximization.

2 - Bayesian Semiparametric Modeling of Cohort Lifecycles

Ryan Dew, Doctoral Student, Columbia University, Columbia University, 3022 Broadway, Uris Hall, SC, New York, NY, 10027, United States of America, RDew18@gs.columbia.edu, Asim Ansari

Mobile application developers are interested in understanding the dynamic patterns of spending by customers, and how those patterns are affected by the firm's actions, such as the nature and timing of software and content updates, and by the duration of customers' use of the product. Crucial to such understanding is modeling distinct cohorts of customers, who are distinguished by their timing and channel of acquisition, and who differ in their long-run value and in their spending dynamics over the time of use of the app. In this paper we use a Bayesian semiparametric Gaussian process propensity model to specify the likelihood of a customer spending in a given time interval. The propensity is semiparametrically estimated using a combination of explicitly defined time-varying covariates and an unspecified propensity function that comes from a Gaussian process prior. This results in a highly flexible discrete time hazard model. We estimate the model on data from a mobile video game application. In addition to yielding insights about cohort lifecycles, current results indicate that the model has the potential to correct for omitted temporal variables, whose omission could result in misleading estimates of the impact of marketing efforts. We also show that the flexibility afforded by our semiparametric approach results in significantly improved fit to the frequency of spend curves when compared to predictions by benchmark parametric hazard models. While our data come from a mobile game context, the modeling framework is easily generalizable to spending decisions within other mobile app categories and for other CRM contexts.

3 - Replacing an Exiting Salesperson: Clone, Rookie, or Star?

Huanhuan Shi, Doctoral Student, Penn State University, Smeal Business Building, University Park, PA, 16802, United States of America, huanhuanshi@psu.edu, Shrihari Sridhar, Rajdeep Grewal, Gary Lilien

In B2B contexts, buyers' relationships with sellers are often linked through a key contact salesperson. When a salesperson exits an account, often due to turnover, account sales usually decline despite efforts to find an appropriate replacement. The purpose of this research is to determine what sellers can do to mitigate lost sales associated with salesperson turnover. We propose a typology of three replacement strategies: clone (the replacement salesperson is similar in customer and industry expertise to the exiting salesperson), rookie (relatively new replacement salesperson), and star (the replacement salesperson is a current top performer). In cooperation with a Fortune 500 B2B firm, we use a before-and-after-with-control-group analysis to overcome selection issues and other exogenous confounding factors to quantify the effect of salesperson exiting on sales. In our empirical setting, we find that average revenue loss when a salesperson exits is 15% of the account sales. The use of a star salesperson helps eradicate this loss, while the use of clone salespersons or rookies exacerbate the loss. We then use model-estimates to calculate the optimal strategy to regain maximum value of each replacement strategy and identify the most effective loss-mitigating strategy. Subject to regional constraints on the supply of salesperson-types, the model-estimated replacement scheme projects sales loss mitigation to be 45%.

SB11  11-Third Floor, Atlantic
Dynamic Models III

Contributed Session
Chair: Masakazu Ishihara, Assistant Professor of Marketing, NYU Stern, 40 West 4th Street, New York, NY, 10012, United States of America, misihira@stern.nyu.edu

1 - Model-Mean-Deviation-and-Heuristic-Based Expectation: An Application to Consumer Level Progression

Yi Zhao, Assistant Professor, Georgia State University, 35 Broad St, Suite 1329, Atlanta, GA, 30303, United States of America, yizhao@gsu.edu, Sha Yang, Shantamu Dutta

The traditional expectation is to capture the cross-sectional deviation from the mean of an outcome variable. However, we argue that the mean-expected deviation and heuristic-based expectation may capture consumer-level progression better. In this paper, we develop a new approach for modeling how economic agents form expectations, namely the mean-expected deviation-and-heuristic-based (MDDB) expectation approach. Such approach allows agents to form expectations based on any point on the distribution as perceived by agents, enabling a flexible way of capturing human psychological behavior for biases like optimism and pessimism, and tendency for applying heuristics when making complicated evaluations. We develop our model in the context of player level progression in online gaming. Players make play-or-quit decisions at each level of the game, and for each completed level, can observe their actual abilities measured by the number of points required for level completion divided by their operation quantity. We model individual players' learning on the evolutionary patterns of their abilities, and the two alternative approaches of how players form expectations on their ability and the associated playing utility. Such expectations will then affect individual players' decision to continue playing or quit at a level. We cast the individual play-or-quit decisions in a dynamic framework with forward looking players, and develop the algorithm for estimating such dynamic models under the MDDB expectation. We test our model using level progression data associated with an online game from 471 real players. We find clear evidence on consumer adoption of such MDDB expectation. In particular, a majority of the players in the samples are found to be optimistic when forming expectations on their future playing ability and utility, and a small group of players show neither optimism nor pessimism. Comparing the two groups, we find that optimists tend to derive a higher utility from the game (i.e. the “Experience”), whereas those realists are more goal oriented and derive a higher benefit from completing the entire game (i.e. the “Achievers”). Counterfactual analysis shows that the proposed model can help calibrate a more effective level-progression point schedule to better engage players and improve the game developer's revenue potential.
2 - Optimal Product Versioning Strategy in Durable Goods Markets: The Case of the US Video Game Industry
Masakazu Ishihara, Assistant Professor of Marketing, NYU Stern, 40 West 4th Street, New York, NY, 10012, United States of America, mis@stern.nyu.edu, Joon Rietveld, Yuzhou Liu

Product versioning in limited edition video games has been studied as an effective segmentation/prediction tool in many durable goods industries such as computer software, video games, books, and cars. Despite the popularity and importance of this phenomenon (e.g., sales of limited edition video games can comprise up to 15% of total product sales), little empirical work has been done in this area. This paper studies the antecedents and consequences of product versioning strategy in the U.S. video game industry between 2006 and 2012. Specifically, we examine (1) when firms should introduce multiple versions of a durable good, (2) how versioning strategy helps firms to better segment price sensitive consumers or to price-discriminate intertemporally, and (1) whether product versioning improves social welfare. To answer these questions, we collect rich product- and firm-level panel data on sales, prices, product characteristics (genre, critic/user ratings, award, series, version and associated special features/collector items, etc.), and firm characteristics (product portfolio, reputation, etc.). Using this data set, we first estimate a simple model of firms’ decisions on introducing a single version versus multiple versions of a video game, and uncover factors that affect product versioning decisions. We then develop and estimate a dynamic structural model of consumer adoption decisions by controlling for the endogeneity of versioning and pricing strategies. Finally, using the demand estimates, we conduct a series of supply-side counterfactual experiments to investigate the optimal versioning strategy, the optimal pricing paths, and their welfare implications. Our analysis offers managerial implications for how firms could effectively use joint versioning and price-skimming strategies to improve the profitability of their products.

3 - Causal Impact of Online Reviews on Durable Goods Adoption: The Case of the US Video Game Market
Yuzhou Liu, PhD Candidate, NYU Stern, 40 West 4th Street, New York, NY, 10012, United States of America, yliu@stern.nyu.edu, Masakazu Ishihara

Firms in durable goods markets face demand uncertainty when consumers perceive quality of new products remain uncertain. In such cases, product reviews may play important roles in determining the success of new products since they help consumers with product quality information. However, such review information only becomes available around product release date (i.e., critic reviews), and afterwards (i.e., consumer reviews). In this paper, we propose a dynamic structural learning model to quantify the causal impacts of critic reviews and consumer review bias on forward-looking consumer adoption of video games in the U.S. market. Our datasets combine a novel dataset of pre-order sales (released prior to product launch) and post-order sales and prices at product level from 2009 to 2012. We also collect individual-level online critic and consumer reviews using computer-programming techniques. Our studies include two parts. First, we leverage the pre-order information to separately identify the impacts of critic reviews and consumer prior knowledge on firm’s profits. Second, we find systematic differences between critic reviews and consumer reviews that also have significant direct impact on sales: the average of consumer reviews tends to become lower (higher) when critic ratings are higher (lower). Therefore, a standard Bayesian learning model cannot be directly applied since such systematic differences are not merely driven by the sampling error when quality signals are drawn from distributions of true product quality. We posit that such differences could be driven by consumer review bias due to reference point and self-selection effect. We propose a consumer evaluation function that can explain the observed review bias and estimate this function within the structural model. Using the structural model estimates, we examine the impact of critic reviews and consumer review bias on firm’s optimal prices, sales, and profits, as well as consumer welfare. To assess the these impacts, we conduct counterfactual experiments by simulating firm’s optimal price, sales, and profits in the absence of critic reviews and consumer review bias. The results of our model can provide important managerial implications with respect to dynamic pricing and preorder strategies.

[SB12]}

1 - Reading between the Lines: The Impact of Online Review Content on Sales
Werner Reinartz, University of Cologne, Alerbus Magnus Platz, Cologne, Germany, werner.reinartz@uni-koeln.de; Mark Heuberger, Maik Eisenbeiss

It is well established that online consumer reviews have emerged into a robust influence on purchase behavior. Prior research has mainly focused on different aspects of star ratings (e.g. average rating, dispersion, share of five star ratings vs. one star ratings, etc.). While we regard these heuristic cues as important drivers of purchase behavior, we develop an extended framework based on the dual process theory. In our study we thus argue that heuristic numerical cues as well as systematically processed content affect the purchase decision. In particular we model the effects of ratings as well as the informative and persuasive elements of the written reviews, operationalized through the linguistic style of the content.

We test our conceptual framework with a panel dataset containing more than 1,000 consumer electronics products with over 90,000 reviews in total. The empirical evidence supports our hypotheses that numerical cues as well as informative and persuasive elements of reviews affect sales.

2 - Management Response to Online Customer Word of Mouth
Yang Wang, PhD student, Rice University, 2540 Prospect St., Unit E, Houston, TX, 77004, United States of America, yang.wang@rice.edu, Alexander Chaudhary

Significant academic research has been dedicated to understanding the impact of online reviews on customers’ preferences, attitudes, and choices. However, management’s public response to online word of mouth has been a relatively sparsely studied area. We investigate the effect of management responses to online reviews in two ways. First, we investigate the effect of management response on subsequent online reviews by comparing reviews and ratings between TripAdvisor and Hotels.com for the same set of hotels using a difference-in-differences approach. We find that managerial responses lead to higher ratings. In particular, we find that ratings converge between TripAdvisor and Hotels.com after managers begin to respond on the former site. Second, we investigate the impact of management response on sales by comparing bookings of a cross-section of hotels before and after managers begin to respond to online reviews. We find that discontinuous jumps in sales respond to reviews. We argue that the large concentrations of positive reviews for high end hotels minimizes the potential gains to management responses while low end hotels compete homogenized.

3 - Preaching to the Choir: The New Chasm Between Top Ranked Reviewers, Mainstream Opinion, and Product Sales
Elham Yazdani, University of Utah, 1655 Campus Center Drive, Salt Lake City, UT, United States of America, Elham.Yazdani@business.utah.edu, Shyam Gopinath, Steve Carson

Opinion leaders are typically defined as consumers who generate a high volume of influential word of mouth (WOM). Since influence is rarely measured directly, marketers trying to identify opinion leaders usually look for users who generate a high volume of content along with feedback from other users such as helpfulness ratings or subscribers that serve as a proxy for influence. While the influence of top ranked reviewers is often assumed without much critical assessment, it is an open question as to the extent to which they actually influence other reviewers and product sales. To gain insights into these issues, we study the review and sales activity for 182 music CDs in audio format, released between January 21, 2014 and April 15, 2014 on Amazon.com. We find that top ranked reviewers act as opinion leaders for newly released products, but their influence is largely limited to other top rated reviewers (as evident in the data). In contrast, the reviews of followers (non-highly-ranked reviewers) have a far greater influence on the opinions of other followers and product sales. The impact of reviews from the two groups on sales show that (mainstream vs. niche) and the variance of reviews for the product. Top ranked reviewers are comparatively more influential for mainstream product releases and for products that lack consensus among existing reviews. In contrast, followers are relatively more influential for niche products and for products with low review variance. The findings of the study are in-line with theory based on reviewer similarity (homophily) and credibility.

4 - A Dynamic Changepoint Model for Online Product Opinions
Yue Wang, PhD, National University of Singapore, BIZ 2 Building, 01-01, 1 Business Link, Singapore, 117592, Singapore, a0181820@nus.edu.sg, Dai Yao

It has been prevalent for customers to communicate their opinions about products in online platforms, usually in the form of product ratings and reviews. Whereas researchers have recently demonstrated the impact of such online opinions on product sales and have started to investigate the underlying drivers that affect an individual’s decision to contribute these opinions (i.e., when to contribute, and what to contribute), little attention has been paid to the longitudinal change in the individual’s posting behavior, which ultimately shapes the opinion dynamics in online market places. A reviewer new to an online platform differs from her some time later on the same online platform, in terms of the different incentives and considerations with respect to posting a product rating, which are usually reflected by her reactions to the previously posted ratings. We develop a dynamic change point model to account for the behavioral change of an individual across different product rating occasions, and the behavioral difference across all the individuals. Applying the model to our empirical setting of online movie reviews, we uncover two different roles an individual may play in her tenure: a naive reviewer and a sophisticated reviewer. The two different roles exhibit substantive differences in terms of how the review environment affects the timing of contribution and the rating value. Through simulations, we shed new lights on how these dynamics affect the evolution of online product opinions.
1 - Understanding In-Store Consumer Experiences via User-Generated Content from Social Media

Karthik Sridhar, Assistant Professor, Baruch College - The City University of New York, 55 Lexington Ave, 12-240 Vertical Campus, New York, NY, 10010, United States of America, karthik.sridhar@baruch.cuny.edu

Social media sites like Twitter and Foursquare have increased the significance of Word-Of-Mouth (WOM) on an individual's purchase decisions and experiences. This instant WOM can reflect not only consumers’ (dis)satisfaction of prior purchases, but also of their ongoing purchase experiences. Prior literature in the area used past WOM to measure firm-specific outcomes. Though research has shown that consumers’ reactions to product-related stimuli vary depending on where they are (at home or in-store), this study has used the more recent and actionable real time WOM such as micro-blogging content to understand its impact on ongoing purchase experience. This study contributes to the literature by addressing this gap. Specifically, we analyze the online conversations in their immediate physical contexts – when customers are inside the store, during the purchase process. To achieve this we linked location check-ins via Foursquare with corresponding posts made on Twitter, and merged it with the company's publicly available profile information from Facebook. Applying this method, we collected over 100,000 in-store tweets tied to several brands across multiple cities. Using this data, we make the following contributions to the literature: a) develop a method to connect multiple social networks to obtain a better picture of the customer and the conversation, b) make the content analysis of tweets more actionable in real time and c) illustrate when and how firms can choose to react while customers are immersed in the purchase process.

2 - What You Said and What People Said About You – Do They Concur with Each Other?

Chunyao Huang, National Taiwan University, 1, Sec. 4, Roosevelt Rd., Taipei, Taiwan 106, ROC, chunyao@ntu.edu.tw, Pingyu Liu

Marketing researchers today are equipped with more powerful tools and much richer resources for explorations that were unimaginable a few decades ago. In the past, a firm’s strategic orientation, its brand equity, and customers’ opinions about its product/service offerings were always studied independently and separately. Nowadays, as this research would showcase, we are able to look at these dimensions altogether and get insights unavailable before. Conducting computer aided text analysis, we infer a publicly listed company’s strategic orientation by text-analyzing its annual reports. We then investigate to what extent the online consumer reviews that the company got reflect the strategic orientation revealed in its annual reports. The results thus derived are further triangulated with brand equity measures. As a company may manage several brands, the research first focuses on companies that are brand houses. The empirical research thus designed looks at multiple product/service categories and makes comparisons across them.

3 - Television Advertising and Online Word-of-Mouth: An Empirical Investigation of Social TV Activity

Bethilly, Emory University, 3000 Clifton Road NE, W462, Atlanta, GA, 30322, United States of America, blossen@emory.edu, David Schweidel

Online word-of-mouth (WOM) impacts customer acquisition, television program ratings, and sales. While the positive consequences of online WOM have been well founded in the marketing literature, research on the drivers of online WOM is still in its infancy, and questions remain concerning how marketers can encourage online discussions about their brands in this research, we investigate how television advertising drives online WOM. Specifically, we explore if television advertising has the ability to drive online WOM about (i) the brand advertised and (ii) the program in which the advertisement aired. We further examine if the media context in which the advertisement is served – the television program – impacts the relationship between television advertising and online WOM. Using data containing home viewership and the volume of minute social media mentions, our analysis reveals that television advertising impacts online WOM for both the brand advertised and the program in which the advertisement aired. Moreover, the program in which the advertisement aired affects the extent of online WOM following TV advertising. Furthermore, we find evidence that the programs that receive the most online WOM aren’t necessarily the best programs for advertisers. Our findings have implications for media planning strategies, advertiser-network negotiations of media buys, and ad design strategies.
pharmaceutical industry, the new brands generally compete in different markets and at different prices, taking care to not cannibalize the mother brand. In contrast, in cloned rivalry the two brands explicitly define the clone rival as their principal competition, with the salespeople being rewarded for taking market share from the rival without resort to price tactics. That is, the rival brands compete in the same markets and at similar prices. Using time series data we find that introducing cloned rivalry leads to growth in both the original and new rival brands. Moreover, these brands are able to maintain high prices and market share even as new patented brands enter the market and as generic substitutes gain significant market share. This is the first study we know of that looks specifically at cloned rivalry in any market.

**SB15**

15- Fourth Floor, Essex AB

**Applied Theory on Product & Platform Design**

Cluster: Special Session

Invited Session

Chair: Yi Zhu, Assistant Professor, University of Minnesota-Twin Cities, Carlson School of Management, Minneapolis, MN, 55455, United States of America, yizhu@umn.edu

1 - **Designing Crowdfunding Campaigns**

Mark Bender, Doctoral Candidate in Marketing, University of Pittsburgh, Pittsburgh, PA, mb34@pitt.edu, Esther Gal-Or, Tansey Geylan

Determining the funder reward and setting the campaign goal are two important decisions made by entrepreneurs in crowdfunding campaigns. We show the conditions under which an entrepreneur offers a more generous reward to encourage higher pledges from funders. We also demonstrate that the entrepreneur never finds it optimal to set the campaign goal above the level that allows her to cover the development cost of the product. The optimal level of this goal depends on the entrepreneur's ability to access traditional capital markets. When the entrepreneur has access to traditional capital markets, we demonstrate that this optimal level declines as the platform shares more of the crowdfunding revenues with the entrepreneur. Results further show that in addition to raising capital the crowdfunding campaign can serve as a vehicle to facilitate price discrimination. As such, it enables more successful extraction of consumer surplus than uniform pricing. This happens when heterogeneity in the consumer population is sufficiently large and when the development cost of the product or the anticipated surplus generated from it is relatively small.

2 - **The Marginal Role of the Salesperson**

Mark Bergen, Associate Dean, James D Watkins Chair in Marketing Marketing, University of Minnesota, Twin Cities, Department of Marketing, Minneapolis, MN, United States of America, mbergen@umn.edu, Zuhui Xiao, Yi Zhu, Mark Zbaracki

Using a combination of ethnographic field data and economic modeling, we study the tragiic role of the salesperson “working at the margin” to facilitate exchange between firms and customers. We build a theoretical model to explore this “marginal role” of the salesperson and its impact on information provision, pricing and market exchange. We find that the salesperson provides a social lubricant that is central to market exchange by selectively revealing customer information to the firm. Consistent with ethnographic field data, we find salespeople sometimes truthfully reveal (broker) customer information, and sometimes fail to reveal (nurture) customer information, in order to get both parties to agree to a deal. We go on to characterize when failing to reveal information (buffering) is required for market exchange depending on the parameters of the model.

3 - **Strategic Product Design Outsourcing**

Kangkang Wang, Assistant Professor, University of Alberta, Edmonton AB, T6G 2R6, Canada, ka8@ualberta.ca, Chunhua Wu

Original design manufacturer (ODM) is a new form of global outsourcing, in which the manufacturer not only produces, but also designs and develops the specifics of the product for a brand. We investigate the brands’ incentives in the strategic choice of keeping the development process in-house (OEM model) vs. outsourcing it to an external party (ODM model). Our analytic model reveals that channel power and brand competition are two important factors that determines brands’ outsourcing strategy in a competitive market. We show that, all combinations of OEM vs. ODM strategy can be the equilibrium outcome in a marketplace. Interestingly, we find that asymmetric equilibria exist when neither the brand nor the manufacturer has a dominant power in the channel. It is possible that the strong brand will adopt an OEM strategy while the weak brand adopts an ODM strategy in equilibrium. Overall, our findings resonate with different strategies in the current industry practices, and provide insights to supply chain management in today’s dynamic market environment.

**SB16**

16- Fourth Floor, Essex C

**Working Papers XXV**

Contributed Session

Chair: Ananya Sen, Toulouse School of Economics, 21, rue des Amidonniers, Toulouse, Toulouse, 31000, France, ananyasen100@hotmail.com

1 - **Predicting Social Influence based on Dynamic Network Structures**

Manit Hui, Assistant Professor, Chinese University of Hong Kong, Room 1105, Cheng Yu Tung Building, No. 12, Chak Cheung Street, Shatin, Hong Kong - PRC, mandyhui@bali.cuhk.edu.hk, Jianmin Jia, Chih-Sheng Hsieh

This study examines how network structure and dynamics interplay with the effect of social influence to facilitate diffusion. The context we consider is the diffusion of a new smartphone from a major wireless carrier in two medium-sized cities in China. The study is carried out in three stages: (1) New phone adopters (seeds) are selected within our sample period, and a two-layer snowball sampling of their mobile contacts is used to extract individual networks. (2) Given the longitudinal networks and temporal adoption behaviors, the stochastic actor-based dynamic network model is used to determine the homophily effect on network formation and the social influence effect on adoptions. (3) The measures of the network structure are linked to the estimated effects of social influence based on meta-analysis. As a result, the two most significant network measures related to social influence are diversity of connection and time variation of edge numbers, after controlling for network size and density. The simulation further reveals that a certain amount of initial adoptions is needed to trigger positive social influence during the diffusion process. Our findings provide a new perspective on buzz marketing campaigns by emphasizing the appropriate selection of social networks prior to the selection of individuals.

2 - **Clicks and Editorial Decisions: How Does Popularity Shape Online News Coverage?**

Ananya Sen, Toulouse School of Economics, 21, rue des Amidonniers, Toulouse, Toulouse, 31000, France, ananyasen100@hotmail.com, Pinar Yildirim

This paper analyzes how demand side incentives shapes news media reporting in the context of online news. With news available online, editors have the ability to track reader demand (i.e., the number of clicks) for individual stories. Using online news data from a large Indian English daily newspaper, we provide evidence that editors expand coverage of stories which receive more clicks. To establish a causal link, we instrument the clicks received by articles using days with rain and days with electricity shortage as exogenous shocks to reader attention. Further, we find that the newspaper responds by giving additional coverage based only on the higher clicks received by “hard” news stories. Hence, we provide evidence of “hard” news potentially crowding out “soft” news, at least in the short run. Moreover, we find suggestive evidence that editorial decisions, responding to clicks, in some instances may be driven by events orthogonal to the newsworthiness of stories, and this may be detrimental to information provision to readers and newspaper profits.
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TA01 Advertising I
TA02 Channel I
TA03 Consumer Behavior I
TA04 New Product I
TA05 Working Paper I
TA07 Game Theory I
TA08 Customer Relationship Management I
TA09 Analyzing Advertising Content
TA10 Retailing I
TA11 Bayesian
TA12 Marketing Finance I
TA13 Digital Marketing I
TA15 Building the Marketing-Finance Interface – Substantive and Methodological Issues
TA16 Working Paper II

Thursday, 10:30am - 12:00pm
TB01 Advertising II
TB02 Channel II
TB03 Consumer Behavior II
TB04 Customer Relationship Management II
TB05 Working Paper III
TB06 Remembering Allan D. Shocker: A Celebration of Intellectual Leadership
TB07 Game Theory II
TB08 Working Paper V
TB09 Modeling the Persistent and Downstream Effects of Strategic Firm Decisions
TB10 Retailing II
TB11 Choice Models I
TB12 Marketing Finance II
TB13 Digital Marketing II
TB14 Internet II
TB15 Developments in the Measurement and Modeling of Consumer Preferences I
TB16 Working Paper IV

Thursday, 1:30pm - 3:00pm
TC01 Advertising III
TC02 Channel III
TC03 Decision Making
TC04 Internet and Incentives
TC05 Working Paper VI
TC06 Decision Neuroscience I (Origins and Applications)
TC07 Game Theory III
TC08 Network
TC09 The Interplay between Social Networks and Consumer Behavior
TC10 Retailing III
TC11 Location Decisions
TC12 Marketing Strategy I
TC13 Digital Marketing III
TC14 Internet III
TC15 Developments in the Measurement and Modeling of Consumer Preferences II
TC16 Working Paper VII

Thursday, 3:30 - 5:00pm
TD01 Advertising IV
TD02 Channel IV
TD03 Consumer Behavior III
TD04 Customer Relationship Management IV
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TD06 Panel Discussion: What’s Next for Online Marketing? Frontiers in Research
TD07 Game Theory IV
TD08 Strategy
TD09 Meet the Editors I
TD10 Retailing IV
TD11 Choice Models II
TD12 Marketing Strategy II
TD13 Digital Marketing IV
TD14 Internet IV
TD15 Developments in the Measurement and Modeling of Consumer Preferences III
TD16 Working Paper IX

Thursday, 5:15pm - 6:00pm
TE13 You Can Get Data from the Wharton Customer Analytics Initiative

Friday, 8:30am - 10:00am
FA01 Advertising V
FA02 Channel V
FA03 Consumer Behavior IV
FA04 Customer Relationship Management V
FA05 Working Paper X
FA07 Game Theory in Marketing
FA08 Working Paper XII
FA09 Models on Information and Media Economics
FA10 Retailing V
FA11 Choice Models III
FA12 Marketing Strategy III
FA13 Banner Advertising
FA14 Mobile Marketing
FA15 Mobile Ads and Consumer Insights
FA16 Working Paper XI

Friday, 10:30am - 12:00pm
FB01 Advertising VI
FB02 Channel Strategy
FB03 Consumer Behavior V
FB04 Customer Relationship Management VI
FB05 Working Paper XIII
FB06 Decision Neuroscience II (Behavioral Insights)
FB07 Pricing I
FB08 Working Paper XV
FB09 Meet the Editors II
FB10 Sales Force I
FB11 Choice Models IV
FB12 Marketing Strategy IV
FB13 Customer Relationship Management III
FB14 Internet VI
FB15 Mobile Coupons and Networks
FB16 Working Paper XIV
FB17 New Trends in Structural Modeling in Marketing I
Friday, 1:30pm - 3:00pm

FC01  Brands I
FC02  Competition I
FC03  Consumer Behavior VI
FC04  New Product II
FC05  Working Paper XVI
FC06  Decision Neuroscience III (Insights from Health Research)
FC07  Pricing II
FC08  Behavior Game/IO
FC09  New Trends in Structural Modeling in Marketing II
FC10  Sales Force II
FC11  Choice Models V
FC12  Social Influence I
FC13  Digital Marketing V
FC14  Entertainment I
FC15  The Effect of Numerical Markers on Consumer Inferences and Decisions
FC16  Working Paper XVII
FC17  ISMS Doctoral Dissertation Proposal Competition Winners I

Friday, 3:30pm - 5:00pm

FD01  Brands II
FD02  Competition II
FD03  Consumer Behavior VII
FD04  New Product III
FD05  Working Paper XVIII
FD06  Decision Neuroscience IV (Applied Consumer Neuroscience)
FD07  Pricing III
FD08  Marketing in a Fast Changing Digital Environment
FD09  Recent Development in Dynamic Structural Models
FD10  Sustainability
FD11  Dynamic Models I
FD12  Social Influence II
FD13  Digital Marketing VI
FD14  Entertainment II
FD15  Mobile Marketing and Quantitative Models
FD16  Working Paper XIX
FD17  ISMS Doctoral Dissertation Proposal Competition Winners II

Saturday, 8:30am - 10:00am

SA01  Brands III
SA02  Innovation I
SA03  International Marketing I
SA04  New Product IV
SA05  Working Papers XXII
SA07  Pricing IV
SA09  Movies and Marketing
SA10  Empirical Methods
SA11  Dynamic Models II
SA12  Social Influence III
SA13  Social Media I
SA14  Health Science
SA15  Product Entry - Effects on Preference Evolution
SA16  Working Papers XXII

Saturday, 10:30am - 12:00pm

SB01  Brands IV
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SB03  International Marketing II
SB04  Customer Relationship Management VII
SB05  Working Papers XXIV
SB06  Decision Neuroscience V
SB07  Promotion
SB08  Working Papers XXVI
SB09  Digital Marketing Platforms
SB10  Analytics
SB11  Dynamic Models III
SB12  Social Influence IV
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SB14  Pharma
SB15  Applied Theory on Product & Platform Design
SB16  Working Papers XXV

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Program

Salad Course

Welcome
Johns Hopkins University
ISMS

Main course
Dessert

Awards
John D. C. Little Award
Frank M. Bass Dissertation Paper Award
Long-term Impact Award
Buck Weaver Award
ISMS Fellows

Future Conferences
2016: Fudan University

Adjourn

Dinner Menu

House Select Red/White Wines

Waterfront Salad
Frisee & Lola Rosa, Cucumber, Blistered Tomatoes, Shaved Chappelle’s Cheese Crostini,
Lemon Basil Dressing

Roasted Chicken Provençale
Herb-Marinated Chicken, Onion Ragu, Parmesan Mashed Potato
or
Herb Polenta
with Zucchini and Squash Stuffed Pepper

Opera Torte
Chocolate & Hazelnut Sponge Cake, Praline Butter Cream, Ganache, Berry Compote
List of Finalists

**John D. C. Little Award**

*Given annually to the best marketing paper published in Marketing Science or Management Science.*


**Frank M. Bass Dissertation Paper Award**

*Given annually to a marketing paper derived from a Ph.D. thesis published in an Informs-sponsored journal.*

**Long-Term Impact Award**

Given annually to the best marketing paper published in Marketing Science, or Management Science, or another Informs journal, that is viewed to have made a significant long run impact on the field of Marketing.


**Buck Weaver Award**

Awarded for lifetime contribution to theory and practice in the development of rigor and relevance in marketing science.
ISMS Fellows
(through 2014)

Recognizes cumulative long term contribution to the mission of ISMS. The mission of ISMS is “…to foster the development, dissemination, and implementation of knowledge, basic and applied research, and science and technologies that improve the understanding and practice of marketing.”